TECHNICAL NOTES

1. *INTRODUCTION*

The data for this publication was collected through the Monthly Survey of Wholesale & Retail Trade which comprise of the Wholesale & Retail Trade sector started in the January 2014;

However, for this publication, the statistics presented commenced from 2021.

2. *OBJECTIVES*

This publication presents information on sales value in Wholesale & Retail Trade sector. The main objectives of this survey are to:

- *Provide short term indicators of Wholesale & Retail Trade sector;*
- *Provide input towards the compilation of Monthly Index of Wholesale & Retail Trade sector;*
- *Provide information for the compilation of Quarterly Gross Domestic Product; and*
- *Assist the government and other organisation as well as business community in planning and decision making based on evidence.*

3. *SCOPE AND COVERAGE*

The surveys cover all registered establishments of the relevant regulatory bodies engaged in the Wholesale & Retail Trade.

4. *CONCEPTS AND DEFINITIONS*

The classification of the industry is based on the Malaysia Standard Industrial Classification 2008 Ver. 1.0. The classification conforms to the International Standard Industrial Classification of All Economic Activities, Revision 4, United Nations Statistics Division. Meanwhile, the concepts of wholesale and retail trade adopted in this publication is based on recommendation in the Manual of International Recommendations for Distributive Trade Statistics 2008 (IRDTS 2008) published by the United Nations Statistics Division. The definition of industries are as follows:

4.1 Wholesale and Retail Trade

4.1.1 Wholesale Trade

Refers to the resale (sale without transformation) of new and used goods to retailers; industrial, commercial, institutional or professional users; or to other wholesalers; or selling merchandise to, such persons or companies.

Wholesalers frequently physically assemble, sort and grade goods in large lots; break bulk, repack and bottle (except in air-tight containers) and redistribute in smaller lots; store, refrigerate, deliver and install goods as well as engage in sales promotion for customers and label design.

4.1.2 Retail Trade

Refers to the resale (sale without transformation) of new and used goods to the general public for personal or household consumption or utilisation.

4.1.3 Motor Vehicles

Refers to wholesale and retail sale of motor vehicles and motorcycles, either new or used, sale of motor vehicle parts and accessories, maintenance and repair of motor vehicles and motorcycles including washing, polishing as well as commission agents.

4.2 Index Volume of Wholesale and Retail Trade

4.2.1 Type of Volume Index

The Volume Index of Wholesale & Retail Trade measured in the reference period as compared to the base period, (2015=100).

5. REPORTING UNIT

*The reporting unit is an **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 an industry classification based on its principal activity and not by its parent company.*

6. SALES VALUE

This definition is an applicable to Wholesale and Retail Trade.

Sales value refer to:
*(a) the value of all **goods**, for which ownership or effective right to use with a view to ultimate purchase, has been transferred to others; and*

*(b) the value of **services** rendered during the inquiry period, irrespective of time or method of payment.*

*The sales value in this survey refers to the **total sum paid** by the customers. It includes:*
(a) sales price;

(b) financing, delivery and installation charges, if these services are rendered by the establishment enumerated.

7. CONFIDENTIALITY REQUIREMENTS

*The information is gathered under the provisions of the **Statistics Act 1965 (Revised 1989)**. Section 5 of this Act requires all establishments services operating in Malaysia to provide actual information or best estimates to the Department. The Act stipulates that the content of individual returns are **confidential** and only aggregated figures are published. Meanwhile, Section 7 under the same Act provides the penalty to the respondents that could not comply with the surveys undertaken.*

8. REVISIONS POLICY
- *For monthly data, subject to changes in data source, revision is t-1 where t refers to current month.*
- *For quarterly data, subject to changes in data source, revision is t-1 where t refers to current quarter.*
- *For annual data, subject to changes in data source, revision is t-3 where t refers to current year.*

9. METHODOLOGY

9.1. Population

All establishments encompass of 179 industries (5 digits) based on Malaysia Standard Industrial Classification 2008 Ver 1.0.

9.2. Sampling frame

From the identified population, establishments that are still operating as at December 2021 were listed as sampling frame.

9.3. Sampling design

Sampling design of the survey is a one-stage stratified random sampling. Industries at national level have been classified as stratum and the establishment as the sampling unit.

Each stratum (industry) has been set up into four sub stratum to ensure the sample is distributed taking into account the economy characteristics of the industry. The main substratum is heterogeneous, was fully covered while other sub stratum that is homogeneous were sampled.

Main substratum comprise large establishments that have significant total revenue in the industry while for the second to fourth substratum were formed based on Cumulative Frequency Square Root Method. This method forms the boundaries, for each substratum.

9.4. Sample size

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:

$$n = \frac{\left(\sum N_i S_i\right)^2}{V + \sum N_i S_i^2}$$

where;

n = Sample size

N_i = Population size for stratum i

S_i^2 = Variance for stratum i

V = Desired variance

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

where;

$\hat{Y}_i$ = Estimated total revenue for stratum i

RSE = Relative standard error

Z = Value of confidence level

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

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

h = 2,3 and 4

i = 1,2,...k

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_j = Sample size for stratum i

h = Substratum

j = Stratum

Establishments of the large categories were fully covered while establishments of the second to fourth substratum were randomly selected using systematic random sampling.

9.5. Weight

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

$$W_h = \frac{N_h}{n_h}$$

where,

N_h = Total population of substratum h; and

n_h = Total sample of substratum h

Weight for non response at sub stratum h as below:

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

where;

n'_h =   *Number of response sampel for substratum h; and*

n_h =   *Number of sampel for substratum h*

The method of calculating the sampling design weight after the survey (adjusted weight) on substratum has below:

$$W'_h = W_h \times NRW_h, \quad h = 1, ..., 4$$

where,

W_h =   *Sampling design weight at substratum h*

NRW_h =   *Non response weight at substratum h*

10. ROUNDING

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