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NOTA TEKNIKAL

Technical Notes

INTRODUCTION

*This publication presents the quarterly statistics of labour productivity from the first quarter of 2020 to the fourth quarter of 2024 by economic activity. These statistics are compiled based on the concepts and guidelines outlined in the **System of National Accounts 2008, United Nations** and **The Organisation for Economic Co-operation and Development (OECD) Manual: Measuring Productivity.***

Statistics available in this publication include values and annual percentage changes. However, the compilation methodology has been improved with new components namely the index of labour productivity per hour worked and the index of labour productivity per employment that are available to the public starting in the first quarter of 2022. Labour productivity index uses 2015 as base year .

SCOPE AND COVERAGE

The compilation of labour productivity statistics comprises five main sectors namely Agriculture, Mining and quarrying, Manufacturing, Construction, and Services based on the Malaysian Standard Industrial Classification (MSIC) 2008 Ver.1.0 in line with the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4 published by the United Nations. The classification of subsectors and economic activities is as in exhibit below, with the Manufacturing and Services sectors can be detailed into eight subsectors.

Classification of Economic Activity according to MSIC 2008 Ver. 1.0

SECTOR	SECTION	DIVISION	DESCRIPTION
Agriculture	*A*		**Agriculture, forestry and fishing**
Mining and quarrying	*B*		**Mining and quarrying**
Manufacturing	*C*		**Manufacturing**
		10	*Vegetable and animal oils & fats and food processing*
		11, 12	*Beverages and tobacco products*
		13, 14, 15	*Textiles, wearing apparel and leather products*
		16, 17, 18, 31	*Wood products, furniture, paper products and printing*
		19, 20, 21, 22	*Petroleum, chemical, rubber and plastic products*
		23, 24, 25*	*Non-metallic mineral products, basic metal and fabricated metal products* **not including 252*
		26, 27, 28	*Electrical, electronic and optical products* **including 252 & 325*
		29, 30, 32*, 33	*Transport equipment, other manufacturing and repair* ** not including 325*
Construction	*F*		**Construction**
Services	*D, E*		**Utilities**
	G		**Wholesale and retail trade**
	I		**Food & beverages and accommodation**
	H		**Transportation and storage**
	J		**Information and communication**
	K		**Finance and insurance**
	L, M, N		**Real estate and business services**
	P, Q, R, S, T		**Other services**

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CONCEPT AND DEFINITION

The concept of labour productivity refers to the efficiency and effectiveness of each employee to generate value added or overall output. Labour productivity can be defined as output ratio (goods and services) to input (employment and total hours worked).

*Productivity can be measured by various methods depending on the requirements and availability of data. These methods can be classified into two categories namely **Single Factor Productivity** and **Multifactor Productivity.** Malaysia Productivity Blueprint (MPB) has outlined the use of labour input as a productivity indicator in line with the requirement of the Eleventh Malaysia Plan. Meanwhile, other factors influencing value added such as assets and technology cannot be measured through this method.*

The use of Single Factor Productivity method affects the productivity values where for certain industries it may not refer to the actual amount of production for an employee. Users are advised to use index and percentage change data for analysis purposes. The labour productivity values in this publication are for reference only and any comparative analysis should be made with caution.

Value added

Value added refers to the difference between output and intermediate consumption. Output is value of goods and services produced. This includes market production, production for own final use, and non-market production (government services and NPISHs). Production of goods and services are not necessarily for sale or turnover of establishment. Meanwhile, intermediate consumption is the value of goods and services consumed (as input) in the production process of goods and services excluding salaries and wages, depreciation of capital and net interest paid.

Value added good and services by economic activity is approximately equivalent to commercial profit, salaries and wages, depreciation and indirect taxes; plus, interest paid and less interest received.

Employment

Employment refers to all persons who, at any time during the reference week worked at least one hour for pay, profit or family gain (as an employer, employee, own-account worker or unpaid family worker). They are also considered as employed if they:

- *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.*

- *Were temporary laid-off with pay and would definitely be called back to work.*

- *Were employed less than 30 hours during the reference week because of the nature of their work or due to insufficient work and were able and willing to accept additional hours of work. This group is underemployed.*

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.

Total hours worked

Total hours worked for all employment during the reference period are the aggregate number of hours actually worked for a quarter. It is defined as the product of the average hours worked and the number of employment hours worked. Employment hours worked refers to the overall number of employees at the end of the reference period excluding the employees who did not work during the reference period because of illness, injury, disability, bad weather, leave, labour dispute and social or religious reasons.

$$THW = AHW \times EmpHW$$

where:

THW	*Total hours worked*
AHW	*Average hours worked*
EmpHW	*Employment hours worked*

Labour productivity per employment

Labour productivity per employment is measured as the ratio of output (goods and services) to input (employment). It reflects the amount of output produced by each employee in full-time, part-time, self-employed or unpaid family worker for at least one hour within a week. Employment refers to the overall number of employees at the end of the reference period.

$$LPE = \frac{VA}{Emp}$$

where:

LPE	*Labour productivity per employment*
VA	*Value added*
Emp	*Employment*

Labour productivity per hour worked

Labour productivity per hour worked is defined as the ratio of output (goods and services) to input (total hours worked). It reflects the amount of output produced within an hour based on the category of employees either in full-time, part-time, self-employed or unpaid family worker who worked for at least one hour within a week. Employment refers to the overall number of employees excluding the employees who did not work during the reference period because of illness, injury, disability, bad weather, leave, labour dispute and social or religious reasons.

$$LPHW = \frac{VA}{THW}$$

where:

LPHW	*Labour productivity per hour worked*
VA	*Value added*
THW	*Total hours worked*

Labour productivity index

Labour productivity index (LPI) is an indicator to measure the efficiency of inputs used to generate output in a given period of time. LPI is defined as the ratio of the output index (goods and services) to the input index (employees or total hours worked). LPI is measured at the reference period against the based year 2015, (2015=100).

$$LP_i = \frac{O_i}{I_i} \times 100$$

where:

LP$_I$	*Index of labour productivity*
O$_I$	*Output index (value added)*
I$_I$	*Input index (employment or total hours worked)*

GENERAL APPROACH OF LABOUR PRODUCTIVITY ESTIMATION

*Quarterly labour productivity estimation is measured using the Single Factor Productivity method. This estimate is based on information of value added per employment and value added per hour worked by economic activity. Measurement of labour productivity per hour worked provides a better picture of the development of productivity in the economy than labour productivity per employment because the element of difference in the composition of full-time/ part-time workers has been eliminated. Additional information regarding labour productivity estimation can be obtained from **www.dosm.gov.my.***

The value added at constant prices is used where it refers to the value of goods and services at 2015 prices. Employment refers to the overall number of employees in the reference period. Meanwhile, total hours worked is the aggregate number of hours actually worked during the period.
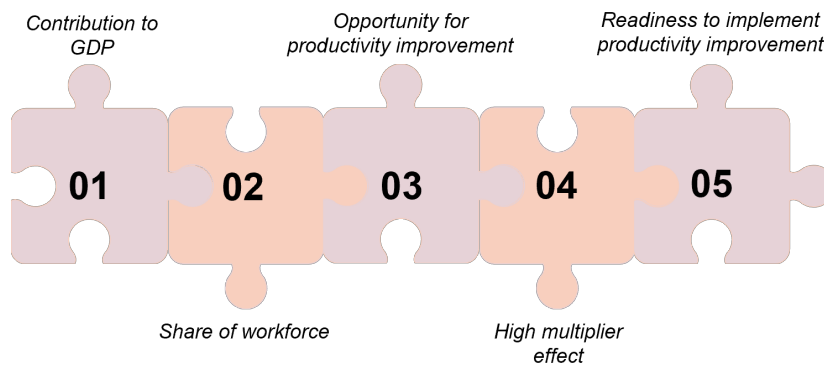
The methodology of estimating employment data are based on censuses and surveys data conducted by DOSM as well as administrative data from various agencies. Quarterly and annual estimations cover the entire employment according to the economic activity. Annual employment is the average quarterly employment for the year. Estimation for employment is calculated by using extrapolation method that refers to the various data sources. Meanwhile, the number of employees refers to the working population published in the quarterly report of the Labour Force Survey (LFS). It should be noted that employment estimates by economic activities are not solely based on LFS as the employment component of labour productivity has taken into account the harmonisation of labour supply and demand data sources.
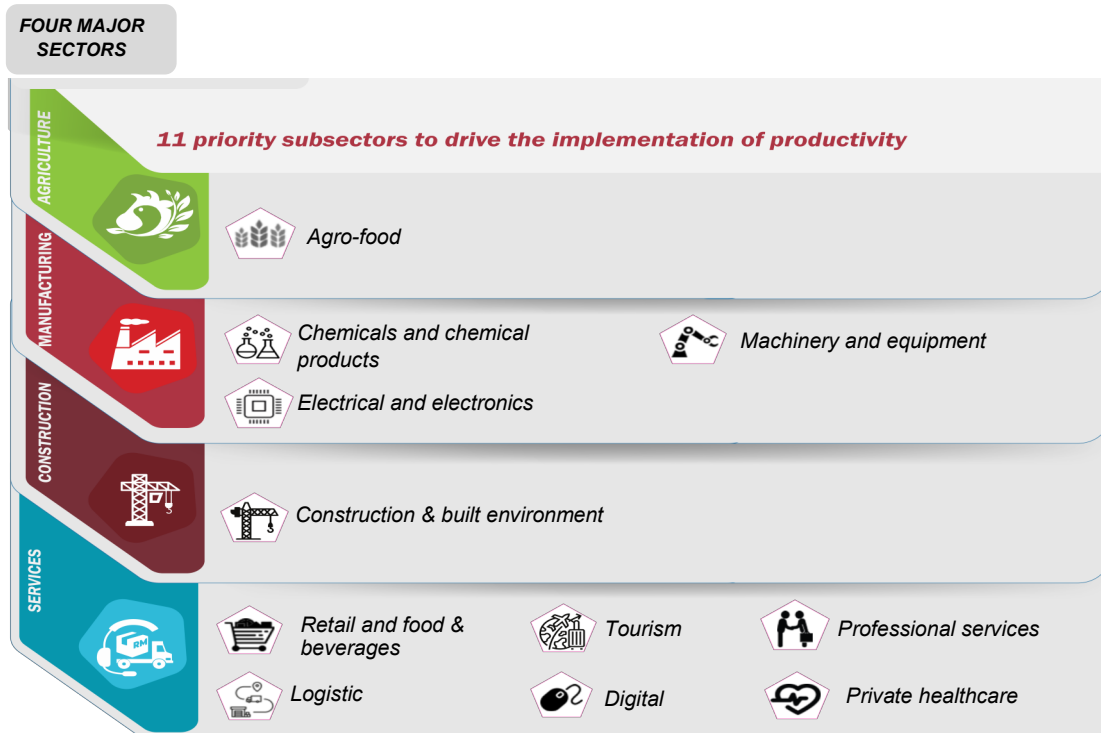
11 PRIORITY SUBSECTORS

Unlocking greater productivity within industry in Malaysia is one of the national strategies to drive continuous economic growth and expansion. In line with this, the Government launched the **Malaysia Productivity Blueprint (MPB)** *in May 2017 as part of the Eleventh Malaysia Plan. Within the MPB, 9 priority subsectors were identified as presenting high potential growth for the country. Starting 2023, two new priority subsectors were introduced, namely Construction & built environment and Logistic, bringing the total priority subsector to 11, while the number of main sectors also increased, namely Agriculture, Manufacturing, Construction, and Services. In this regard, the priority subsector of Agro-food and Private healthcare has also been reviewed and reported in fourth quarter 2023 [refer to table on page 80].*

The 11 priority subsectors which have been identified includes Agro-food; Chemicals and chemical products; Electrical and electronics; Machinery and equipment; Construction & built environment; Retail and food & beverages; Logistic; Tourism; Digital; Professional services; and Private healthcare. Combined, the 11 priority subsectors selected contribute 30 per cent of Malaysia's Gross Domestic Product (GDP) and 40 per cent of total employment. These subsectors are prioritised based on the following criteria:

11 priority subsectors to drive the implementation of productivity initiatives as outlined by the MPB are as follows:

Classification of 11 priority subsectors is based on MSIC 2008 Ver. 1.0 as shown in table below.
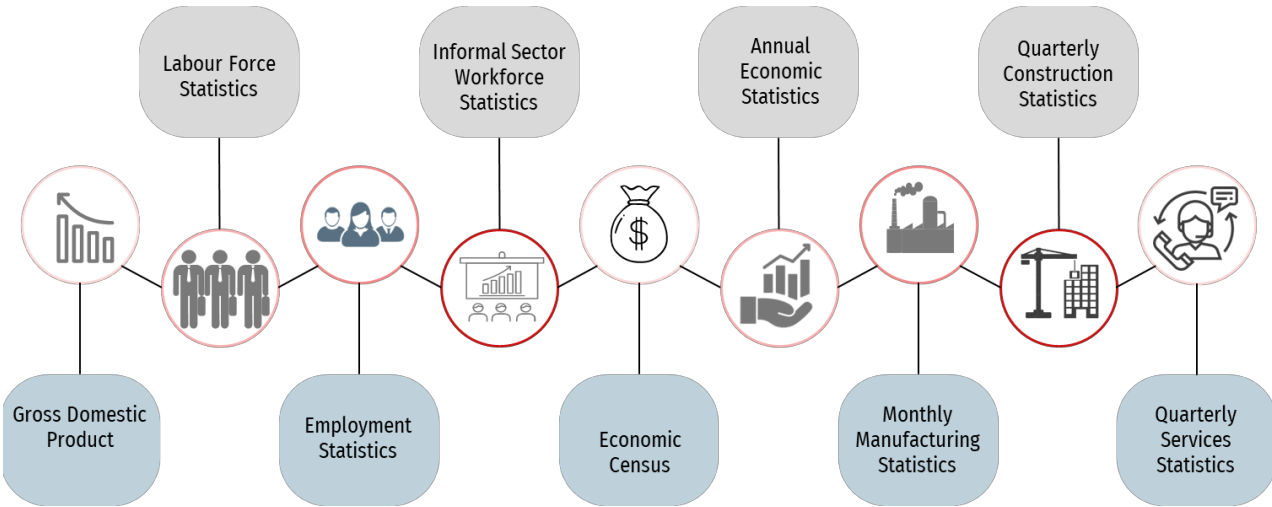
Classification of 11 priority subsectors using MSIC 2008 Ver. 1.0

MSIC	DESCRIPTION
AGRO-FOOD	
011	Growing of non-perennial crops*
012	Growing of perennial crops**
013	Plant propagation
014	Animal production
015	Mixed farming
03	Fishing & aquaculture
	* exclude: 01150
	** exclude: 01261, 01262, 01273, 01281, 01291, 01292, 01295
CHEMICALS AND CHEMICAL PRODUCTS	
20	Manufacture of chemicals and chemical products
ELECTRICAL AND ELECTRONICS	
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
MACHINERY AND EQUIPMENT	
28	Manufacture of machinery and equipment n.e.c.
CONSTRUCTION & BUILT ENVIRONMENT	
41	Construction of buildings
42	Civil engineering
43	Specialized construction activities
RETAIL AND FOOD & BEVERAGES	
47	Retail trade, except of motor vehicles and motorcycles
56	Food and beverage service activities
LOGISTICS	
49	Land transport and transport via pipelines[+]
50	Water transport[++]
51	Air transport[#]
52	Warehousing and support activities for transportation[##]
53	Postal and courier activities
	[+] include only: 49120, 49230, 49300
	[++] include only: 50121, 50122, 50220
	[#] include only: 51201, 51202, 51203
	[##] exclude: 52212, 52213, 52214, 52231, 52232, 52233, 52234, 52292
TOURISM	
55	Accommodation
79	Travel agency, tour operator, reservation service and related activities
90	Creative, arts and entertainment activities
91	Libraries, archives, museums and other cultural activities
93	Sports activities and amusement and recreation activities
DIGITAL [Information, communication and technology (ICT)]	
58	Publishing activities
59	Motion picture, video and television programme production, sound recording and music publishing activities
60	Programming and broadcasting activities
61	Telecommunications
62	Computer programming, consultancy and related activities
63	Information service activities
PROFESSIONAL SERVICES	
69	Legal and accounting activities
70	Activities of head offices; management consultancy activities
71	Architectural and engineering activities; technical testing and analysis
72	Scientific research and development
73	Advertising and market research
74	Other professional, scientific and technical activities
75	Veterinary activities
PRIVATE HEALTHCARE	
86	Human health activities
87	Residential care activities

DATA SOURCES

The main data sources of this publication comprise of statistics produced by the Department of Statistics Malaysia:

Secondary data also used in the estimation of labour productivity that are Employment Statistics in Financial Industry from the Central Bank of Malaysia, Statistics of Civil Servant from the Public Service Department Malaysia and Foreign Workers Statistics from the Ministry of Home Affairs.

ROUNDING

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

SYMBOLS AND ABBREVIATIONS

&	: *and*	**Q**	: *quarter*	**e**	: *estimate*
%	: *percentage*	**r**	: *revised*	**p**	: *preliminary*
MYR	: *Malaysian Ringgit*	**GDP**	: *Gross Domestic Product*	**OECD**	: *Organisation for Economic Co-operation and Development*
NPISHs	: *Non-Profit Institutions Serving Households*	**MPB**	: *Malaysia Productivity Blueprint*		

PUBLICATION AND REVISION OF STATISTICS

Labour productivity statistics presented in this publication from the first quarter 2020 to fourth quarter 2024 are compiled based on the estimates of Gross Domestic Product, hours worked and employment. Statistics on employment has been aligned with the latest available data from the censuses and surveys conducted by DOSM. Revision of statistics on labour productivity are subject to any revision on the statistics of value added, hours worked and employment.

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