

## 1. INTRODUCTION

- 1.1 *The statistics published in this report is based on Migration Survey's findings conducted by the Department of Statistics, Malaysia (DOSM). The implementation of the Migration Survey is based on the guidelines and recommendations of the **United Nations** with reference to the **Manuals on Methods of Estimating Population, Manual VI: Methods of Measuring Internal Migration**.*
- 1.2 *Migration Survey is conducted on a monthly basis to provide statistics on internal migration at state level as well as urban and rural areas. A comprehensive and systematic approach in the data collection and processing has been maintained over a period of time in order to obtain comparative statistical time series.*
- 1.3 *This technical note provides a detailed explanation on the concepts, definitions and methodology used in the implementation of the Migration Survey to assist users to better understand the patterns of internal migration collected through household approach.*

## 2. OBJECTIVES OF THE SURVEY

*The main objective of Migration Survey is to provide estimates of population movements at state level in a certain period. In addition, the survey also aims to obtain information on the demographic and socioeconomic characteristics of migrants and non-migrants such as age, sex, ethnicity, marital status, educational attainment, participation in the labour market, employment at the place of destination as well as the factor for population migration.*

### **3. METHOD OF COLLECTION**

- 3.1 *Migration Surveys uses the face to face interview method. During the survey period, trained interviewers will visit selected living quarters to collect information of all household members including demographic particulars. In terms of operation, Migration Survey questions are asked for household members **aged one year and over**.*
- 3.2 *Field operation checks are undertaken to identify and correct any possibility of errors or omissions at the time of the survey is conducted.*

### **4. QUESTIONNAIRE**

- 4.1 *The survey questionnaire is designed to collect information on respondents' usual place of residence for a certain period of time to determine migration status. The respondents will be asked for the usual place of residence at two specific point of times (dates) which are exactly one year apart. A change in the locality of the usual place of residence at these two points in time constitutes migration. Any intervening move between these two reference dates is not taken into consideration. This means the scope of migration data in Migration Survey is confined to "**fixed-term migration**".*
- 4.2 *If the place of usual residence of the household at two points of time (dates) given within one year apart is different, the reasons for migration and employment before move (for household members aged 15 years and over) were also obtained.*
- 4.3 *Details on members' demographic and socioeconomic characteristics will be extracted from Labour Force Survey (LFS) questionnaire.*

## 5. **REFERENCE PERIOD**

*The reference period of the survey is “monthly moving reference period” that is:*

| <b>Survey month</b> | <b>Reference period</b>  |
|---------------------|--|
| January             | 1 <sup>st</sup> January 2023 to 1 <sup>st</sup> January 2024     |
| February            | 1 <sup>st</sup> February 2023 to 1 <sup>st</sup> February 2024   |
| March               | 1 <sup>st</sup> March 2023 to 1 <sup>st</sup> March 2024         |
| April               | 1 <sup>st</sup> April 2023 to 1 <sup>st</sup> April 2024         |
| May                 | 1 <sup>st</sup> May 2023 to 1 <sup>st</sup> May 2024             |
| June                | 1 <sup>st</sup> June 2023 to 1 <sup>st</sup> June 2024           |
| July                | 1 <sup>st</sup> July 2023 to 1 <sup>st</sup> July 2024           |
| August              | 1 <sup>st</sup> August 2023 to 1 <sup>st</sup> August 2024       |
| September           | 1 <sup>st</sup> September 2023 to 1 <sup>st</sup> September 2024 |
| October             | 1 <sup>st</sup> October 2023 to 1 <sup>st</sup> October 2024     |
| November            | 1 <sup>st</sup> November 2023 to 1 <sup>st</sup> November 2024   |
| December            | 1 <sup>st</sup> December 2023 to 1 <sup>st</sup> December 2024   |

## 6. **SCOPE AND COVERAGE**

- 6.1 *The survey population in the Migration Survey is the same as the LFS, which covers rural and urban areas of all states in Malaysia.*
- 6.2 *The survey population is defined to cover persons who live in private living quarters (LQ) and hence excludes persons residing in institutional LQs such as hotels, hostels, hospitals, prisons, boarding houses and construction work site.*
- 6.3 *No attempt was made to adjust for the exclusion of the population living in institutional LQs from the independent mid-year post census population estimates although the Migration Survey did not cover the institutional population. Based on the 2020 Population and Housing Census, those living in institutional LQs were less than four per cent of the total population.*

*The percentage was small and did not affect the estimates from the Migration Survey.*

6.4 *For the purpose of this survey, the usual households' members must comply the following conditions:*

- i. one or more person(s) who may be related and/ or persons unrelated who usually live together and make provision individually or in a group for the preparation of meal or other essentials for living;*
- ii. usual member that has/will live in a living quarter for a period of at least three months; and*
- iii. aged one year and over.*

## **7. SAMPLING FRAME**

7.1 *The frame used for the selection of sample for Migration Survey 2024 is based on the Household Sampling Frame which is made up of Enumeration Blocks (EBs) created for the 2020 Population and Housing Census and was updated from time to time.*

7.2 *EBs are geographically contiguous areas of land with identifiable boundaries created for survey operation purposes, which on average contains about 80 to 120 living quarters. Generally, all EBs are formed within gazetted boundaries, i.e. within mukim or local authority areas.*

7.3 *The EBs in the sampling frame are also classified by urban and rural areas<sup>a</sup>.*

**URBAN** is a gazetted area and the built-up area bordering it and the combination of these two areas have a population of 10,000 persons or more; or special development area.

**RURAL** refers to strata 3 and 4, which are areas/ settlements with a population of less than 10,000 persons.

<sup>a</sup> Refer *Key Findings, Urban and Rural, 2020 Population and Housing Census*

*i. Urban areas*

*Gazetted areas with their adjoining 'built-up' areas with a combined population of 10,000 or more at the time of the 2020 Population and Housing Census.*

**• Built-up areas**

*Areas contiguous to a gazetted area and has at least 60 per cent of their population (aged 15 years and over) engaged in non-agricultural activities.*

- The definition of urban areas also takes into account the special development area namely the development area which is not gazetted and can be identified and separated from the gazetted area or built-up area of more than 5 km and a population of at least 10,000 persons where 60 per cent of the population (aged 15 years and over) involved in non-agricultural activities.*

*ii. Rural areas*

*All other gazetted areas with a population of less than 1,000 persons and non-gazetted areas. The classification of areas by stratum is as follows:*

| <b>Stratum</b>      | <b>Number of populations</b> |
|---------------------|------------------------------|
| <i>Metropolitan</i> | <i>75,000 and over</i>       |
| <i>Urban large</i>  | <i>10,000 to 74,999</i>      |
| <i>Urban small</i>  | <i>1,000 to 9,999</i>        |
| <i>Rural</i>        | <i>The rest of the areas</i> |

7.4 *Urbanisation is a dynamic process and keeps changing in line with the progress and development. Thus, the urban areas for the 2010 and 2020 censuses do not necessarily refer to the same areas, as areas fulfilling the criteria of urban continue to increase or grow with time.*

## **8. SAMPLE DESIGN**

8.1 A stratified two-stage sample design is adopted that is:

Primary strata : Urban and rural strata

Secondary strata : States and administrative district within the primary strata

8.2 Two-stage sample selections are implemented, and samples are drawn randomly. The first stage units of sample selection are the EBs while the second stage units are the LQs within the EBs. All households and persons within the selected LQs are canvassed. At every stage of selection, the units are selected systematically with equal probability within each level of the secondary strata.

## **9. SAMPLE SIZE**

9.1 The sample size for this survey is required to represent overall population at the fixed level of analysis. This sample size has accounted for the following elements:

- i. Response rate of the previous survey;
- ii. Level of sampling design; and
- iii. Desired error.

Factors that are taken into consideration to finalise the sample size are cost, time and human resources.

9.2 The sample size of the Migration Survey 2024 are as follows:

| <b>State</b>             | <b>Number of selected EBs</b> | <b>Number of selected LQs</b> |
|--------------------------|-------------------------------|-------------------------------|
| <i>Johor</i>             | 812                           | 6,603                         |
| <i>Kedah</i>             | 723                           | 5,818                         |
| <i>Kelantan</i>          | 539                           | 4,365                         |
| <i>Melaka</i>            | 332                           | 2,809                         |
| <i>Negeri Sembilan</i>   | 503                           | 3,790                         |
| <i>Pahang</i>            | 650                           | 5,456                         |
| <i>Pulau Pinang</i>      | 476                           | 3,915                         |
| <i>Perak</i>             | 757                           | 5,964                         |
| <i>Perlis</i>            | 198                           | 1,647                         |
| <i>Selangor</i>          | 798                           | 6,321                         |
| <i>Terengganu</i>        | 489                           | 3,996                         |
| <i>Sabah</i>             | 1,041                         | 8,563                         |
| <i>Sarawak</i>           | 1,107                         | 9,009                         |
| <i>W.P. Kuala Lumpur</i> | 336                           | 2,738                         |
| <i>W.P. Labuan</i>       | 99                            | 818                           |
| <i>W.P. Putrajaya</i>    | 126                           | 1,044                         |
| <b><i>Malaysia</i></b>   | <b>8,986</b>                  | <b>72,856</b>                 |

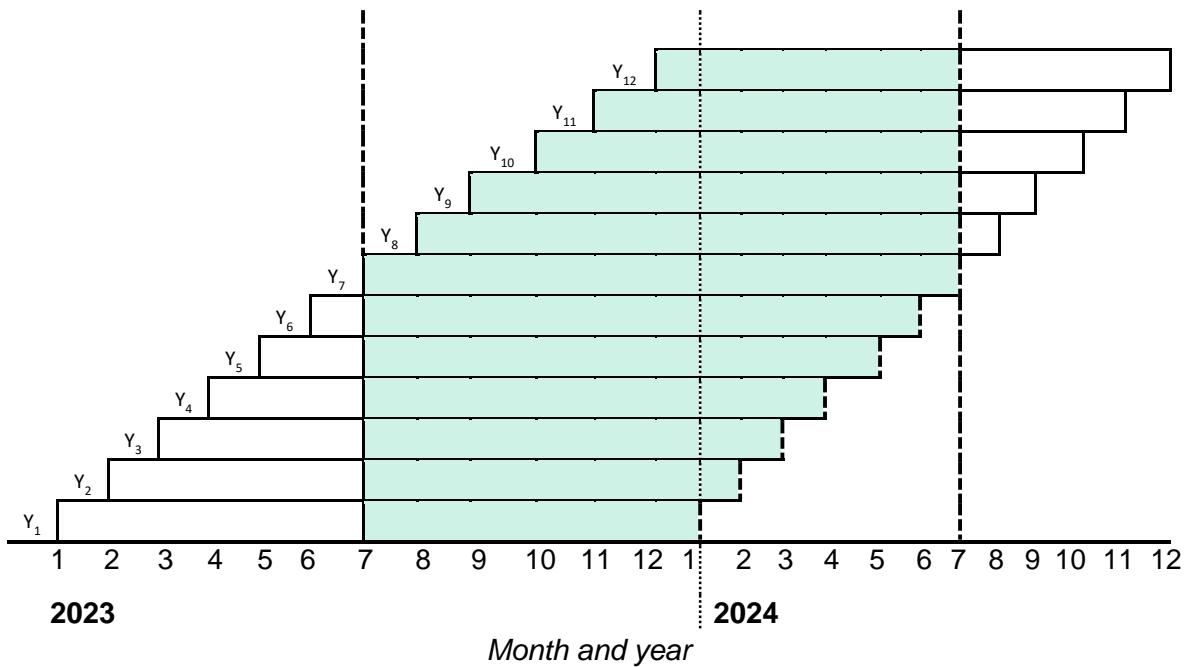
## 10. ESTIMATION PROCEDURES

10.1 There are two stages in the estimation procedure. The first stage is to get the weighted migration estimates from the sample.

10.2 The estimation method assumes that the migration flow is uniformly distributed throughout one-year period and thus provides an average estimate of migration from 1<sup>st</sup> July 2023 to 30<sup>th</sup> June 2024 for the year 2024. In addition, it is also to take note that the reference time varies according to the survey period.

10.3 Let  $Y$  represent the estimates of total migration for each round of the survey year 2024.  $t=1, 2, \dots, 12$ , as illustrated in the following diagram.

Diagram 1: Average migration for 1<sup>st</sup> July 2023 to 30<sup>th</sup> June 2024



### Equation 1

$$\begin{aligned}
 &= \left[ \frac{1}{12} \cdot \frac{1}{7} (Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7) \right] + \left[ \frac{1}{12} \cdot \frac{1}{8} (Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8) \right] \\
 &+ \left[ \frac{1}{12} \cdot \frac{1}{9} (Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9) \right] \\
 &+ \left[ \frac{1}{12} \cdot \frac{1}{10} (Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10}) \right]
 \end{aligned}$$

$$\begin{aligned}
& + \left[ \frac{1}{12} \cdot \frac{1}{11} (Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11}) \right] \\
& + \left[ \frac{1}{12} \cdot \frac{1}{12} (Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] \\
& + \left[ \frac{1}{12} \cdot \frac{1}{11} (Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] \\
& + \left[ \frac{1}{12} \cdot \frac{1}{10} (Y_3 + Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] \\
& + \left[ \frac{1}{12} \cdot \frac{1}{9} (Y_4 + Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] + \left[ \frac{1}{12} \cdot \frac{1}{8} (Y_5 + Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] \\
& + \left[ \frac{1}{12} \cdot \frac{1}{7} (Y_6 + Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] + \left[ \frac{1}{12} \cdot \frac{1}{6} (Y_7 + Y_8 + Y_9 + Y_{10} + Y_{11} + Y_{12}) \right] \\
= & \left( \frac{1}{84} Y_1 + \frac{1}{96} Y_1 + \frac{1}{108} Y_1 + \frac{1}{120} Y_1 + \frac{1}{132} Y_1 + \frac{1}{144} Y_1 \right) \\
& + \left( \frac{1}{84} Y_2 + \frac{1}{96} Y_2 + \frac{1}{108} Y_2 + \frac{1}{120} Y_2 + \frac{1}{132} Y_2 + \frac{1}{144} Y_2 + \frac{1}{132} Y_2 \right) \\
& + \left( \frac{1}{84} Y_3 + \frac{1}{96} Y_3 + \frac{1}{108} Y_3 + \frac{1}{120} Y_3 + \frac{1}{132} Y_3 + \frac{1}{144} Y_3 + \frac{1}{132} Y_3 + \frac{1}{120} Y_3 \right) \\
& + \left( \frac{1}{84} Y_4 + \frac{1}{96} Y_4 + \frac{1}{108} Y_4 + \frac{1}{120} Y_4 + \frac{1}{132} Y_4 + \frac{1}{144} Y_4 + \frac{1}{132} Y_4 + \frac{1}{120} Y_4 + \frac{1}{108} Y_4 \right) \\
& + \left( \frac{1}{84} Y_5 + \frac{1}{96} Y_5 + \frac{1}{108} Y_5 + \frac{1}{120} Y_5 + \frac{1}{132} Y_5 + \frac{1}{144} Y_5 + \frac{1}{132} Y_5 + \frac{1}{120} Y_5 + \frac{1}{108} Y_5 + \frac{1}{96} Y_5 \right) \\
& + \left( \frac{1}{84} Y_6 + \frac{1}{96} Y_6 + \frac{1}{108} Y_6 + \frac{1}{120} Y_6 + \frac{1}{132} Y_6 + \frac{1}{144} Y_6 + \frac{1}{132} Y_6 + \frac{1}{120} Y_6 + \frac{1}{108} Y_6 + \frac{1}{96} Y_6 + \frac{1}{84} Y_6 \right) \\
& + \left( \frac{1}{84} Y_7 + \frac{1}{96} Y_7 + \frac{1}{108} Y_7 + \frac{1}{120} Y_7 + \frac{1}{132} Y_7 + \frac{1}{144} Y_7 + \frac{1}{132} Y_7 + \frac{1}{120} Y_7 + \frac{1}{108} Y_7 + \frac{1}{96} Y_7 + \frac{1}{84} Y_7 + \frac{1}{72} Y_7 \right) \\
& + \left( \frac{1}{96} Y_8 + \frac{1}{108} Y_8 + \frac{1}{120} Y_8 + \frac{1}{132} Y_8 + \frac{1}{144} Y_8 + \frac{1}{132} Y_8 + \frac{1}{120} Y_8 + \frac{1}{108} Y_8 + \frac{1}{96} Y_8 + \frac{1}{84} Y_8 + \frac{1}{72} Y_8 \right) \\
& + \left( \frac{1}{108} Y_9 + \frac{1}{120} Y_9 + \frac{1}{132} Y_9 + \frac{1}{144} Y_9 + \frac{1}{132} Y_9 + \frac{1}{120} Y_9 + \frac{1}{108} Y_9 + \frac{1}{96} Y_9 + \frac{1}{84} Y_9 + \frac{1}{72} Y_9 \right) \\
& + \left( \frac{1}{120} Y_{10} + \frac{1}{132} Y_{10} + \frac{1}{144} Y_{10} + \frac{1}{132} Y_{10} + \frac{1}{120} Y_{10} + \frac{1}{108} Y_{10} + \frac{1}{96} Y_{10} + \frac{1}{84} Y_{10} + \frac{1}{72} Y_{10} \right) \\
& + \left( \frac{1}{132} Y_{11} + \frac{1}{144} Y_{11} + \frac{1}{132} Y_{11} + \frac{1}{120} Y_{11} + \frac{1}{108} Y_{11} + \frac{1}{96} Y_{11} + \frac{1}{84} Y_{11} + \frac{1}{72} Y_{11} \right) \\
& + \left( \frac{1}{144} Y_{12} + \frac{1}{132} Y_{12} + \frac{1}{120} Y_{12} + \frac{1}{108} Y_{12} + \frac{1}{96} Y_{12} + \frac{1}{84} Y_{12} + \frac{1}{72} Y_{12} \right)
\end{aligned}$$

$$\begin{aligned}
&= \frac{18,107}{332,640} Y_1 + \frac{20,627}{332,640} Y_2 + \frac{23,399}{332,640} Y_3 + \frac{26,479}{332,640} Y_4 + \frac{3,743}{41,580} Y_5 + \frac{2,119}{20,790} Y_6 + \\
&\frac{9,631}{83,160} Y_7 + \frac{8,641}{83,160} Y_8 + \frac{31,099}{332,640} Y_9 + \frac{28,019}{332,640} Y_{10} + \frac{25,247}{332,640} Y_{11} + \frac{22,727}{332,640} Y_{12} \quad \dots \dots \dots (1)
\end{aligned}$$

10.4 This means that the average migration for 1<sup>st</sup> July 2023 to 30<sup>th</sup> June 2024 refers to migrations that occurred in the reference period (months) as denoted by the shaded areas of Diagram 1.

10.5 The values derived from Equation 1 are the appropriate weights applied to the sample data for each survey period, which was then combined to obtain the average migration estimates for a specific period.

|                 |      |                    |   |              |
|-----------------|------|--------------------|---|--------------|
| Monthly weight, | P1:  | $0.0544 \times 12$ | = | 0.6532       |
|                 | P2:  | $0.0620 \times 12$ | = | 0.7441       |
|                 | P3:  | $0.0703 \times 12$ | = | 0.8441       |
|                 | P4:  | $0.0796 \times 12$ | = | 0.9552       |
|                 | P5:  | $0.0900 \times 12$ | = | 1.0802       |
|                 | P6:  | $0.1019 \times 12$ | = | 1.2230       |
|                 | P7:  | $0.1158 \times 12$ | = | 1.3897       |
|                 | P8:  | $0.1039 \times 12$ | = | 1.2469       |
|                 | P9:  | $0.0935 \times 12$ | = | 1.1219       |
|                 | P10: | $0.0842 \times 12$ | = | 1.0108       |
|                 | P11: | $0.0759 \times 12$ | = | 0.9108       |
|                 | P12: | $0.0683 \times 12$ | = | 0.8198       |
|                 |      |                    |   | <hr/> 12.000 |

10.6 The second stage is the use of combined ratio estimated method (adjusted weight<sup>b</sup> and population factor<sup>c</sup>). Population statistics according to the characteristics of age group, sex, ethnicity and state were used as a benchmark in this estimation.

<sup>b</sup> Adjusted weight is used to take into account the non-response cases.

<sup>c</sup> In multi-stage sampling design, the sample size is a random variable and aggregates directly estimated from the survey can have large sampling errors and in Migration Survey, external weight is the population factor. The population factor is obtained through up-to-date estimates of population totals which is used to inflate the various rates and ratios estimated from the survey.

10.7 Two types of population statistics are:

- i. **Population projection** to indicate the size and structure of the population in the long term based on certain assumption on the trend of fertility, mortality and migration. These statistics are used as input to formulate future plans and policies.
- ii. **Current population estimates** to illustrate the size of the current population and is prepared annually based on the recent data on birth, death and migration.

## 11. CONCEPTS AND DEFINITIONS

### 11.1 **Place of origin/destination**

*Place of origin/ destination identifies the locality of the usual place of residence at the two specified reference dates which are 12 months apart as fixed by survey periods. In this context, a locality refers to a town in the urban strata or a village/ settlement in the rural strata.*

### 11.2 **Strata of origin/destination**

*Strata of origin/ destination are the urban and rural stratification of the place of origin and destination and are the same as the population cut off.*

### 11.3 **Migrants**

*Those whose usual place of residence at the two reference dates is different and does not include those who move within the same locality.*

#### i. **Internal migrants**

*Those who have changed their usual place of residence at various geographical levels. They may be categorised as **inter-state migrants** if they move from one state to another. If they move within the same state, they are categorised as **intra-state migrants**.*

**Internal migrants** = **Inter-state migrants + Intra-state migrants**

#### ii. **International migrants**

*Those who have moved from other countries to Malaysia.*

### 11.4 **Non-migrants**

*Those whose usual place of residence at the two reference dates is the same or those who move within the same locality.*

## 11.5 **Migration rate**

The rate of migration measures the level of migration. In this case, for convenience, the population at risk is approximated to be the population at destination at the time of the survey. The rate was computed by the following formula:

$$\text{Migration rate} = \frac{\text{Number of migrants}}{\text{Total population}} \times 100$$

## 11.6 **Inter-state migration flows**

### i. **In-migrants**

Those who have moved from another state to stay in the state of destination.

### ii. **Out-migrants**

Those who have moved out of the state of origin to stay in another state.

### iii. **Net migration**

The difference between the number of in-migrants and out-migrants. If the number of in-migrants is more than the out-migrants, then the result is net in-migrants. For the opposite case, it results is net out-migrants.

$$\text{Net migration} = \text{In-migrants} - \text{Out-migrants}$$

### iv. **Gross migration**

The sum of in-migrants and out-migrants for a specific state. Gross migration measures the magnitude of in and out movements which reflects the population turnover and redistribution in the state.

$$\text{Gross migration} = \text{In-migrants} + \text{Out-migrants}$$

### v. **In-migration rate**

The number of migrants arriving at the destination state for every 1,000 persons at the destination in a current year.

$$\text{In-migration rate} = \frac{\text{In-migrants}}{\text{Population at state of destination}} \times 1,000$$

vi. **Out-migration rate**

*The number of migrants departing from the state of origin for every 1,000 persons at the origin in a current year.*

$$\text{Out-migration rate} = \frac{\text{Out-migrants}}{\text{Population at state of origin}} \times 1,000$$

vii. **Net migration rate**

*The net increase or decrease per 1,000 persons in a current year.*

$$\text{Net migration rate} = \frac{\text{Net migration}}{\text{Population at state of destination}} \times 1,000$$

viii. **Gross migration rate**

*The number of gross migrations at the state of destination for every 1,000 persons in a current year.*

$$\text{Gross migration rate} = \frac{\text{Gross migration}}{\text{Population at state of destination}} \times 1,000$$

ix. **Migration effectiveness ratio**

*An index that assesses the effectiveness of migration in redistributing the population.*

$$\text{Migration effectiveness ratio} = \frac{\text{Net migration}}{\text{Gross migration}} \times 100$$

## 11.7 Sex ratio

*Refers to the number of males for every 100 females.*

$$\text{Sex ratio} = \frac{\text{Total number of males in age group}}{\text{Total number of females in age group}} \times 100$$

#### 11.8 **Ethnic group**

*The ethnic group is within Malaysian citizens after alienating non-Malaysian citizens. The classification is as follows:*

*i. **Malaysian citizens***

- *Bumiputera*
- *Chinese*
- *Indians*
- *Others*

*ii. **Non-Malaysian citizens***

#### 11.9 **Marital status**

*i. **Never married***

*Refers to those who have never been married at the time of interview.*

*ii. **Married***

*Refers to persons who are currently married at the time of interview. The term, 'married' includes those married by law or by religious rites or are living together by mutual agreement.*

*iii. **Widowed***

*Refers to those who have not remarried after the death of the spouses at the time of interview.*

*iv. **Divorced/ permanently separated***

*Refers to those whose marriages were annulled through divorce by law or religious arrangement or separated for a long duration without any possibility of reconciliation.*

#### 11.10 **Educational attainment**

*Refers to the highest level in which a person has completed schooling or is currently attending school in a public or private educational institution that provides formal education and is categorised as follows:*

*i. **No formal education***

*Refers to persons who have never attended school in any of the educational institutions that provide formal education.*

ii. **Primary**

Refers to those whose highest level of education attained is from Standard 1 to 6 or equivalent.

iii. **Secondary**

Refers to those whose highest level of education attained is from Form 1 to 5 (including remove class), General Certificate of Education (GCE) O Level or equivalent. This includes basic skill programmes in specific trades and technical skills institutions with the training period of at least six months.

iv. **Tertiary**

Refers to those whose highest level of education is above Form 5.

11.11 **Working age**

Those who are between **15 to 64 years** (in completed years at last birthday) during the reference week, and who are either in the labour force or outside the labour force.

11.12 **Labour force participation rate**

The **actual status** approach is used, where a person is classified on the basis of his/ her labour force activity during the reference week, either employed or unemployed which classified as labour force.

The economic activity of a population depends on the demographic characteristics of that population. Therefore, the proportion of economically active persons differs between sub-groups of that population. These variations are measured by specific activity rates termed **labour force participation rate**.

Labour force participation rate is defined as the ratio of the labour force to the working age population (15 to 64 years), expressed as percentage. The formula is as follow:

$$\text{Labour force participation rate} = \frac{\text{Number of persons in the labour force}}{\text{Number of populations in the working age (15-64 years)}} \times 100$$

### **11.13 *Employed***

*All persons who, at any time during the reference week worked at least **one hour** for pay, profit or family gain. They are also considered as employed if they:*

- i. did not work during the reference week because of illness, injury, disability, bad weather, leave, labour dispute and social or religious reasons but had a job, farm, enterprise or other family enterprise to return to; and*
- ii. were temporary laid-off with pay and would definitely be called back to work.*

### **11.14 *Occupation***

- i. In 2016 - 2021, occupation is classified according to MASCO 2013 which was also based on the ISCO-08 but was improved in line with the transformation of work process and areas of specialisation as well as the complexity and dynamics in skills and tasks. The classification of occupation based on MASCO 2013 is as follows:*

- 1. Managers*
- 2. Professionals*
- 3. Technicians and associate professionals*
- 4. Clerical support workers*
- 5. Service and sales workers*
- 6. Skilled agricultural, forestry, livestock and fishery workers*
- 7. Craft and related trades workers*
- 8. Plant and machine-operators and assemblers*
- 9. Elementary occupations*

ii. Occupation data of 2024 is classified according to **Malaysia Standard Classification of Occupations (MASCO) 2020** based on the **International Standard Classification of Occupations (ISCO)** as follows:

0. Armed forces occupation
1. Managers
2. Professionals
3. Technicians and associate professionals
4. Clerical support workers
5. Service and sales workers
6. Skilled agricultural, forestry, livestock and fishery workers
7. Craft and related trades workers
8. Plant and machine-operators and assemblers
9. Elementary occupations

iii. For a person having more than one job, only the job at which he worked for the longest number of hours during the reference week is treated as his principal occupation. Should the number of hours worked for each job is the same, then the job with the highest income is the principal occupation. In cases where the number of hours worked and the income earned from each job are the same, the job at which he was working for the longest period of time is considered as the principal occupation.

#### 11.15 **Industry**

- i. Industry is classified according to the **Malaysia Standard Industrial Classification (MSIC) 2008 version 1.0** based on the **International Standard Industrial Classification of All Economic Activities (ISIC) Revision 4.**
- ii. A person's industry classification refers to that of his principal occupation.

iii. Sector for the selected statistics population's migration on page 6 are the reclassification of industry as follows:

| <b>Sector</b>                 | <b>MSIC 2008</b>  |
|-------------------------------|---|
| <b>Agriculture</b>            | <i>Agriculture, forestry and fishing</i>  |
| <b>Mining &amp; quarrying</b> | <i>Mining and quarrying</i>   |
| <b>Manufacturing</b>          | <i>Manufacturing</i>  |
| <b>Construction</b>           | <i>Construction</i>   |
| <b>Services</b>               | <p><i>Electricity, gas, steam and air conditioning supply</i></p> <p><i>Water supply; sewerage, waste management and remediation activities</i></p> <p><i>Wholesale and retail trade; repair of motor vehicles and motorcycles</i></p> <p><i>Transportation and storage</i></p> <p><i>Accommodation and food and beverage service activities</i></p> <p><i>Information and communication</i></p> <p><i>Financial and insurance/ takaful activities</i></p> <p><i>Real estate activities</i></p> <p><i>Professional, scientific and technical activities</i></p> <p><i>Administrative and support services activities</i></p> <p><i>Public administration and defence; compulsory social security</i></p> <p><i>Education</i></p> <p><i>Human health and social work activities</i></p> <p><i>Arts, entertainment and recreation</i></p> <p><i>Other service activities</i></p> <p><i>Activities of households as employers</i></p> <p><i>Activities of extraterritorial organization and bodies</i></p> |

iv. *LFS does not classify the subsistence goods-and services-producing activities of households as persons who are economically active. Therefore, the classification of industry by MSIC 2008 for 'Activities of households as employers; undifferentiated goods-and services producing activities of households for own use' only accounted for 'Activities of households as employers'.*

#### 11.16 **Status in employment**

Refers to the **position or status** of an employed person within the establishment or organisation for which he/ she worked and is adapted based on the **International Classification of Status in Employment (ICSE-93)**. Employed persons are classified according to the following employment status:

i. **Employer**

*A person who operates a business, a plantation or other trade and employs one or more workers to help him.*

ii. **Employee**

*A person who works for a public or private employer and receives regular remuneration in wages, salary, commission, tips or payment in kind.*

iii. **Own account worker**

*A person who operates his own farm, business or trade without employing any paid workers in the conduct of his farm, trade or business.*

iv. **Unpaid family worker**

*A person who works without pay or wages on a farm, business or trade operated by another member of the family.*

## 12. RELIABILITY OF STATISTICS

*The statistics generated based on survey conducted with probability sampling are subjected to two types of errors that are sampling and non-sampling errors.*

### 12.1 Sampling error

*Sampling error is a result of estimating data based on probability sampling survey compared to the population. Such error in statistics is termed as **Relative Standard Error (RSE)** and is expressed in percentage. This error is an indication to the precision of the parameter under study. In other words, it reflects the extent of variation of sample-based estimates compared to the parameter of population.*

*Sampling errors of estimates on a few important variables at national and state levels are calculated separately as shown in Table A3. For Migration Survey 2024, the internal migration rate for Malaysia was 0.8 per cent with RSE of 5.58 per cent and standard error (SE) of 0.05 per cent. At confidence interval  $\alpha = 0.05$ , the internal migration rate was in the range of 0.75 – 0.94 per cent.*

### 12.2 Non-sampling error

*The error may rise through incomplete survey coverage, weaknesses in the frame, response errors, non-response errors and also errors during processing either through editing, coding or data capture. To ensure that data is of high quality, several administrative procedures were taken to minimise non-sampling errors.*

*Intensive training was conducted for the supervisors and enumerators. In addition, close supervision and random checks were carried out on households covered by the enumerators to ensure the validity of the recorded information.*

*In order to resolve the case of non-response error due to several reasons such as vacant house, 'no one at home', refusal to cooperate or unqualified LQ, the sample size estimation for this survey has taken into account all the possibilities.*

*The survey frame is updated regularly to overcome the problem of non-response due to vacant home. Publicity was carried out widely through electronic and printed media to minimise the case of 'no one at home' and refusal to cooperate.*

*In addition, at the data processing stage, consistency checking and validation process has been systematically implemented for each variable in order to minimise the non-sampling error.*

### **13. PRESENTATION OF STATISTICS**

- 13.1 *The statistics at state level compiled in this report consists of thirteen states and three federal territories. However, statistics for the W.P. Labuan was not published because the number of cases was too small to be estimated.*
- 13.2 *Detailed estimates for Kedah, Kelantan, Melaka, Perlis, Terengganu, Sabah dan W.P. Putrajaya are subject to a higher RSE and should be used with caution.*
- 13.3 *The main limitation of the survey is that the selective nature of migration in a short reference period of one year may not yield sufficient number of migrants in a sample survey using sample design of the LFS.*
- 13.4 *The estimates on total population shown in the tabulations refer only to those aged one year and over. The main characteristics of the migrant population are shown in the form of rates or percentage distributions, and where pertinent, they are compared with the non-migrant population at state of destination. As such, age standardization procedures will be applied when it is considered that the different age distributions of the migrant and non-migrant population may affect a comparison of the other characteristics, such as educational attainment and marital status (Table A1 and A2).*

## **14. ROUNDING OF ESTIMATES**

*The sum of each category may not always equal to the totals shown in related tables because of independent rounding to one decimal place. However, the differences are not obvious.*

## **15. NOTES AND SYMBOLS**

- *Nil/ no cases*

0.0 *Less than half of the smallest unit shown. For example, less than 0.05 per cent.*

*n.a Not applicable*

*W.P. Wilayah Persekutuan*