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JABATAN PERANGKAAN MALAYSIA

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**AES**

**STATISTIK EKONOMI  
TAHUNAN**  
*Annual Economic Statistics*

**2022**

**Perkhidmatan Pengangkutan dan Penyimpanan**  
***Transportation and Storage Services***

**JABATAN PERANGKAAN MALAYSIA**  
**DEPARTMENT OF STATISTICS MALAYSIA**



**KEMENTERIAN EKONOMI  
JABATAN PERANGKAAN MALAYSIA**

# **STATISTIK EKONOMI TAHUNAN ANNUAL ECONOMIC STATISTICS 2022**

**PERKHIDMATAN PENGANGKUTAN DAN PENYIMPANAN  
TRANSPORTATION AND STORAGE SERVICES**

**Dikeluarkan pada: 1 Mac 2023  
Released on: 1 March 2023**

## **Pemakluman**

Jabatan Perangkaan Malaysia (DOSM) sedang menjalankan Survei Pendapatan, Perbelanjaan Isi Rumah dan Kemudahan Asas (HIES/BA) 2022 bermula dari 1 Januari 2022 sehingga 31 Disember 2022. DOSM amat menghargai kerjasama daripada responden yang terpilih untuk memberikan maklumat kepada DOSM serta menjayakan survei ini. Sila layari [www.dosm.gov.my](http://www.dosm.gov.my) untuk maklumat lanjut.

Penerbitan statistik ekonomi dan sosial iaitu PocketStats yang mengandungi statistik suku tahunan dan tahunan boleh diperolehi dari portal DOSM atau melalui pautan [https://bit.ly/PocketStats\\_2022](https://bit.ly/PocketStats_2022).

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## **Announcement**

The Department of Statistics Malaysia (DOSM) is conducting the Household Income, Expenditure and Basic Amenities Survey (HIES/BA) 2022 from 1<sup>st</sup> January 2022 until 31<sup>st</sup> December 2022. DOSM greatly appreciates the cooperation given by selected respondents by sharing their information with DOSM and making the survey a success. Please visit [www.dosm.gov.my](http://www.dosm.gov.my) for more information.

Economic and social statistics publication namely PocketStats which contain quarterly and annual statistics can be obtained from the DOSM portal or via the link [https://bit.ly/PocketStats\\_2022](https://bit.ly/PocketStats_2022).

Please be informed that the Government of Malaysia has declared National Statistics Day (MyStats Day) on October 20 each year. MyStats Day theme is "Connecting the World with Data We Can Trust".

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## KATA PENGANTAR

Penerbitan Statistik Ekonomi Tahunan 2022, Perkhidmatan Pengangkutan dan Penyimpanan memaparkan statistik utama bagi pekhidmatan pengangkutan dan penyimpanan yang diperolehi daripada Survei Ekonomi Tahunan 2022 bagi tahun rujukan 2021. Liputan industri yang digunakan adalah berdasarkan Seksyen H; Pengangkutan dan Penyimpanan, Klasifikasi Industri Malaysia (MSIC) 2008 Versi 1.0, selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4*.

Statistik yang dilaporkan dalam penerbitan ini adalah nilai output kasar, nilai input perantara, nilai ditambah, bilangan pekerja, gaji & upah dan nilai harta tetap. Statistik ini juga boleh digunakan sebagai sumber rujukan oleh kerajaan, ahli ekonomi, ahli akademik, pihak swasta serta individu.

Penerbitan ini mengandungi tiga bahagian utama. Bahagian pertama membentangkan infografik dan ringkasan penemuan. Bahagian kedua memuatkan jadual terperinci manakala di bahagian ketiga menerangkan aspek teknikal bagi skop & liputan, konsep & definisi untuk memudahkan pengguna memahami statistik yang diterbitkan.

Jabatan Perangkaan Malaysia merakamkan setinggi-tinggi penghargaan atas kerjasama dan sumbangan yang diberikan oleh semua pihak dalam menjayakan survei ini. Setiap maklum balas dan cadangan untuk penambahbaikan penerbitan ini pada masa akan datang amatlah dihargai.

**DATO' SRI DR. MOHD UZIR MAHIDIN**

Ketua Perangkawan Malaysia

**Mac 2023**

## **PREFACE**

*The Annual Economic Statistics 2022, Transportation and Storage services presents main statistics on transportation and storage services of Annual Economic Survey, 2022 for the reference year 2021. The statistics represent industry as classified in Section H: Transportation and Storage, Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0, in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4.*

*Statistics reported in this publication are value of gross output, intermediate input, value added, numbers of persons engaged, salaries & wages and value of fixed assets. These statistics are also useful as a source of reference by government agencies, economists, academicians, private sectors and individuals.*

*This publication is divided into three main parts. The first part displays the infographic and summary of findings. The second part shows the detailed statistical table, meanwhile the third part describes technical aspects on scope & coverage and concepts & definitions to assist users in understanding the published statistics.*

*Department of Statistics Malaysia (DOSM) gratefully acknowledges the co-operation and contribution rendered by all parties in making this publication a success. Every feedback and suggestion towards improving future publications is highly appreciated.*

**DATO' SRI DR. MOHD UZIR MAHIDIN**

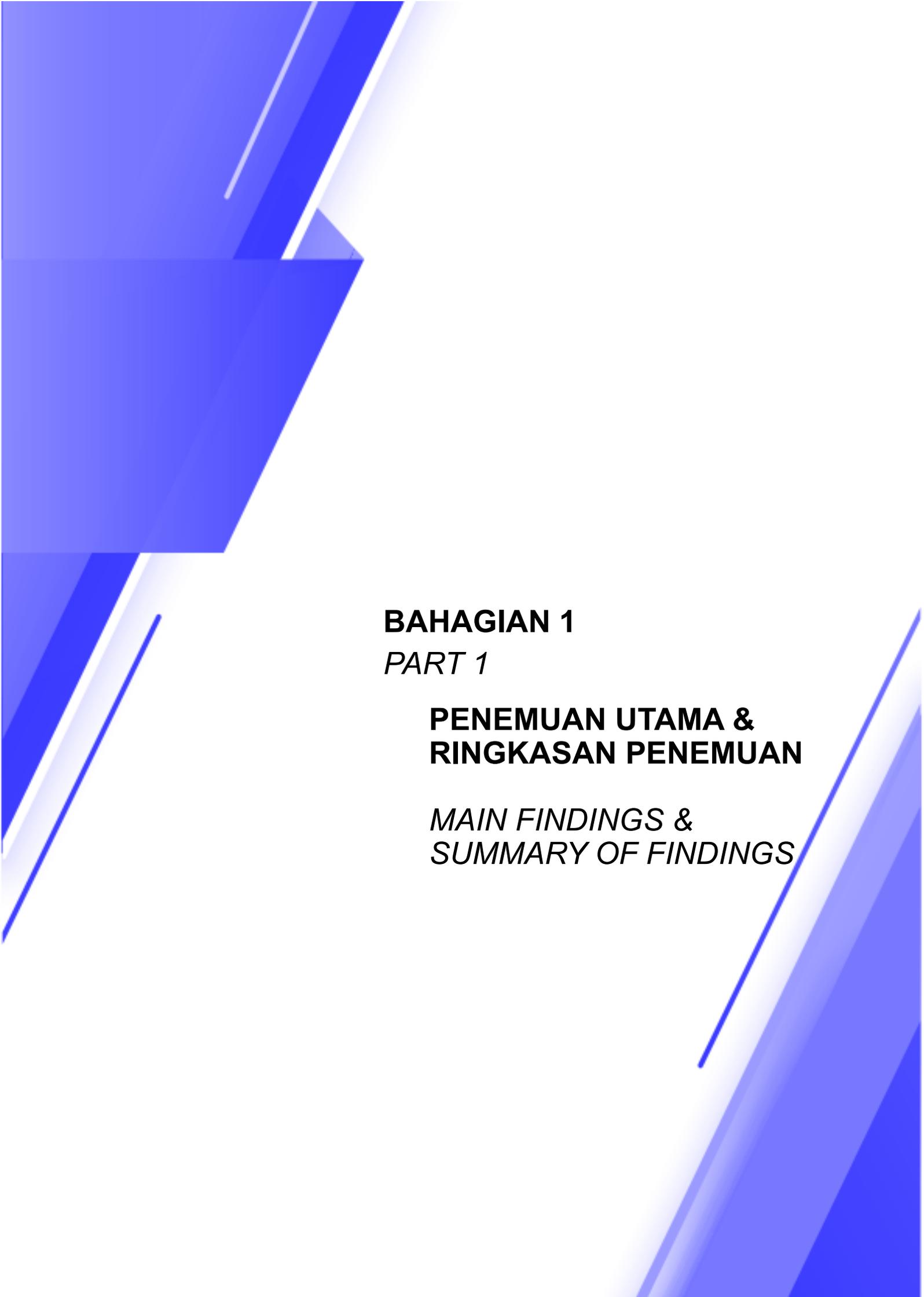
*Chief Statistician, Malaysia*

**March 2023**

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**BAHAGIAN 1**

*PART 1*

**PENEMUAN UTAMA &  
RINGKASAN PENEMUAN**

*MAIN FINDINGS &  
SUMMARY OF FINDINGS*

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# STATISTIK EKONOMI TAHUNAN, 2022 PERKHIDMATAN PENGANGKUTAN DAN PENYIMPANAN

## PENEMUAN UTAMA

### Nilai Output Kasar



2021: RM102.0 bilion  
2020: RM99.8 bilion

▲ 2.2%

### Nilai Input Perantara



2021: RM58.5 bilion  
2020: RM56.4 bilion

▲ 3.7%

### Nilai Ditambah



2021: RM43.6 bilion  
2020: RM43.4 bilion

▲ 0.2%

### Bilangan Pekerja



2021: 457,484 orang  
2020: 440,536 orang

▲ 3.8%

### Gaji dan Upah Dibayar



2021: RM15.6 bilion  
2020: RM15.6 bilion

▼ -0.3%

### Nilai Harta Tetap



2021: RM192.2 bilion  
2020: RM187.0 bilion

▲ 2.8%

Perubahan peratusan (%): Tahun-ke-tahun



Sumber: Statistik Ekonomi Tahunan, Perkhidmatan Pengangkutan dan Penyimpanan, 2022,  
Jabatan Perangkaan Malaysia (DOSM)



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# ANNUAL ECONOMIC STATISTICS, 2022 TRANSPORTATION AND STORAGE SERVICES

## MAIN FINDINGS

### Value of Gross Output



**2021: RM102.0 billion**  
2020: RM99.8 billion  
**▲ 2.2%**

### Value of Intermediate Input



**2021: RM58.5 billion**  
2020: RM56.4 billion  
**▲ 3.7%**

### Value Added



**2021: RM43.6 billion**  
2020: RM43.4 billion  
**▲ 0.2%**

### Number of Persons Engaged



**2021: 457,484 persons**  
2020: 440,536 persons  
**▲ 3.8%**

### Salaries & Wages Paid



**2021: RM15.6 billion**  
2020: RM15.6 billion  
**▼ -0.3%**

### Value of Fixed Assets



**2021: RM192.2 billion**  
2020: RM187.0 billion  
**▲ 2.8%**

Percentage change (%): Year-on-year



Source: Annual Economic Statistics, Transportation and Storage, 2022,  
Department of Statistics Malaysia (DOSM)

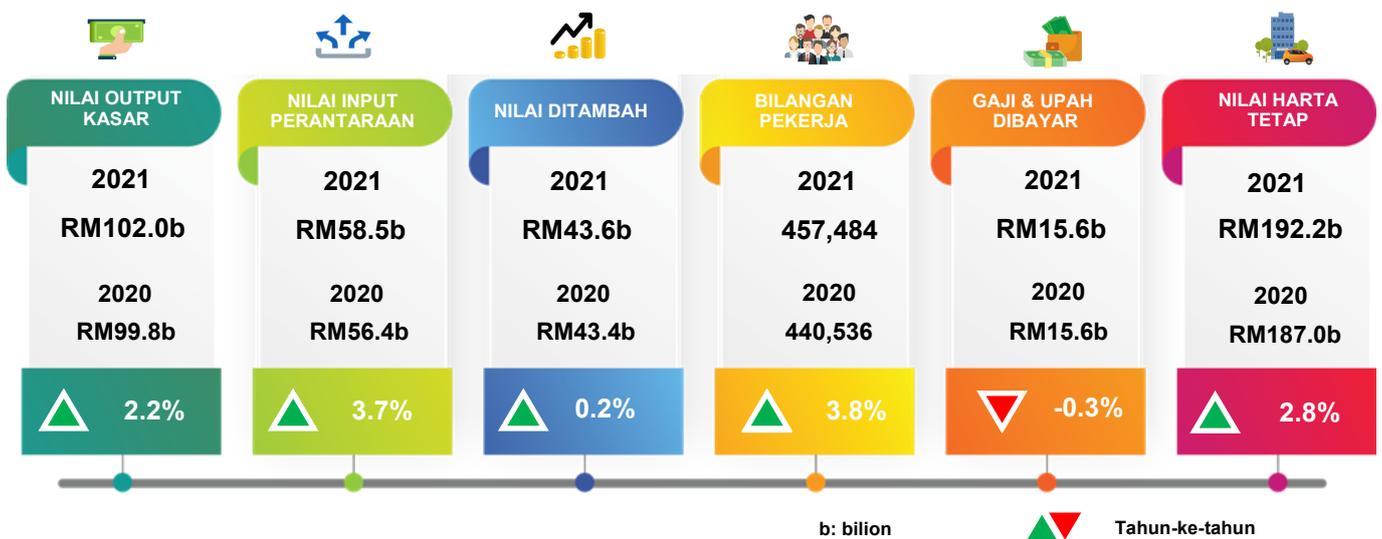
## RINGKASAN PENEMUAN

### 1. PENGENALAN

Penerbitan ini memaparkan statistik bagi perkhidmatan pengangkutan dan penyimpanan yang diperoleh daripada Survei Ekonomi Tahunan 2022 bagi tahun rujukan 2021. Perkhidmatan pengangkutan dan penyimpanan merangkumi perkhidmatan pengangkutan darat; pengangkutan air; pengangkutan udara; pengangkutan & aktiviti sokongan dan pos & kurier. Statistik utama seperti nilai output kasar, nilai input perantaraan, nilai ditambah, bilangan pekerja, gaji & upah yang dibayar dan nilai harta tetap yang dimiliki turut dipaparkan dalam penerbitan ini.

### 2. PRESTASI PERKHIDMATAN PENGANGKUTAN DAN PENYIMPANAN

#### Paparan 1: Statistik Utama bagi Perkhidmatan Pengangkutan dan Penyimpanan, 2020 dan 2021



Perkhidmatan pengangkutan dan penyimpanan mencatatkan nilai output kasar sebanyak RM102.0 bilion pada tahun 2021 berbanding RM99.8 bilion pada tahun 2020 dengan pertumbuhan sebanyak 2.2 peratus. Nilai input perantaraan pula meningkat sebanyak RM2.1 bilion, mencatatkan RM58.5 bilion dengan peningkatan 3.7 peratus, menghasilkan nilai ditambah sebanyak RM43.6 bilion pada tahun 2021. Bilangan pekerja subsektor ini turut meningkat 3.8 peratus, dengan mencatatkan 457,484 orang berbanding 440,536 orang pada tahun 2020. Sementara itu, jumlah gaji & upah yang dibayar pada tahun 2021 adalah RM15.6 bilion berbanding RM15.6 bilion pada tahun 2020, berkurang 0.3 peratus seperti yang ditunjukkan dalam **Paparan 1**.

## RINGKASAN PENEMUAN

### 3. NILAI OUTPUT KASAR

Bagi tahun 2021, nilai output kasar perkhidmatan pengangkutan dan penyimpanan mencatatkan RM102.0 billion dengan pertumbuhan 2.2 peratus berbanding tahun 2020. Penggudangan & aktiviti sokongan merupakan penyumbang tertinggi dengan nilai output kasar sebanyak RM41.8 billion (40.9%) diikuti pengangkutan darat sebanyak RM26.8 billion (26.3%) dan pengangkutan air sebanyak RM19.5 billion (19.1%) seperti yang ditunjukkan dalam **Paparan 2**. Sumbangan ketiga-tiga aktiviti ini merekodkan 86.3 peratus kepada keseluruhan nilai output kasar perkhidmatan pengangkutan dan penyimpanan.

Selain itu, aktiviti pos dan kurier mencatatkan nilai output kasar RM8.5 billion (8.3%) manakala pengangkutan udara mencatatkan RM5.5 billion pada tahun 2021 dengan sumbangan 5.4 peratus.

#### Paparan 2: Nilai Output Kasar bagi Perkhidmatan Pengangkutan dan Penyimpanan mengikut Aktiviti, 2021



#### 3.1 NILAI OUTPUT KASAR MENGIKUT NEGERI

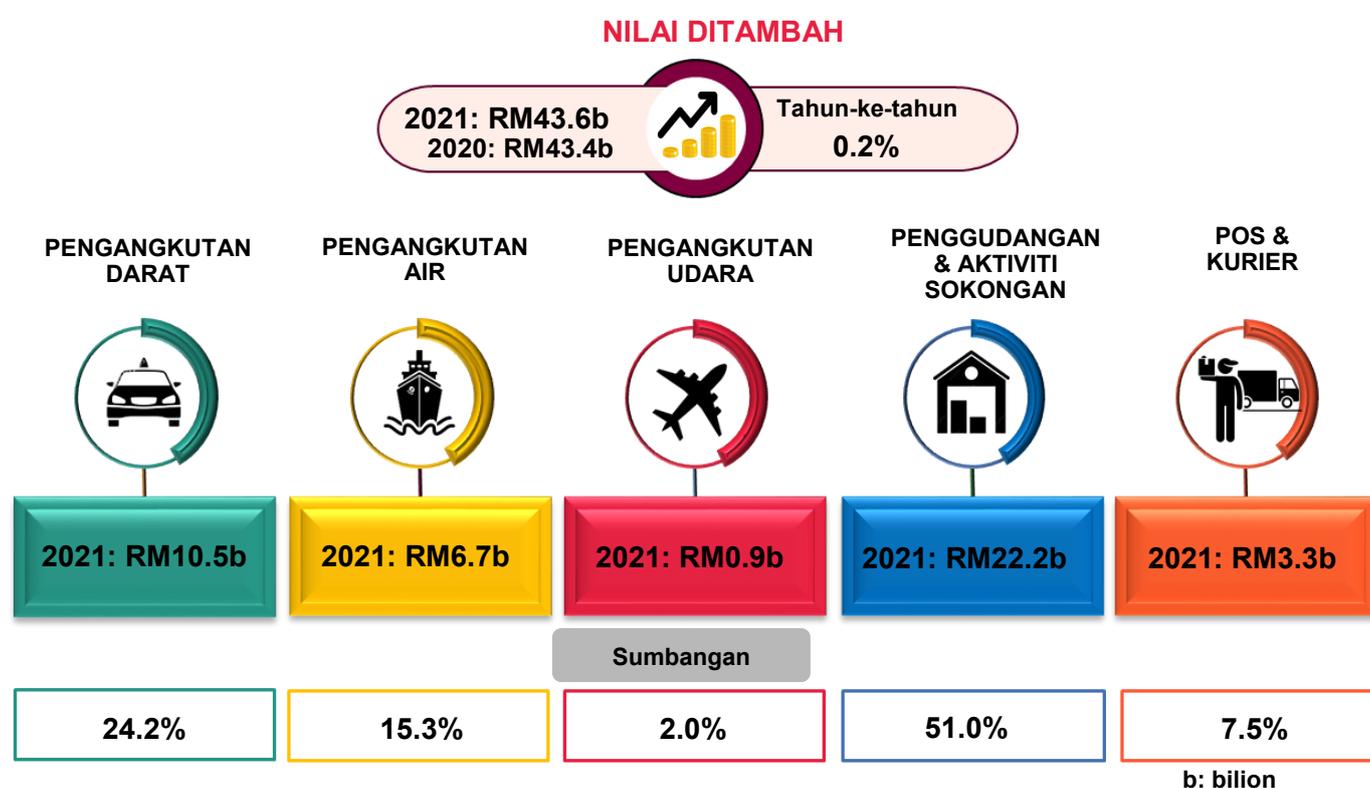
Negeri Selangor kekal sebagai penyumbang utama nilai output kasar bagi perkhidmatan pengangkutan dan penyimpanan pada tahun 2021 dengan merekodkan RM55.3 billion (54.2%). Ini diikuti oleh W.P. Kuala Lumpur dan Johor dengan nilai output kasar masing-masing sebanyak RM16.7 billion (16.4%) dan RM7.9 billion (7.7%). Sumbangan ketiga-tiga negeri ini adalah sebanyak RM79.9 billion (78.3%) terhadap keseluruhan subsektor ini.

## RINGKASAN PENEMUAN

### 4. NILAI DITAMBAH

Nilai ditambah perkhidmatan pengangkutan dan penyimpanan pada tahun 2021 adalah sebanyak RM43.6 bilion dengan pertumbuhan sebanyak 0.2 peratus. **Paparan 3** menunjukkan penggudangan & aktiviti sokongan mencatatkan nilai ditambah tertinggi sebanyak RM22.2 bilion (51.0%). Ini diikuti pengangkutan darat sebanyak RM10.5 bilion (24.2%) dan pengangkutan air sebanyak RM6.7 bilion (15.3%). Pengangkutan udara dan pos & kurier masing-masing mencatatkan RM0.9 bilion dan RM3.3 bilion.

### Paparan 3: Nilai Ditambah bagi Perkhidmatan Pengangkutan dan Penyimpanan mengikut Aktiviti, 2021



#### 4.1 NILAI DITAMBAH MENGIKUT NEGERI

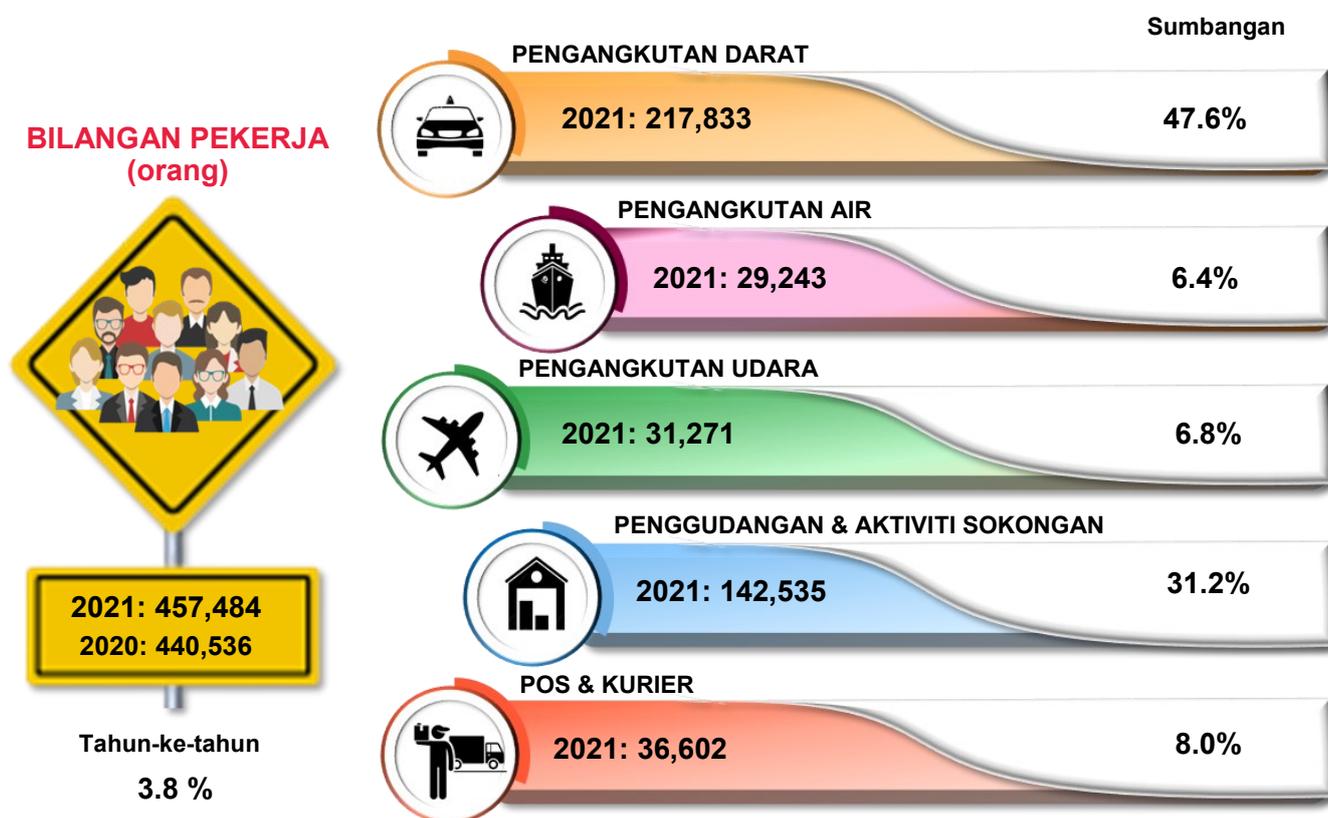
Untuk nilai ditambah mengikut negeri pada tahun 2021, Selangor, W.P. Kuala Lumpur dan Johor merupakan penyumbang utama nilai ditambah bagi perkhidmatan pengangkutan dan penyimpanan. Selangor mencatatkan nilai ditambah tertinggi iaitu RM23.3 bilion dengan sumbangan sebanyak 53.4 peratus, diikuti W.P. Kuala Lumpur sebanyak RM6.8 bilion (15.6%) dan Johor sebanyak RM3.5 bilion (8.0%). Sumbangan nilai ditambah bagi ketiga-tiga negeri ini kepada perkhidmatan pengangkutan dan penyimpanan ialah sebanyak RM33.6 bilion (77.0%).

## RINGKASAN PENEMUAN

### 5. BILANGAN PEKERJA DAN KATEGORI PEKERJA

Perkhidmatan pengangkutan dan penyimpanan pada tahun 2021 merekodkan bilangan pekerja seramai 457,484 orang, meningkat 3.8 peratus berbanding tahun sebelumnya (2020: 440,536). Pengangkutan darat merekodkan bilangan pekerja tertinggi iaitu 217,833 orang, atau 47.6 peratus. Ini diikuti oleh pengudangan & aktiviti sokongan dengan pekerja seramai 142,535 orang atau 31.2 peratus dan pos & kurier seramai 36,602 orang atau 8.0 peratus seperti yang ditunjukkan di **Paparan 4**. Ketiga-tiga aktiviti ini menyumbang sebanyak 86.8% kepada jumlah bilangan pekerja dalam subsektor pengangkutan dan penyimpanan pada tahun 2021.

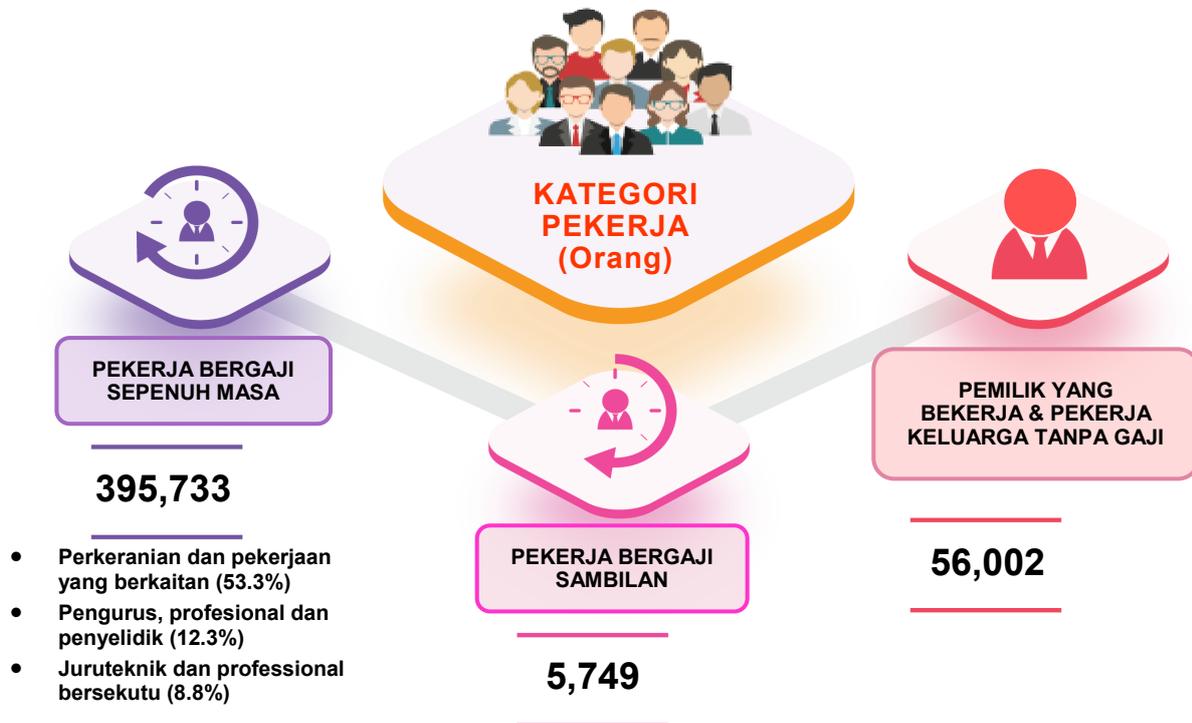
**Paparan 4: Bilangan Pekerja bagi Perkhidmatan Pengangkutan dan Penyimpanan mengikut Aktiviti, 2021**



Bagi jumlah pekerja mengikut kategori, pekerja bergaji sepenuh masa merekodkan seramai 395,733 orang dengan sumbangan 86.5 peratus. Pemilik yang bekerja dan pekerja keluarga tidak bergaji pula mencatatkan 56,002 orang (12.2%) dan pekerja bergaji sambilan adalah seramai 5,749 orang (1.3%) seperti yang ditunjukkan di **Paparan 5**. Untuk pekerja bergaji sepenuh masa, kategori perkeranian dan pekerjaan yang berkaitan merekodkan bilangan pekerja yang tertinggi iaitu seramai 210,988 orang (53.3%) diikuti oleh pengurus, profesional dan penyelidik (48,578 orang; 12.3%) dan juruteknik dan profesional bersekutu (35,018 orang; 8.8%).

## RINGKASAN PENEMUAN

### Paparan 5: Bilangan Pekerja bagi Perkhidmatan Pengangkutan dan Penyimpanan mengikut kategori Pekerja, 2021

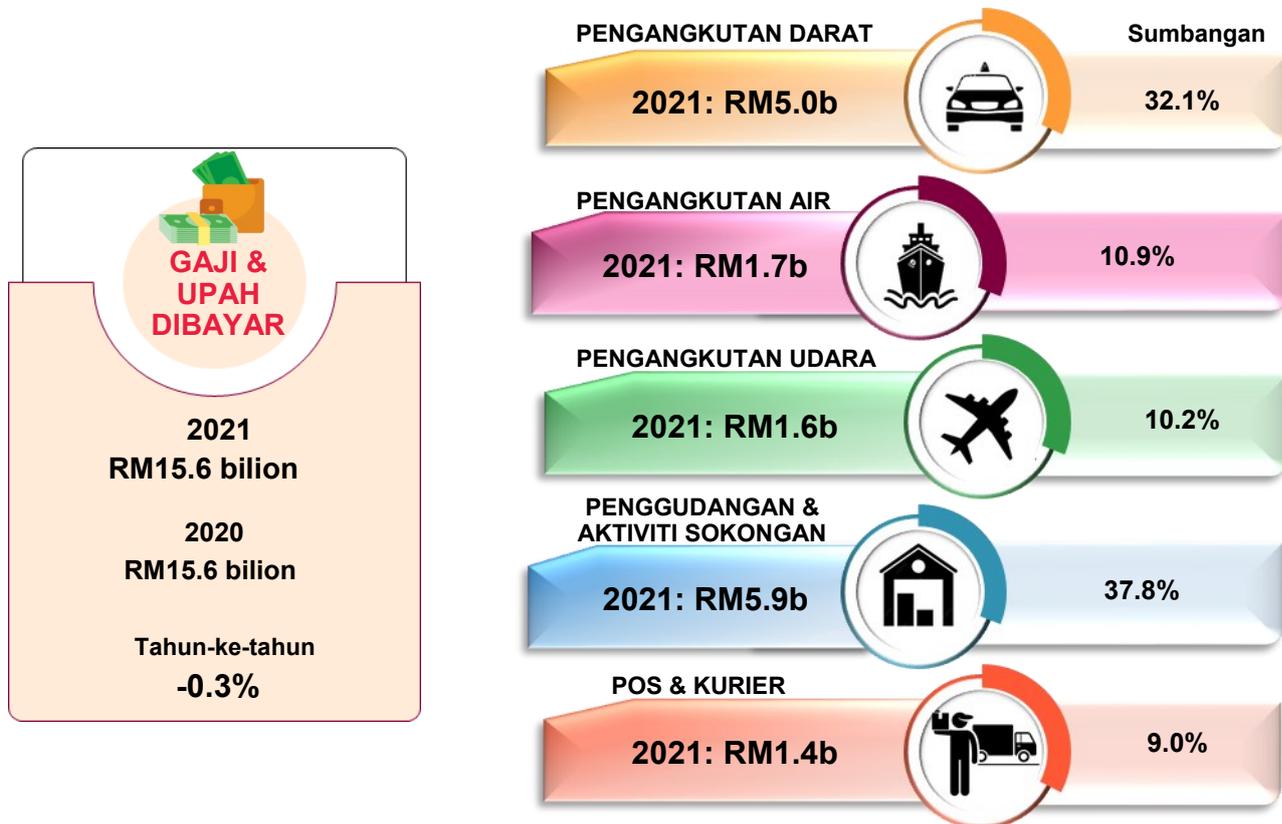


## 6. GAJI & UPAH

Jumlah gaji & upah yang dibayar dalam perkhidmatan pengangkutan dan penyimpanan pada tahun 2021 adalah sebanyak RM15.6 bilion atau menurun 0.3 peratus berbanding tahun 2020. Aktiviti pengangkutan & aktiviti sokongan merekodkan jumlah gaji & upah tertinggi iaitu RM5.9 bilion atau 37.8 peratus daripada keseluruhan gaji & upah yang dibayar. Penyumbang kedua tertinggi adalah pengangkutan darat iaitu RM5.0 bilion atau 32.1 peratus diikuti dengan pengangkutan air RM1.7 bilion atau 10.9 peratus seperti yang ditunjukkan dalam **Paparan 6**. Sumbangan gaji & upah bagi ketiga-tiga aktiviti ini kepada perkhidmatan pengangkutan dan penyimpanan adalah RM12.6 bilion (80.8%). Secara purata, gaji & upah yang diterima oleh pekerja dalam perkhidmatan pengangkutan dan penyimpanan pada tahun 2021 adalah sebanyak RM3,233 sebulan.

## RINGKASAN PENEMUAN

### Paparan 6: Gaji & Upah bagi Perkhidmatan Pengangkutan dan Penyimpanan mengikut Aktiviti, 2021



b: bilion

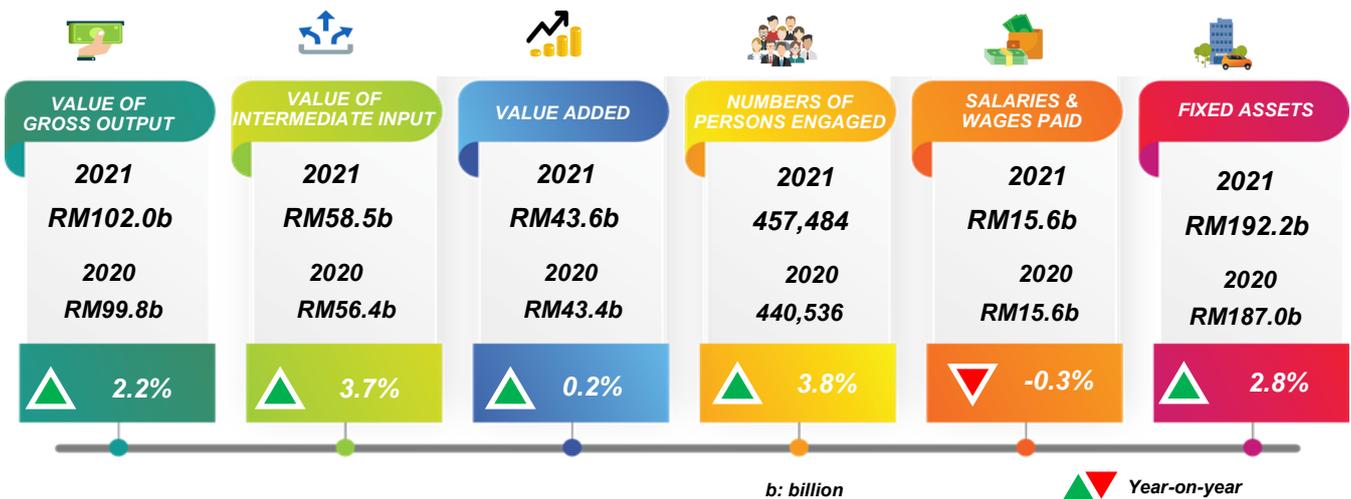
## SUMMARY OF FINDINGS

### 1. INTRODUCTION

This publication presents statistics on the transportation and storage services which obtained from the Annual Economic Survey 2022 for reference year 2021. Transportation and storage services comprises activity of land transport; water transport; air transport; warehousing & support activities and post & courier services. The main statistics such as the value of gross output, value of intermediate input, value added, number of persons engaged, salaries & wages paid as well as value of fixed assets owned also presented in this publication.

### 2. PERFORMANCE OF TRANSPORTATION AND STORAGE SERVICES

**Exhibit 1: Principle Statistics of Transportation and Storage Services, 2020 and 2021**



The transportation and storage services recorded RM102.0 billion for value of gross output in 2021 compared to RM99.8 billion in 2020 with the growth of 2.2 per cent. The value of intermediate input increased RM2.1 billion, recorded RM58.5 billion with growth of 3.7 per cent, thus resulting the value added of RM43.6 billion for the year 2021. The number of persons engaged in this sub-sector also increased 3.8 per cent, recorded 457,484 persons as compared to 440,536 persons in 2020. Meanwhile, the salaries & wages paid in 2021 was RM15.6 billion compared to RM15.6 billion in 2020, decreased 0.3 per cent as shown in **Exhibit 1**.

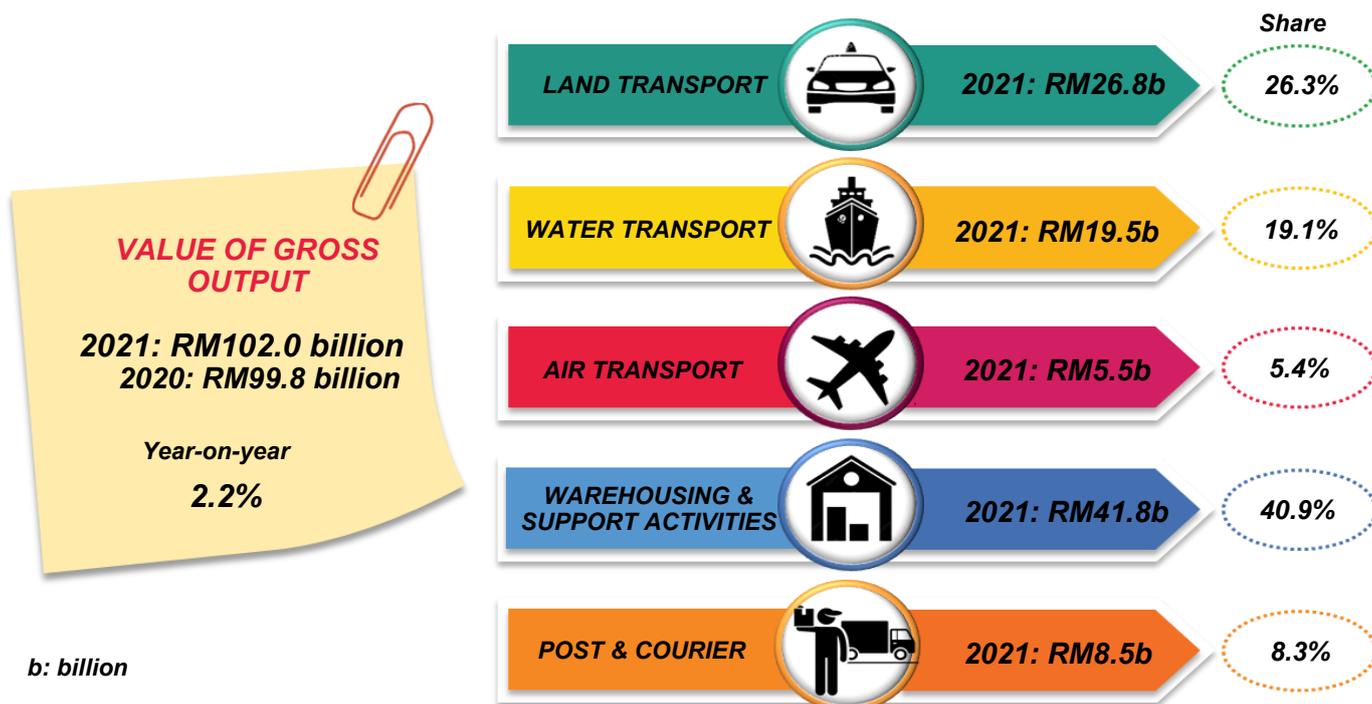
## SUMMARY OF FINDINGS

### 3. VALUE OF GROSS OUTPUT

In 2021, the value of gross output in transportation and storage services recorded 102.0 billion with growth 2.2 per cent compared to 2020. Warehousing & support activities was the largest contributor with the gross output RM41.8 billion (40.9%) followed by land transport of RM26.8 billion (26.3%) and water transport of RM19.5 billion (19.1%) as shown in **Exhibit 2**. These three activities contributed 86.3 per cent to the total value of gross output in transportation and storage services.

Post & courier activity recorded value of gross output of RM8.5 billion (8.3%) while air transport recorded RM5.5 billion for year 2021 with share 5.4 per cent.

**Exhibit 2: Value of Gross Output for Transportation and Storage Services by Activities, 2021**



#### 3.1 VALUE OF GROSS OUTPUT BY STATE

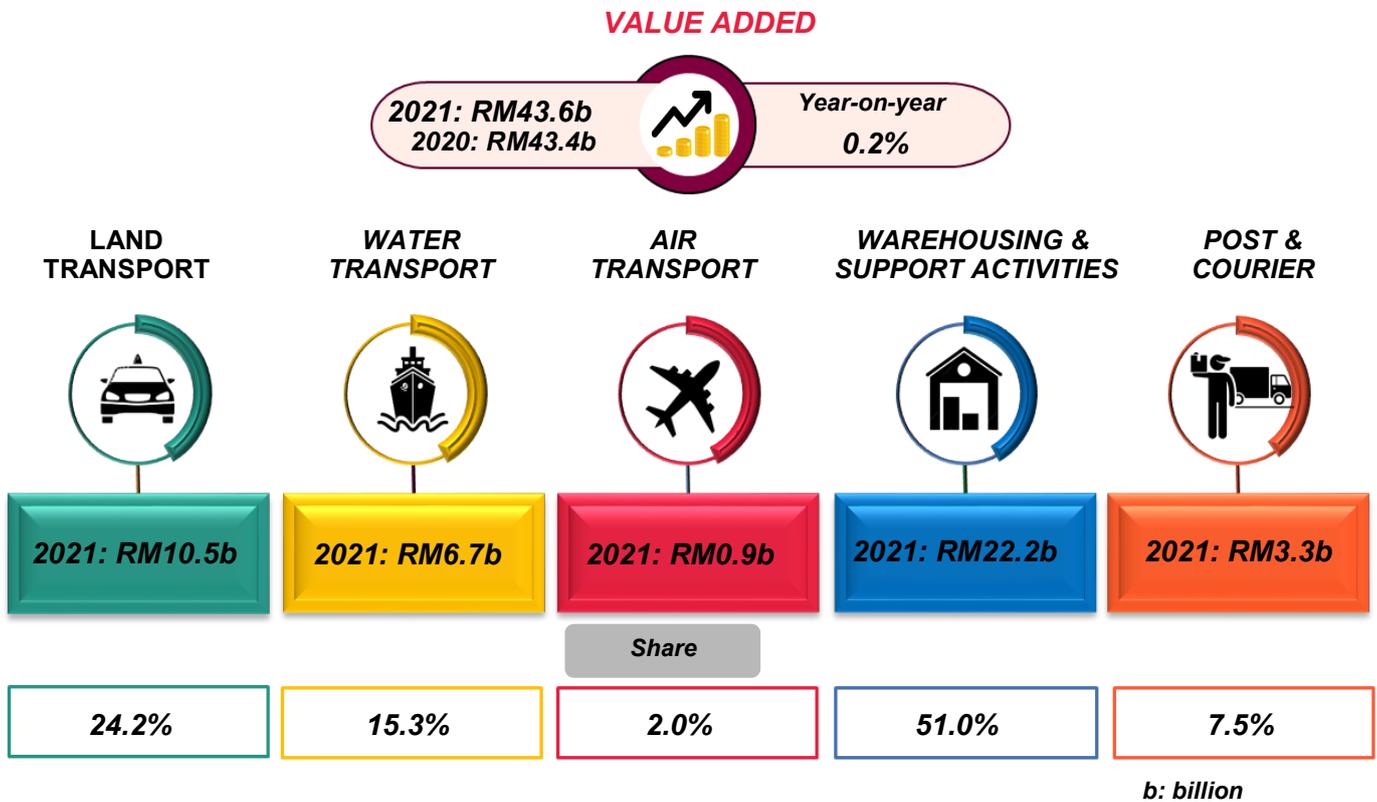
Selangor remained as the main contributor to the value of gross output for transportation and storage services in 2021 by recording RM55.3 billion (54.2%). This was followed by W.P. Kuala Lumpur and Johor with the gross output value of RM16.7 billion (16.4%) and RM7.9 billion (7.7%) respectively. The total value of gross output for these three states amounted to RM79.9 billion (78.3%).

## SUMMARY OF FINDINGS

### 4. VALUE ADDED

The total value added recorded in transportation and storage services for 2021 was RM43.6 billion with growth 0.2 per cent. **Exhibit 3** shows that the warehousing & support activities was the highest value added in 2021 by recording RM22.2 billion (51.0%). This was followed by the land transport of RM10.5 billion (24.2%) and water transport of RM6.7 billion (15.3%). Air transport and post & courier recorded RM0.9 billion and RM3.3 billion respectively.

**Exhibit 3: Value Added for Transportation and Storage Services by Activities, 2021**



### 4.1 VALUE ADDED BY STATE

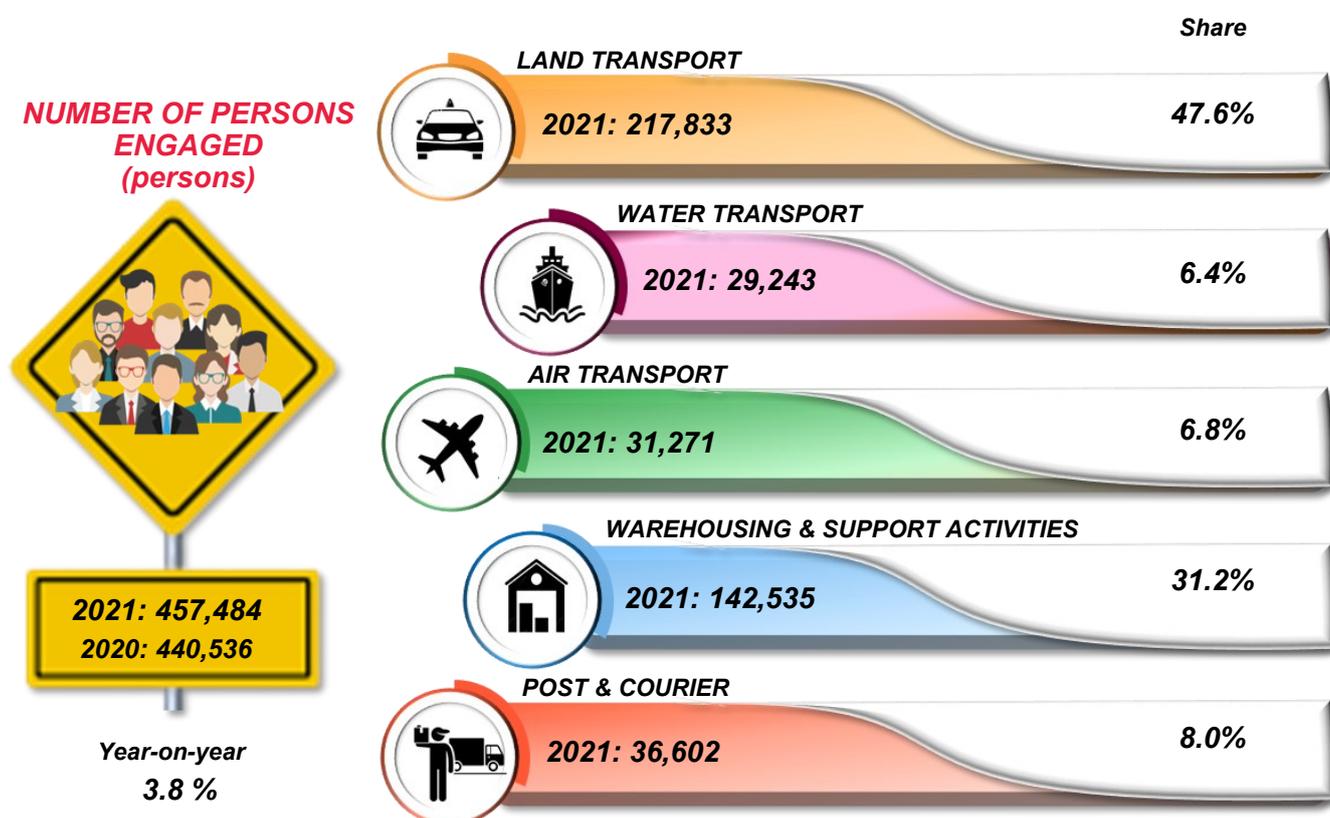
Value added by state in 2021 indicated that three states i.e. Selangor, W.P. Kuala Lumpur and Johor were the main contributors to the value added of transportation and storage services. Selangor registered the highest value added of RM23.3 billion with share 53.4 per cent, followed by W.P. Kuala Lumpur of RM6.8 billion (15.6%) and Johor with RM3.5 billion (8.0%). The share of value added for three states to transportation and storage services for were RM33.6 billion (77.0%).

## SUMMARY OF FINDINGS

### 5. NUMBER OF PERSONS ENGAGED AND CATEGORY OF WORKERS

Transportation and storage services recorded the total number of persons engaged of 457,484 persons in 2021, increase 3.8 per cent as compared to the previous year (2020: 440,536). Land transport registered the highest number of persons engaged of 217,833 persons or 47.6 per cent. This was followed by warehousing and support activities with 142,535 persons or 31.2 per cent and post & courier with 36,602 persons or 8.0 per cent as shown in **Exhibit 4**. These three activities contributed 86.8% to the total number of persons engaged in the transportation and storage services in 2021.

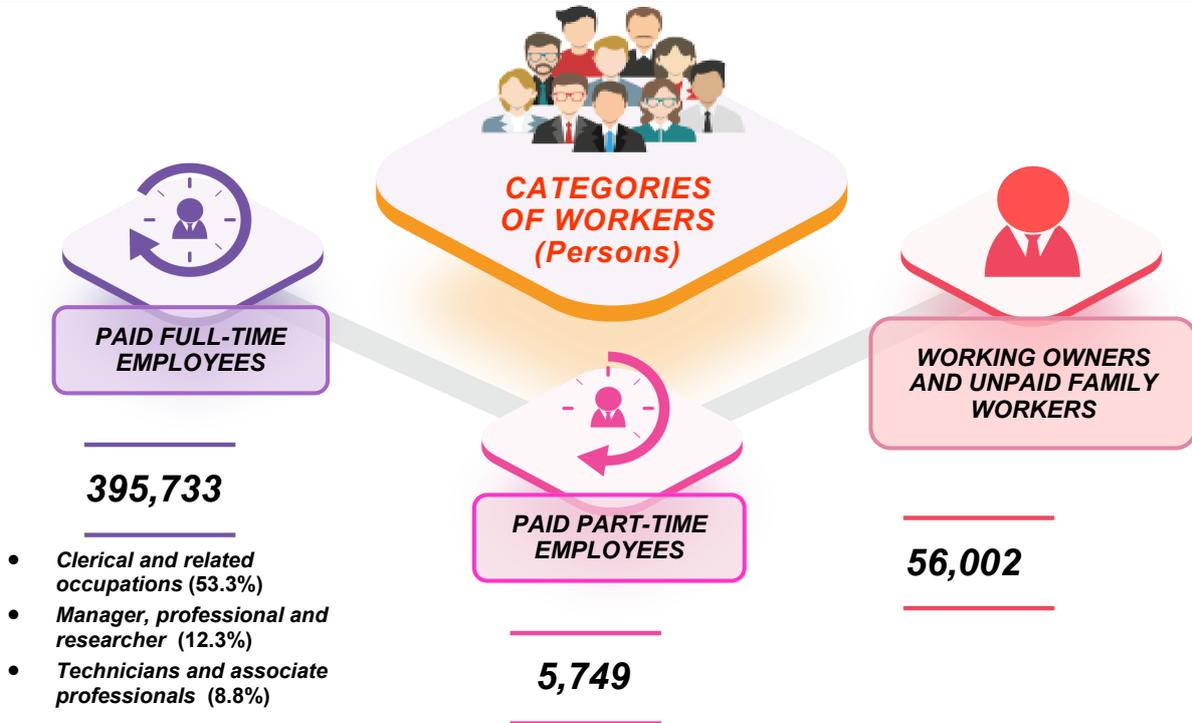
**Exhibit 4: Number of Persons Engaged for Transportation and Storage Services by Activity, 2021**



For number of persons engaged by category, paid full-time employees recorded a total of 395,733 persons with percentage share of 86.5 per cent. Working owners & unpaid family workers registered 56,002 persons (12.2%) and paid part-time employees 5,749 persons (1.3%) as shown in **Exhibit 5**. For the total number of full-time employees, clerical and related occupations recorded the highest number of persons engaged of 210,988 persons (53.3%), followed by manager, professional and researcher (48,578 persons; 12.3%) and technicians and associate professionals (35,018 persons; 8.8%).

## SUMMARY OF FINDINGS

### Exhibit 5: Number of Persons Engaged in Transportation and Storage Services by Category of Workers, 2021

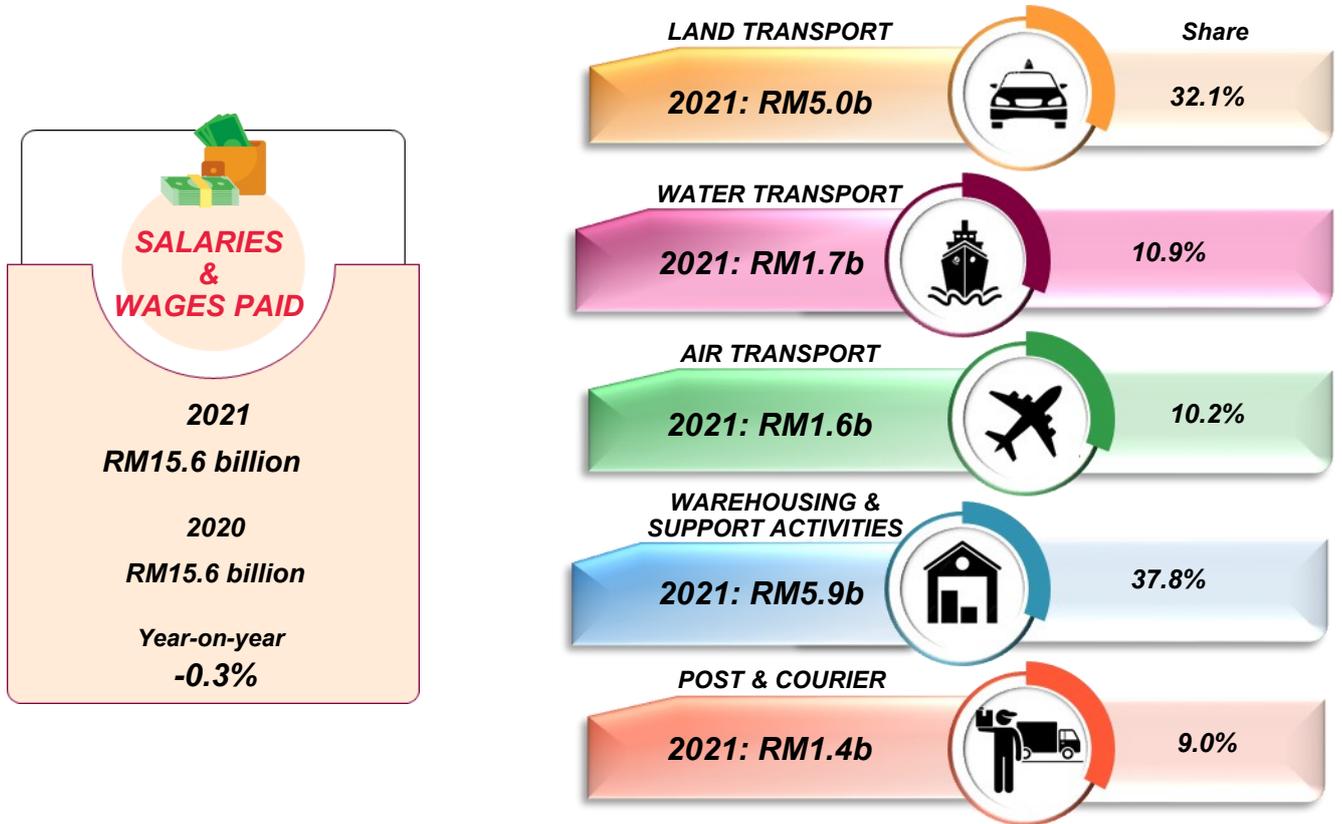


## 6. SALARIES & WAGES

The total salaries & wages paid in transportation and storage services for the year 2021 was RM15.6 billion, decrease 0.3 per cent compared to 2020. Warehousing & support activities recorded the highest salaries & wages of RM5.9 billion or 37.8 per cent of the total salaries & wages paid. The second highest was land transport with RM5.0 billion or 32.1 per cent followed by water transport with RM1.7 billion or 10.9 per cent as shown in **Exhibit 6**. The salaries & wages from these three activities was RM12.6 billion (80.8%) from the total transportation and storage services. On average, salaries & wages received by employees in the transportation and storage services was RM3,233 per month.

## SUMMARY OF FINDINGS

### Exhibit 6: Salaries & Wages in Transportation and Storage Services by Activity, 2021



b: billion



**BAHAGIAN 2**  
*PART 2*

**JADUAL**  
*TABLES*

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**Jadual 1: Statistik Utama Perkhidmatan Pengangkutan dan Penyimpanan, 2015, 2017-2021***Table 1: Principal Statistics of Transportation and Storage Services, 2015, 2017-2021*

<b>Tahun</b>	<b>Nilai output kasar</b>	<b>Nilai input perantaraan</b>	<b>Nilai ditambah</b>	<b>Jumlah pekerja</b>	<b>Gaji &amp; upah yang dibayar</b>	<b>Nilai harta tetap</b>
<i>Year</i>	<i>Value of gross output</i>	<i>Value of intermediate input</i>	<i>Value added</i>	<i>Total number of persons engaged</i>	<i>Salaries &amp; wages paid</i>	<i>Value of fixed assets</i>
	<b>(RM '000)</b>	<b>(RM '000)</b>	<b>(RM '000)</b>		<b>(RM '000)</b>	<b>(RM '000)</b>
<b>2021</b>	102,041,689	58,490,092	43,551,597	457,484	15,574,266	192,230,745
<b>2020</b>	99,847,998	56,400,436	43,447,562	440,536	15,617,095	187,007,098
<b>2019</b>	135,472,344	82,122,503	53,349,841	471,647	18,739,196	214,165,617
<b>2018</b>	127,606,915	77,316,133	50,290,782	453,497	17,415,610	200,905,832
<b>2017</b>	120,745,185	73,036,666	47,708,519	437,926	16,245,905	188,998,901
<b>2015</b>	109,237,374	65,490,249	43,747,125	411,273	14,254,121	168,941,099

**Jadual 1.1: Statistik Utama Perkhidmatan Pengangkutan dan Penyimpanan mengikut Aktiviti, 2021**

*Table 1.1: Principal Statistics of Transportation and Storage Services by Activities, 2021*

<b>Aktiviti</b>	<b>Nilai output kasar</b>	<b>Nilai input perantaraan</b>	<b>Nilai ditambah</b>	<b>Jumlah pekerja</b>	<b>Gaji &amp; upah yang dibayar</b>	<b>Nilai harta tetap</b>
<i>Activities</i>	<i>Value of gross output</i>	<i>Value of intermediate input</i>	<i>Value added</i>	<i>Total number of persons engaged</i>	<i>Salaries &amp; wages paid</i>	<i>Value of fixed assets</i>
	<b>(RM '000)</b>	<b>(RM '000)</b>	<b>(RM '000)</b>		<b>(RM '000)</b>	<b>(RM '000)</b>
<b>Jumlah</b> <i>Total</i>	<b>102,041,689</b>	<b>58,490,092</b>	<b>43,551,597</b>	<b>457,484</b>	<b>15,574,266</b>	<b>192,230,745</b>
<b>Pengangkutan darat</b> <i>Land transport</i>	26,776,307	16,241,120	10,535,187	217,833	4,964,738	16,184,205
<b>Pengangkutan air</b> <i>Water transport</i>	19,508,626	12,848,338	6,660,289	29,243	1,694,318	35,180,501
<b>Pengangkutan udara</b> <i>Air transport</i>	5,514,420	4,645,973	868,447	31,271	1,592,319	33,701,274
<b>Penggudangan dan aktiviti sokongan kepada pengangkutan</b> <i>Warehousing and support activities for transportation</i>	41,762,297	19,543,723	22,218,574	142,535	5,945,314	105,605,530
<b>Perkhidmatan pos &amp; kurier</b> <i>Post &amp; courier services</i>	8,480,039	5,210,938	3,269,101	36,602	1,377,576	1,559,236

**Jadual 2: Statistik Utama Perkhidmatan Pengangkutan dan Penyimpanan mengikut Negeri, 2021**  
*Table 2: Principal Statistics of Transportation and Storage Services by State, 2021*

Negeri	Nilai output kasar	Nilai input perantaraan	Nilai ditambah	Jumlah pekerja	Gaji & upah yang dibayar	Nilai harta tetap
<i>State</i>	<i>Value of gross output</i>	<i>Value of intermediate input</i>	<i>Value added</i>	<i>Total number of persons engaged</i>	<i>Salaries &amp; wages paid</i>	<i>Value of fixed assets</i>
	(RM '000)	(RM '000)	(RM '000)		(RM '000)	(RM '000)
<b>Jumlah</b>	<b>102,041,689</b>	<b>58,490,092</b>	<b>43,551,597</b>	<b>457,484</b>	<b>15,574,266</b>	<b>192,230,745</b>
<i>Total</i>						
<b>Johor</b>	7,908,226	4,411,849	3,496,376	53,472	1,522,812	16,608,754
<b>Kedah</b>	1,067,259	541,371	525,888	10,326	187,339	643,836
<b>Kelantan</b>	214,859	109,836	105,022	4,590	57,907	194,054
<b>Melaka</b>	760,935	430,118	330,816	6,327	131,210	406,631
<b>Negeri Sembilan</b>	1,101,355	680,732	420,623	9,377	210,936	600,789
<b>Pahang</b>	1,429,146	727,253	701,893	8,014	199,655	820,228
<b>Pulau Pinang</b>	4,717,856	2,341,151	2,376,705	23,777	651,090	4,701,172
<b>Perak</b>	1,767,078	968,130	798,948	14,199	310,848	1,121,273
<b>Perlis</b>	132,560	61,895	70,665	1,488	21,237	33,171
<b>Selangor</b>	55,263,880	31,937,801	23,326,079	206,099	8,989,991	110,440,205
<b>Terengganu</b>	1,318,032	670,054	647,978	6,258	140,864	2,261,855
<b>Sabah</b>	2,926,254	1,758,240	1,168,015	29,076	529,806	1,530,797
<b>Sarawak</b>	5,760,947	3,357,801	2,403,146	36,133	885,218	6,891,529
<b>W.P. Kuala Lumpur</b>	16,724,518	9,967,690	6,756,828	46,067	1,671,273	44,171,731
<b>W.P. Labuan</b>	922,769	511,505	411,264	1,937	53,679	1,802,027
<b>W.P. Putrajaya</b>	26,015	14,665	11,349	344	10,400	2,694

**Jadual 3: Bilangan Pekerja dan Gaji & Upah Perkhidmatan Pengangkutan dan Penyimpanan mengikut Kategori Pekerja, 2021**  
*Table 3: Number of Persons Engaged and Salaries & Wages of Transportation and Storage Services by Category of Workers, 2021*

Kategori pekerja <i>Category of workers</i>	Bilangan pekerja <i>Number of persons engaged</i>			Gaji & upah yang dibayar <i>Salaries &amp; wages paid</i>  (RM '000)
	Jumlah <i>Total</i>	Lelaki <i>Male</i>	Perempuan <i>Female</i>	
<b>Jumlah</b> <i>Total</i>	<b>457,484</b>	<b>351,119</b>	<b>106,365</b>	<b>15,574,266</b>
<b>Jumlah pemilik yang bekerja dan pekerja keluarga tidak bergaji</b> <i>Total working proprietors and unpaid family workers</i>	<b>56,002</b>	<b>51,100</b>	<b>4,902</b>	-
<b>Jumlah pekerja bergaji (sepenuh masa)</b> <i>Total paid employees (full-time)</i>	<b>395,733</b>	<b>295,190</b>	<b>100,543</b>	<b>15,493,434</b>
<b>Pengurus, profesional dan penyelidik</b> <i>Manager, professional and researcher</i>	48,578	35,305	13,273	5,013,434
<b>Juruteknik dan profesional bersekutu</b> <i>Technicians and associate professionals</i>	35,018	29,433	5,585	1,996,279
<b>Perkeranian dan pekerjaan yang berkaitan*</b> <i>Clerical and related occupations</i>	210,988	147,214	63,774	6,354,155
<b>Pekerja asas</b> <i>Elementary occupation</i>	101,149	83,238	17,911	2,129,565
<b>Pekerja bergaji (sambilan)</b> <i>Paid employees (part-time)</i>	<b>5,749</b>	<b>4,829</b>	<b>920</b>	<b>80,832</b>

\* Termasuk pekerja sokongan perkeranian, pekerja perkhidmatan & jualan, pekerja kemahiran & pekerja pertukangan yang berkaitan dan operator mesin & loji pemasangan  
*Includes clerical support workers, service & sales workers, craft & related trades workers and plant & machine operators & assemblers*

**Jadual 4: Bilangan Pekerja dan Gaji & Upah Perkhidmatan Pengangkutan dan Penyimpanan mengikut Kategori Kemahiran dan Jantina, 2021**

*Table 4: Number of Persons Engaged and Salaries & Wages of Transportation and Storage Services by Category of Skills and Sex, 2021*

Kategori kemahiran <i>Category of skilled</i>	Bilangan pekerja <i>Number of persons engaged</i>			Gaji & upah yang dibayar <i>Salaries &amp; wages paid</i>
	Jumlah <i>Total</i>	Lelaki <i>Male</i>	Perempuan <i>Female</i>	
<b>Jumlah</b>	<b>395,733</b>	<b>295,190</b>	<b>100,543</b>	<b>15,493,434</b>
* Mahir <i>Skilled</i>	83,596	64,738	18,858	7,009,714
** Separuh mahir <i>Semi-skilled</i>	210,988	147,214	63,774	6,354,155
*** Berkemahiran rendah <i>Low-skilled</i>	101,149	83,238	17,911	2,129,565

\* **Termasuk pengurusan & profesional dan juruteknik & profesional bersekutu**

*Includes managers & professionals and technicians & associate professionals*

\*\* **Termasuk pekerja sokongan perkeranian, pekerja perkhidmatan & jualan, pekerja kemahiran & pekerja pertukangan yang berkaitan dan operator mesin & loji pemasangan**

*Includes clerical support workers, service & sales workers, craft & related trades workers and plant & machine operators & assemblers*

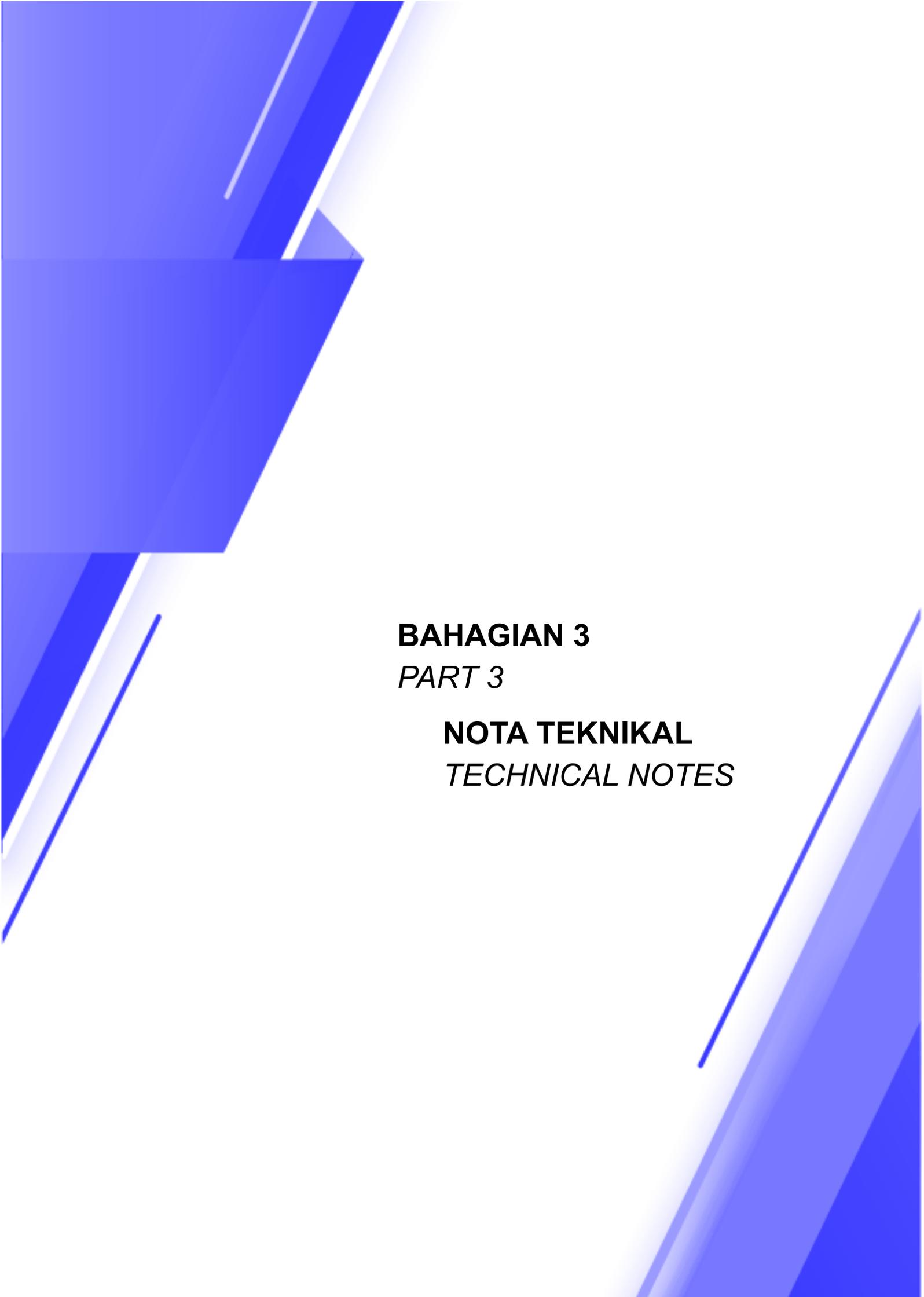
\*\*\* **Termasuk pekerja asas**

*Includes elementary occupations*

**Jadual 5: Perbelanjaan Modal dan Nilai Harta Tetap Perkhidmatan Pengangkutan dan Penyimpanan, 2021**

*Table 5: Capital Expenditure and Value of Fixed Asset of Transportation and Storage Services, 2021*

Subsektor <i>Sub-sector</i>	Perbelanjaan modal <i>Capital expenditure</i>	Pelupusan <i>Disposal</i>	Susut nilai <i>Depreciation</i>	Nilai Harta Tetap <i>Value of fixed assets</i>
	(RM '000)	(RM '000)	(RM '000)	(RM '000)
<b>Jumlah</b> <i>Total</i>	<b>20,756,937</b>	<b>4,747,853</b>	<b>9,667,358</b>	<b>192,230,745</b>
<b>Pengangkutan darat</b> <i>Land transport</i>	2,950,797	324,166	1,842,679	16,184,205
<b>Pengangkutan air</b> <i>Water transport</i>	6,532,718	995,395	2,107,715	35,180,501
<b>Pengangkutan udara</b> <i>Air transport</i>	1,183,092	2,378,309	1,953,763	33,701,274
<b>Penggudangan dan aktiviti sokongan kepada pengangkutan</b> <i>Warehousing and support activities for transportation</i>	9,890,494	958,407	3,466,338	105,605,530
<b>Perkhidmatan pos &amp; kurier</b> <i>Post &amp; courier services</i>	199,836	91,575	296,862	1,559,236



**BAHAGIAN 3**

*PART 3*

**NOTA TEKNIKAL**

*TECHNICAL NOTES*

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## NOTA TEKNIKAL

### 1. Skop dan liputan

Survei ini meliputi pertubuhan berdaftar yang terlibat dalam **perkhidmatan pengangkutan dan penyimpanan** yang berdaftar dengan Suruhanjaya Syarikat Malaysia (SSM – ROB & ROC), Pihak Berkuasa Tempatan (PBT), *Registrar of Societies* (ROS). Aktiviti perkhidmatan pengangkutan dan penyimpanan yang terlibat adalah seperti berikut :

#### **Pengangkutan darat**

- (i) Kereta api / Transit Aliran Ringan
- (ii) Perkhidmatan bas
- (iii) Perkhidmatan teksi & kereta sewa
- (iv) Pengangkutan muatan melalui jalan raya
- (v) Pengangkutan darat lain

#### **Pengangkutan air**

- (i) Pengangkutan laut
- (ii) Pengangkutan air pedalaman

#### **Pengangkutan udara**

- (i) Pengangkutan udara

#### **Penggudangan & aktiviti sokongan**

- (i) Penyimpanan & gudang
- (ii) Pengoperasian terminal
- (iii) Tempat letak kereta
- (iv) Pengoperasian lebuh raya
- (v) Pengoperasian pelabuhan
- (vi) Pengendalian kargo / pemunggahan
- (vii) Agensi perkapalan & penghantaran
- (viii) Lain-lain aktiviti sokongan perkhidmatan

#### **Perkhidmatan pos & kurier**

- (i) Perkhidmatan pos & kurier

Keseluruhan liputan survei bagi perkhidmatan pengangkutan dan penyimpanan terdiri daripada 47 industri di peringkat 5-digit mengikut Piawaian Klasifikasi Industri Malaysia (MSIC), 2008. Senarai lengkap industri yang diliputi ditunjukkan di Lampiran.



## NOTA TEKNICAL

### 2. Sumber rangka pertubuhan

Sumber utama rangka statistik perniagaan adalah daripada Malaysia Statistical Business Register (MSBR). MSBR adalah senarai pertubuhan / perusahaan yang beroperasi di Malaysia yang merangkumi Daftar syarikat (ROC), Daftar Perniagaan (ROB) dan Perkongsian Liabiliti Terhad (LLP) yang berdaftar dengan Suruhanjaya Syarikat Malaysia (CCM) serta pertubuhan yang berdaftar dengan pihak berkuasa tempatan dan badan profesional. Senarai di MSBR dikemas kini secara berkala berdasarkan tinjauan dan bancian yang dijalankan oleh Jabatan Perangkaan Malaysia dan sumber data pentadbiran daripada agensi lain. Sumber utama data pentadbiran adalah daripada Suruhanjaya Syarikat Malaysia.

Selain itu, DOSM juga bekerjasama untuk mendapatkan maklumat terkini daripada agensi lain seperti Kumpulan Wang Simpanan Pekerja (KWSP), Jabatan Kastam Diraja Malaysia, Lembaga Hasil Dalam Negeri (LHDN), pihak berkuasa tempatan dan badan profesional. Rangka dikemaskini untuk mengambil kira pertubuhan baru dan sebarang perubahan yang berlaku kepada pertubuhan tersebut seperti tutup, tidak beroperasi, perubahan jenis aktiviti dan lokasi / alamat pos untuk memastikan maklumat yang terdapat dalam rangka adalah yang paling terkini.

### 3. Jenis aktiviti perniagaan

Jenis aktiviti perniagaan merujuk kepada aktiviti utama dan sekunder. Aktiviti utama merujuk kepada aktiviti yang mana pertubuhan menumpukan sebahagian besar sumbernya atau yang memberikan sumbangan besar dari segi pendapatan. Aktiviti sekunder didefinisikan sebagai aktiviti sampingan kepada aktiviti utama. Klasifikasi industri pertubuhan dibuat berdasarkan aktiviti utama dan *Klasifikasi Standard Perindustrian Malaysia (MSIC) 2008 Ver. 1.0. MSIC 2008 Ver. 1.0* yang diguna pakai adalah selaras dengan Klasifikasi Perindustrian Antarabangsa bagi Semua Aktiviti Ekonomi (ISIC), Semakan Ke-4, Pertubuhan Bangsa-Bangsa Bersatu, dengan pengubahsuaian untuk keperluan tempatan.

### 4. Konsep dan definisi

Definisi perkhidmatan pengangkutan dan penyimpanan yang diguna pakai dalam penerbitan ini berasaskan kepada syor Klasifikasi Standard Perindustrian Malaysia (MSIC) 2008 Ver. 1.0:

#### (i) Kereta api / Transit Aliran Ringan

Merujuk kepada perkhidmatan pengangkutan penumpang dan muatan yang menggunakan perkhidmatan kereta api antara bandar. Ini termasuk perkhidmatan LRT / Komuter yang menyediakan pengangkutan tetap bagi penumpang bandar dan pinggir bandar.



## NOTA TEKNIKAL

### **(ii) Perkhidmatan bas**

Merujuk kepada perkhidmatan pertubuhan yang mempunyai permit Suruhanjaya Pengangkutan Awam Darat sebagai pengusaha bas berhenti-henti, bas ekspres dan bas mini. Pengusaha bas sekolah dan bas kilang tidak dimasukkan. Dalam banci ini hanya bas di bandar, pinggir bandar atau antara bandar diliputi.

### **(iii) Perkhidmatan teksi & kereta sewa**

Merujuk kepada perkhidmatan pertubuhan sebagai pengusaha perkhidmatan teksi, limosin dan sewa kereta dengan pemandu. Dalam banci ini hanya perkhidmatan di bandar, pinggir bandar atau antara bandar diliputi.

### **(iv) Pengangkutan muatan melalui jalan raya**

Merujuk kepada perkhidmatan pengangkutan muatan melalui jalan raya sama ada berjadual atau tidak dalam jarak jauh dan tempatan, pertukaran, perkhidmatan muatan barang-barang ke dalam kereta pedati, termasuk kerja-kerja di tempat-tempat perhentian bagi mengendalikan barang-barang muatan, perkhidmatan penghantaran, perkhidmatan pertukaran barang, perkhidmatan pemunggahan perabot, perkhidmatan pengangkutan haiwan dan penyewaan gerabak-gerabak dengan pemandunya sekali. Pertubuhan ini telah diberikan permit pengangkutan awam oleh Suruhanjaya Pengangkutan Awam Darat.

### **(v) Pengangkutan darat lain**

Merujuk kepada perkhidmatan selain daripada pengangkutan darat yang telah dikelaskan. Aktiviti ini termasuk perkhidmatan sewa khas, trem bukit, perantara kapal terbang dan juga kereta kabel.

### **(vi) Pengangkutan laut**

Merujuk kepada pertubuhan yang beroperasi mengangkut barang-barang dan penumpang di lautan dan persisiran pantai. Termasuk perkhidmatan tunda dan tolak bot / kapal di lautan dan pengurusan pengangkutan barang-barang bagi pemilik lain juga diliputi. Pengangkutan air di kawasan pedalaman tidak dimasukkan.



## NOTA TEKNIKAL

### **(vii) Pengangkutan air pedalaman**

Merujuk kepada pertubuhan yang beroperasi mengangkut barang-barang dan penumpang melalui sungai, terusan dan jalan air pedalaman lain seperti pengkalan dan pelabuhan dengan bot dan sampan sama ada berjadual atau tidak. Termasuk perkhidmatan sewaan bot santai dengan krew bagi pengangkutan air pedalaman.

### **(viii) Pengangkutan udara**

Merujuk kepada perkhidmatan pengangkutan penumpang atau muatan, domestik dan antarabangsa dengan kapal terbang dan mengikut jadual tetap. Ini termasuk perkhidmatan sewaan pesawat udara dengan atau tanpa pemandu yang tidak berjadual atau sewa khas pesawat udara bagi mengangkut penumpang atau muatan.

### **(ix) Penyimpanan & gudang**

Merujuk kepada perkhidmatan kemudahan penyimpanan bagi semua jenis barangan untuk gudang bijian, gudang barangan am, gudang penyejukan dan lain-lain. Termasuk juga penggudangan perabot, kereta, balak, gas dan minyak, tekstil, makanan dan hasil pertanian dan lain-lain, juga untuk penyimpanan barangan di zon perdagangan asing.

### **(x) Pengoperasian terminal**

Merujuk kepada perkhidmatan operasi stesen dan lapangan melibatkan kerja-kerja pemungghahan barang, peralihan penumpang dan pengendalian dalam perjalanan sesuatu pengangkutan darat dan udara.

### **(xi) Tempat letak kereta**

Merujuk kepada perkhidmatan kemudahan tempat letak kenderaan bermotor berbayar kepada orang awam. Walaubagaimanapun, kemudahan tempat kereta yang diusahakan oleh enterpris atau pertubuhan yang mana dikawal terus dan mendatangkan faedah kepada perniagaan seperti yang diusahakan oleh hotel, hospital, kompleks membeli-belah dan lain-lain dikecualikan.



## NOTA TEKNIKAL

### **(xii) Pengoperasian lebuhraya**

Merujuk kepada perkhidmatan pengurusan lebuhraya, jambatan dan terowong, termasuk kerja mengawal dan menjaga keselamatan lalulintas, pembaikan dan penyelenggaraan, mengutip tol dan mengadakan & menjaga kemudahan di lebuhraya.

### **(xiii) Pengoperasian pelabuhan**

Merujuk kepada pertubuhan yang menjalankan operasi kunci jalan air, aktiviti mengawal lalu lintas, pemaliman pandu arah, aktiviti berlabuh dan pengangkutan laiter.

### **(xiv) Pengendalian kargo / pemunggahan**

Merujuk kepada pertubuhan yang memberi perkhidmatan memuat dan memunggah barangan atau bagasi penumpang tanpa mengambil kira jenis pengangkutan laut yang digunakan untuk pengangkutan dan pemunggahan.

### **(xv) Agensi perkapalan & penghantaran**

Merujuk kepada perkhidmatan pengangkutan barang-barang dan perkhidmatan broker (termasuk broker kastam); perkhidmatan broker kapal termasuk perkhidmatan broker pajak gadai kapal, pembungkusan, pengisian secara pukal, pemeriksaan, pensampelan dan penimbangan kepada pedagang kapal atau organisasi perkapalan; dan penjagaan terhadap binatang-binatang sementara menunggu untuk diangkut.

### **(xvi) Lain-lain aktiviti sokongan pengangkutan**

Merujuk kepada perkhidmatan selain daripada perkhidmatan sokongan pengangkutan. Aktiviti ini termasuk perkhidmatan tunda dan bantuan tepi jalan, dan kren.

### **(xvii) Perkhidmatan pos & kurier**

Perkhidmatan mengambil, mengangkut dan menghantar barangan, biasanya dalam bungkusan kecil / paket yang melibatkan satu mod pengangkutan atau lebih dengan menggunakan kenderaan sendiri atau pengangkutan awam.



## NOTA TEKNIKAL

- 5. Tahun survei** Tahun survei adalah merujuk kepada tahun pelaksanaan survei.
- 6. Tahun rujukan** Tahun rujukan bagi penyiasatan ini adalah tahun takwim 2021.
- 7. Kaedah pengumpulan data** Survei ini secara umumnya dijalankan melalui tiga (3) kaedah iaitu :
- i. Kaedah atas talian melalui portal e-aes: Kaedah ini mensasarkan responden yang telah menggunakan kaedah ini bagi survei rutin terdahulu.
  - ii. Responden diberi tempoh satu bulan untuk melengkapkan dan mengembalikan borang soal selidik tersebut kepada Jabatan.
  - iii. Kaedah kutipan data secara bersemuka : Kerja luar operasi di lapangan dijalankan untuk mendapatkan maklum balas daripada pertubuhan yang belum memberi jawapan dari kedua-dua kaedah di atas dan kaedah ini mensasarkan pertubuhan yang tidak pernah terlibat dengan survei rutin DOSM.
- 8. Reka bentuk pensampelan** Reka bentuk pensampelan bagi survei ini adalah pensampelan rawak strata satu peringkat. Kategori industri dua (2), tiga (3), empat (4) dan lima (5) digit MSIC di peringkat negeri telah diklasifikasikan sebagai strata manakala pertubuhan sebagai unit pensampelan.
- Setiap strata (industri) telah dibentuk kepada empat substrata untuk memastikan sampel yang diagihkan mengambil kira ciri-ciri ekonomi industri tersebut. Substrata utama bersifat heterogen diliputi secara liputan penuh. Manakala, substrata selainnya bersifat homogen disampelkan.
- Substrata utama meliputi pertubuhan kategori besar yang mempunyai jumlah hasil yang signifikan dalam industri liputan manakala bagi substrata kedua hingga keempat berdasarkan kategori perusahaan mikro, kecil dan sederhana (PMKS).

## NOTA TEKNIKAL

**9. Saiz sampel dan prosedur penganggaran** Statistik utama yang digunakan untuk penganggaran saiz sampel adalah jumlah hasil. Formula yang digunakan dalam penganggaran saiz sampel bagi strata adalah seperti berikut:

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

di mana,

$n$	=	Saiz sampel
$N_i$	=	Saiz populasi bagi strata <sup><math>i</math></sup>
$S_i^2$	=	Varian bagi strata <sup><math>i</math></sup>
$V$	=	Varian sasaran

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

di mana,

$\hat{Y}_i$	=	Jumlah hasil bagi strata <sup><math>i</math></sup>
$RSE$	=	Ralat piawai relatif
$Z$	=	Nilai aras keyakinan

Sampel akan diagihkan kepada substrata dalam industri liputan dengan menggunakan kaedah Neyman Allocation seperti berikut:

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

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

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

**NOTA TEKNIKAL**

di mana,

- $n_{hi}$  = Saiz sampel bagi substrata  $h$  dalam strata  $i$
- $N_h$  = Saiz populasi bagi substrata  $h$
- $S_h$  = Sisihan piawaian bagi substrata  $h$
- $n_i$  = Saiz sampel bagi strata  $i$
- $h$  = Substrata
- $i$  = Strata

Saiz sampel optimum bagi survei ini adalah 90,968 pertubuhan. Pertubuhan kategori besar diliputi sepenuhnya, manakala pertubuhan bagi substrata kedua hingga keempat dipilih secara rawak mengikut kaedah pensampelan bersistematik.

**10. Wajaran pensampelan** Analisis berwajaran disediakan menggunakan wajaran bagi memastikan sampel yang dipilih dapat menggambarkan populasi survei. Wajaran yang diperlukan adalah wajaran di peringkat reka bentuk pensampelan dan wajaran tiada respons.

Wajaran reka bentuk pensampelan pada substrata adalah seperti berikut:

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

di mana;

$$N_h = \text{Bilangan populasi bagi substrata } h; \text{ dan}$$

$$n_h = \text{Bilangan sampel bagi substrata } h$$

Wajaran tiada respons pada substrata adalah seperti berikut:

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

di mana;

$$n'_h = \text{Bilangan sampel respons bagi substrata } h$$

$$n_h = \text{Bilangan sampel bagi substrata } h$$



## NOTA TEKNIKAL

Kaedah pengiraan wajaran reka bentuk pensampelan selepas survei (*adjusted weight*) pada substrata  $h$  seperti berikut:

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

di mana;

$W_h$  = Wajaran reka bentuk pensampelan pada substrata  $h$

$NRW_h$  = Wajaran tiada respons pada substrata  $h$

### 11. Unit pelapor

Unit pelapor bagi survei ini ialah pertubuhan. Sesebuah pertubuhan secara ideal ditakrifkan sebagai “satu unit ekonomi yang bergiat di bawah satu hak milik atau penguasaan tunggal, iaitu di bawah satu entiti yang sah. Ia menjalankan satu jenis subsektor ekonomi utama di satu tempat/ lokasi fizikal”. Setiap pertubuhan diberikan klasifikasi industri berdasarkan aktiviti utamanya dan bukannya mengikut aktiviti syarikat induk.

Setiap cawangan daripada organisasi yang mempunyai beberapa cawangan di lokasi yang berbeza dari segi konsep dianggap sebagai pertubuhan yang berlainan. Pertubuhan berkenaan diminta memberikan penyata yang berasingan bagi setiap kegiatannya dari segi nilai. Walau bagaimanapun, dari segi praktis akaun biasanya disediakan secara berpusat kerana kesukaran untuk memperoleh data yang berasingan bagi setiap unit atau cawangan. Entiti atau ‘enterprise’ ini akan dianggap sebagai satu unit pelapor dan dibenarkan mengemukakan soal selidik yang menggabungkan semua unit atau cawangannya.



## NOTA TEKNIKAL

### 12. Nilai output kasar

Nilai output kasar pengangkutan dan penyimpanan ditakrifkan dengan memasukkan perkara berikut:

- Pendapatan daripada perkhidmatan dan kemudahan pengangkutan yang diberikan
- + Perkhidmatan pengurusan
  - + Komisen dan pembrokeran yang diterima
  - + Pendapatan daripada sewa yang diterima kecuali tanah
  - + Perbelanjaan penyelidikan dan pembangunan (dalaman)
  - + Perbelanjaan modal ke atas pembinaan sendiri
  - + Pendapatan operasi lain
  - + Bayaran dan caj perkhidmatan (nilai yang dipungut)
  - + Semua output lain (seperti pendapatan yang diterima kerana membaiki peralatan / mesin pertubuhan lain dan lain-lain)

### 13. Nilai input perantaraan

Nilai input perantaraan ditakrifkan dengan memasukkan perkara berikut:

- Nilai bahan dan bekalan yang digunakan (termasuk bayaran pengangkutan, cukai dan duti yang dibayar)
- + Kos kerja perkhidmatan yang dibuat oleh orang lain
  - + Kuasa elektrik dan air yang dibeli
  - + Nilai bahan pembakar, pelincir dan air yang digunakan
  - + Stok awal barangan
  - Stok akhir barangan
  - + Semua kos input lain yang digunakan (seperti; percetakan, pembelian perkhidmatan pengangkutan, perbelanjaan perjalanan, hiburan, pengiklanan, bayaran guaman, bayaran pos, bayaran pengurusan, bayaran sewaan dan lain-lain)
  - + Bayaran kepada pengarah tidak bekerja kerana kehadiran mereka dalam mesyuarat Lembaga Pengarah
  - + Nilai pakaian percuma yang disediakan
  - + Kos latihan kepada pekerja
  - + Bayaran kepada pertubuhan lain yang membekalkan pekerja

Bermula tahun 2014, perbelanjaan penyelidikan dan pembangunan telah dikeluarkan daripada pengiraan input perantaraan dan diambilkira sebagai perbelanjaan harta selaras dengan penggunaan *Recommendation of System of National Accounts (SNA) 2008*.



## NOTA TEKNIKAL

**14. Nilai ditambah** Nilai ditambah adalah tambahan kepada nilai barangan dan perkhidmatan yang dikeluarkan oleh sesebuah pertubuhan. Nilai ditambah diperoleh daripada perbezaan antara nilai output kasar dengan nilai input perantaraan.

**15. Bilangan pekerja** Bilangan pekerja merujuk kepada bilangan orang yang bekerja pada bulan Disember atau pada tempoh pembayaran gaji terakhir bagi tahun rujukan. Bilangan orang yang bekerja dikategorikan seperti berikut:

**a. Pemilik yang bekerja dan rakan niaga yang aktif**

Kategori ini merujuk kepada semua pemilik perseorangan dan rakan niaga, sambilan atau sepenuh masa, yang bekerja dengan aktif dalam sesebuah pertubuhan itu. Justeru, ia tidak termasuk rakan niaga yang tidak aktif.

**b. Pekerja keluarga tidak bergaji**

Kategori ini meliputi semua ahli isi rumah kepada pemilik pertubuhan yang melaksanakan kerja tertentu (sepenuh masa atau sambilan) dan bekerja sekurang-kurangnya satu pertiga daripada waktu bekerja biasa yang diamalkan oleh pertubuhan berkenaan tanpa mendapat bayaran secara tetap, sama ada dalam bentuk wang tunai atau harta benda bagi kerja yang dilakukan. Biasanya pekerja berkenaan mendapat makanan, tempat tinggal dan bantuan lain sebagai sebahagian daripada ahli isi rumah pemilik tersebut dan terus mendapatnya sama ada ia bekerja atau tidak dalam pertubuhan itu.

**c. Pekerja bergaji (sepenuh masa)**

Ia merujuk kepada semua pekerja bergaji yang bekerja sekurang-kurangnya 6 jam sehari dan sekurang-kurangnya 20 hari sebulan.

**d. Pekerja bergaji (sambilan)**

Ia merujuk kepada semua pekerja bergaji yang bekerja kurang daripada enam jam sehari dan/atau kurang daripada 20 hari



## NOTA TEKNIKAL

**16. Kategori kemahiran** Kategori kemahiran telah dikelaskan berdasarkan Piawaian Pengkelasan Pekerjaan Malaysia (MASCO) 2013 adalah seperti berikut:

**a. Pekerja mahir**

Pengurus, Profesional dan Juruteknik & Profesional Bersekutu;

**b. Pekerja separuh mahir**

Pekerja Sokongan Perkeranian; Pekerja Perkhidmatan & Jualan; Pekerja Kemahiran & Pekerja Pertukangan yang Berkaitan dan Operator Mesin & Loji dan Pemasang; dan

**c. Berkemahiran rendah**

Pekerja Asas

**17. Nilai harta tetap** Ia meliputi semua barangan, baru atau terpakai, ketara atau tidak ketara yang digunakan secara berulang atau berterusan yang mempunyai hayat produktif lebih daripada setahun. Ia termasuk tanah, bangunan dan struktur, alat pengangkutan, komputer dan peralatan periferal, peralatan serta perabot dan pemasangan lain. Perbelanjaan penyelidikan dan pembangunan turut diambil kira sebagai perbelanjaan harta selaras dengan *System of National Accounts (SNA) 2008*. Nilai harta bagi pembuka dan penutup 2021 berasaskan nilai buku akaun. Pembelian, pindaan dan pembaikan besar atau perbelanjaan modal pada tahun berkenaan dikira pada nilai sebenar yang dibayar. Nilai aset yang dijual dalam tahun semasa juga dikira pada nilai sebenar. Perbelanjaan penyelidikan dan pembangunan turut diambil kira sebagai perbelanjaan harta selaras dengan *System of National Accounts (SNA) 2008*.

**18. Pembundaran** Penjumlahan komponen mungkin berbeza dengan angka jumlah kecil atau jumlah besar disebabkan pembundaran.

## NOTA TEKNIKAL

### 19. Perubahan peratusan tahunan

Pengiraan adalah berdasarkan formula berikut;

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

Di mana r,

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

Di mana,

$Y_t$  = Nilai pada tahun semasa

$Y_o$  = Nilai pada tahun sebelum

t = Bilangan tahun,  $Y_t - Y_o$

r = kadar pertumbuhan tahunan

### 20. Simbol dan singkatan

-	: tiada
%	: peratus
&	: dan
>	: lebih daripada
<	: kurang daripada
}	: digabungkan
RM	: Ringgit Malaysia
dll.	: dan lain-lain
spt.	: seperti
t.t.t.l.	: tidak terkelas di tempat lain
W.P.	: Wilayah Persekutuan



## TECHNICAL NOTES

**1. Scope and coverage** The survey covers all registered establishments involved in the **transportation and storage services** subsector that were registered with Companies Commission of Malaysia (CCM – ROB & ROC), Local Authorities (PBT), Registrar of Societies (ROS). The selected transport and storage services activities are as listed below:

### **Land transport**

- (i) Train / Light Rail Transit
- (ii) Bus transport
- (iii) Taxi & rental of car services
- (iv) Freight transport by road
- (v) Other land transport

### **Water transport**

- (i) Sea transport
- (ii) Inland water transport

### **Air transport**

- (i) Air transport

### **Warehousing & support activities**

- (i) Storage & warehousing
- (ii) Terminal operations
- (iii) Car parking services
- (iv) Highway operations
- (v) Port operations
- (vi) Cargo handling / stevedoring
- (vii) Shipping agencies & forwarding of freight
- (viii) Other support activities for transportation

### **Post & courier services**

- (i) Post & courier services

Overall coverage of the census for transportation and storage subsector is 47 industries at 5-digit level under the Malaysia Standard Industrial Classification (MSIC), 2008. The complete industry lists is 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),



## TECHNICAL NOTES

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 the Department of Statistics Malaysia 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**

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 activity which contributes the largest income. Secondary activities are 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 (ISIC), Revision 4, United Nations, with modifications to suit local conditions.

### **4. Concepts and definitions**

The definition of transport and storage services adopted in this publication is based on the recommendations of the Malaysia Standard Industrial Classification 2008 (MSIC) 2008 Ver. 1.0:

#### **(i) Train / Light Rail Transit**

Refer to provision of transportation services for passenger and freight by interurban railways. This includes LRT / Commuter services that provide transportation for urban and suburban passengers.

#### **(ii) Bus services**

Refer to services of establishments which have obtained permits from the Land Public Transport Commission as operators of stage buses, express buses and mini buses. Operators of school buses and factory buses have been excluded. In this census, only urban, suburban and interurban bus transport services are included.

## TECHNICAL NOTES

### **(iii) Taxi & rental of car services**

*Refer to services of establishments which have obtained as operator of taxi, limousine services and rental of cars with driver. In this census, only urban, suburban and interurban services are included.*

### **(iv) Freight transport by road**

*Refer to services of establishments which provide local and long-distance trucking, transfer and draying services, whether scheduled or not. This includes operation of terminal for handling of freight, delivery services, baggage transfer services, furniture moving services, animal transport services and rental of trucks with drivers. These establishments have been issued with public carriage permits by the Land Public Transport Commission.*

### **(v) Other land transport**

*Refer to the other services from land transport were classified. This include rental of car services, hill tramway services, charter, excursion and other coach services and cable car.*

### **(vi) Sea and coastal water transport**

*Refer to services of establishments which operate vessels for transporting freight and passengers overseas and coastwise. Towing and pushing services for boats / vessels on the high seas and managing operations of vessels for other owners are included. Inland water transport is excluded.*

### **(vii) Inland water transport**

*Refer to services of establishments which operate vessels for transporting freight and passengers via rivers, canals and other inland waterways such as harbours and ports by boat and sampan whether scheduled or not. Rental of pleasure boats with crew for inland water transport are included.*

### **(viii) Air transport**

*Refer to provision of transportation services for passenger or freight transport by air over domestic and international routes and on regular schedules. This includes rental services of non-scheduled aircraft with or without operator or aircraft chartering for transporting passengers or freight by air.*



## **TECHNICAL NOTES**

**(ix) Storage & warehousing**

*Refer to services related to storage facilities for all kinds of goods in grain elevator, general merchandise warehouse, refrigerated warehouse etc. Included are warehousing of furniture, automobiles, lumber, gas and oil, textiles, food and agricultural product etc. as well as storage of goods in foreign trade zones.*

**(x) Terminal operations**

*Refer to services related to stations and airport for handling of goods, freight terminal activities and operations of airways terminal.*

**(xi) Car parking services**

*Refer to services related to parking facilities for motor vehicles, on a fee basis to the general public. Parking facilities operated by enterprise or establishments which are under their direct control and of benefit to their business such as those operated by hotels, hospitals, shopping malls etc. are excluded.*

**(xii) Highway operations**

*Refer to highway, bridge and tunnel operation services. This includes up keeping of highway facilities, repair and maintenance of highway, toll collection, traffic control and surveillance services.*

**(xiii) Port operations**

*Refer to services related to waterway lock operation, traffic control activities, navigation pilotage, berthing activities and lighterage.*

**(xiv) Cargo handling / stevedoring**

*Refer to services of establishments which provide loading and unloading of goods or passenger luggage irrespective of the mode of sea-going transport used for transportation and stevedoring services.*



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**(xv) Shipping & forwarding agencies**

*Refer to freight forwarding and brokerage services (including custom house brokerage); ship brokerage services including ship leasing brokers, packing, crating, inspecting, sampling and weighting services to shippers or shipping organisations; and care of animals pending transport.*

**(xvi) Other support activities for transportation**

*Refer to the other services from support land transport services. It is included towing and road side assistance, and crane services.*

**(xvii) Post & courier services**

*The pick-up, transport and delivery of letters, parcels and packages, which involve one or more modes of transport using either private or public*

**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. 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 organizations that have not yet given answers from the two methods above and this method also targets organizations 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.*

## TECHNICAL NOTES

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 sub stratum is heterogeneous, was fully covered while other sub stratum that is homogeneous were sampled.

Main sub stratum comprise large establishments that have significant total revenue in the industry while for the second to fourth sub stratum were formed based on micro, small and medium enterprises (MSME) category.

### 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,

$n$	=	Sample size
$N_i$	=	Population size for stratum <sup><math>i</math></sup>
$S_i^2$	=	Variance for stratum <sup><math>i</math></sup>
$V$	=	Desired variance

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

where,

$\hat{Y}_i$	=	Total revenues for stratum <sup><math>i</math></sup>
$RSE$	=	Relative standard error
$Z$	=	Value of confidence level

## TECHNICAL NOTES

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

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

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

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

where,

$n_{hi}$	=	Sample size for substratum <sup>h</sup> of stratum <sup>i</sup>
$N_h$	=	Population size for substratum <sup>h</sup>
$S_h$	=	Standard deviation for substratum <sup>h</sup>
$n_i$	=	Sample size for stratum <sup>i</sup>
$h$	=	Substratum
$i$	=	Stratum

The optimum sample size for this survey is 90,968 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. Sampling weights

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.

## TECHNICAL NOTES

The sampling design weight for the establishment at stratum  $h$  is as follows:

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

where,

$N_h$  = Total population of sub stratum  $h$ ; and

$n_h$  = Total sample of sub stratum  $h$

Non response weight to substrata  $h$  is as follows:

$$NRW_h = \frac{1}{\frac{n_h}{n_h}}, \quad h = 1, \dots, 4$$

where,

$N_h$  = Total sample response of sub stratum  $h$ ; and

$n_h$  = Total sample of sub stratum  $h$

The method of calculating the sampling design weight after the survey (adjusted weight) on sub stratum  $h$  as below:

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

where,

$W_h$  = Sampling design weight at sub stratum  $h$

$NRW_h$  = Non response weight at sub stratum  $h$

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### 11. Reporting unit

The reporting unit for this census is the establishment. An establishment ideally 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 to that of its parent company.

Each branch of the multiple organisation has branches in different locations of conceptually treated as the different organisation. 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. The 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 for transportation and storage is defined to include the following elements:

- Income from transport services rendered*
- + *Management services*
- + *Commission and brokerage earned*
- + *Rental income received except land rental*
- + *Research and development expenditure (in-house)*
- + *Capital expenditure on own construction*
- + *Other operating income*
- + *Value of service tax / serviced charges.*
- + *All other output (such as amount received for repairs and maintenance carried out on other establishments' machinery and equipment, etc.)*

### 13. Value of intermediate input

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

- Value of materials and supplies consumed (including transport charges incurred and taxes and duties paid*
- + *Cost of industrial work done by others*
- + *Cost of electricity and water purchased*
- + *Value of fuels, lubricants and water consumed*
- + *Opening stocks of goods*
- *Closing stocks of goods*



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- + *All other input costs (such as printing, purchase of transport services, traveling expenses, advertising, legal fees, postage, management fees, rental, etc.).*
- + *Fees paid to non-working directors for their attendance at Board of Directors meeting.*
- + *Value of free wearing apparel provided*
- + *Staff training cost*
- + *Payment to other establishment for providing workers*

*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 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:*

#### **a. 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.*

#### **b. 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.*



## TECHNICAL NOTES

### **c. 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.*

### **d. Paid employees (part-time)**

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

## **16. Category of skills**

*Job category has also been categorized according to Malaysia Standard Classification of Occupations 2013 (MASCO) as follow:*

### **a. High-skilled**

*Managers, Professionals, Technicians and Associate Professionals;*

### **b. Semi-skilled**

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

### **c. Low-skilled**

*Elementary occupations*

## **17. Value of fixed assets**

*It covers all goods, new or used, tangible or intangible and used repeatedly or continuously that have a normal economic life span of more than one year. Included are land, buildings and structure; transport equipment; computer and peripheral equipment; other machinery, equipment and furniture and fittings. The research and development expenditure is also treated as capital asset in line with the recommendation of System of National Accounts (SNA) 2008. Value of assets as at the beginning and end of 2020 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 realised value. Research and development expenditure also treated as capital asset in line with the recommendation of System of National Accounts (SNA) 2008.*

## TECHNICAL NOTES

### 18. Rounding

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

### 19. Annual growth rate

The calculation of 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

### 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



**Lampiran**  
*Appendix*

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**LAMPIRAN  
APPENDIX**

**PIAWAIAN KLASIFIKASI INDUSTRI MALAYSIA (MSIC) 2008 Ver. 1.0  
MALAYSIA STANDARD INDUSTRIAL CLASSIFICATION (MSIC) 2008 Ver.1.0**

**PERKHIDMATAN PENGANGKUTAN DAN PENYIMPANAN  
TRANSPORTATION AND STORAGE SERVICES**

<b>MSIC 2008</b>	<b>Keterangan Description</b>
<b>49</b>	<b>Pengangkutan darat dan pengangkutan melalui saluran paip</b> <i>Land transport and transport via pipelines</i>
49110	<b>Pengangkutan penumpang rel antara bandar</b> <i>Passenger transport by inter-urban railways</i>
49120	<b>Pengangkutan muatan rel</b> <i>Freight rail transport</i>
49211	<b>Perkhidmatan bas bandaraya</b> <i>City bus services</i>
49212	<b>Perkhidmatan pengangkutan rel penumpang bandar dan pinggir bandar</b> <i>Urban and suburban railway passenger transport service</i>
49221	<b>Perkhidmatan bas ekspres</b> <i>Express bus services</i>
49222	<b>Perkhidmatan bas pekerja</b> <i>Employees bus services</i>
49223	<b>Perkhidmatan bas sekolah</b> <i>School bus services</i>
49224	<b>Perkhidmatan operasi teksi dan limosin</b> <i>Taxi operation and limousine services</i>
49225	<b>Sewa kereta dengan pemandu</b> <i>Rental of cars with driver</i>
49229	<b>Pengangkutan darat penumpang lain t.t.t.l.</b> <i>Other passenger land transport n.e.c.</i>
49230	<b>Pengangkutan muatan melalui jalan raya</b> <i>Freight transport by road</i>
49300	<b>Pengangkutan melalui saluran paip</b> <i>Transport via pipeline</i>
<b>50</b>	<b>Pengangkutan air</b> <i>Water transport</i>
50111	<b>Operasi rombongan, cruise atau bot persiaran</b> <i>Operation of excursion, cruise or sightseeing boats</i>
50112	<b>Operasi feri, teksi air</b> <i>Operation of ferries, water taxis</i>
50113	<b>Sewaan bot santai dengan krew bagi pengangkutan laut dan pesisir pantai</b> <i>Rental of pleasure boats with crew for sea and coastal water transport</i>
50121	<b>Pengangkutan muatan laut dan pesisir pantai, berjadual atau tidak berjadual</b> <i>Transport of freight over seas and coastal waters, whether scheduled or not</i>
50122	<b>Pengangkutan tunda atau tolak tongkang, pelantar minyak</b> <i>Transport by towing or pushing of barges, oil rigs</i>
50211	<b>Pengangkutan penumpang melalui sungai, terusan, tasik dan laluan air pedalaman lain</b> <i>Transport of passenger via rivers, canals, lakes and other inland waterways</i>

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**PERKHIDMATAN PENGANGKUTAN DAN PENYIMPANAN**  
*TRANSPORTATION AND STORAGE SERVICES*

<b>MSIC 2008</b>	<b>Keterangan Description</b>
50212	<b>Sewaan bot santai dengan krew bagi pengangkutan air pedalaman</b> <i>Rental of pleasure boats with crew for inland water transport</i>
50220	<b>Pengangkutan muatan air pedalaman</b> <i>Inland freight water transport</i>
<b>51</b>	<b>Pengangkutan udara</b> <i>Air transport</i>
51101	<b>Pengangkutan penumpang melalui udara mengikut laluan dan jadual biasa</b> <i>Transport of passengers by air over regular routes and on regular schedules</i>
51102	<b>Pengangkutan penumpang tidak berjadual</b> <i>Non-scheduled transport of passenger by air</i>
51103	<b>Penyewaan peralatan pengangkutan dengan operator untuk tujuan pengangkutan penumpang</b> <i>Renting of air-transport equipment with operator for the purpose of passenger transportation</i>
51201	<b>Pengangkutan muatan udara mengikut laluan dan berjadual biasa</b> <i>Transport freight by air over regular routes and on regular schedules</i>
51202	<b>Pengangkutan muatan udara tidak berjadual</b> <i>Non-scheduled transport of freight by air</i>
51203	<b>Penyewaan peralatan pengangkutan udara dengan operator untuk tujuan pengangkutan muatan</b> <i>Renting of air-transport equipment with operator for the purpose of freight transportation</i>
<b>52</b>	<b>Penggudangan dan aktiviti sokongan untuk pengangkutan</b> <i>Warehousing and support activities for transportation</i>
52100	<b>Perkhidmatan penggudangan dan penyimpanan</b> <i>Warehousing and storage services</i>
52211	<b>Operasi kemudahan terminal</b> <i>Operation of terminal facilities</i>
52212	<b>Perkhidmatan tunda dan bantuan tepi jalan</b> <i>Towing and road side assistance</i>
52213	<b>Operasi kemudahan meletak kenderaan bermotor (medan letak kereta)</b> <i>Operation of parking facilities for motor vehicle (parking lots)</i>
52214	<b>Perkhidmatan operasi lebuhraya, jambatan dan terowong</b> <i>Highway, bridge and tunnel operation services</i>
52219	<b>Aktiviti perkhidmatan lain berkaitan pengangkutan darat t.t.t.l.</b> <i>Other services activities incidental to land transportation n.e.c.</i>
52221	<b>Operasi perkhidmatan pelabuhan dan limbungan</b> <i>Port, harbours and piers operation services</i>
52222	<b>Perkhidmatan penyelamat dan pengapungan semula kapal</b> <i>Vassel salvage and refloating services</i>

**LAMPIRAN  
APPENDIX**

**PIAWAIAN KLASIFIKASI INDUSTRI MALAYSIA (MSIC) 2008 Ver. 1.0**  
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**PERKHIDMATAN PENGANGKUTAN DAN PENYIMPANAN**  
*TRANSPORTATION AND STORAGE SERVICES*

<b>MSIC 2008</b>	<b>Keterangan Description</b>
52229	<b>Aktiviti perkhidmatan lain berkaitan pengangkutan air t.t.t.l.</b> <i>Other services activities incidental to water transportation n.e.c.</i>
52231	<b>Operasi kemudahan terminal</b> <i>Operation of terminal facilities</i>
52232	<b>Lapangan terbang dan aktiviti kawalan trafik udara</b> <i>Airport and air-traffic-control activities</i>
52233	<b>Aktiviti perkhidmatan asas di padang terbang</b> <i>Ground service activities on airfields</i>
52234	<b>Aktiviti melawan dan pencegahan api di lapangan terbang</b> <i>Fire fighting and fire-prevention services at airports</i>
52239	<b>Aktiviti perkhidmatan lain berkaitan pengangkutan udara t.t.t.l.</b> <i>Other service activities incidental to air transportation n.e.c.</i>
52241	<b>Perkhidmatan pemunggahan</b> <i>Stevedoring services</i>
52249	<b>Aktiviti pengendalian kargo lain t.t.t.l.</b> <i>Other cargo handling activities n.e.c.</i>
52291	<b>Penghantaran muatan</b> <i>Forwarding of freight</i>
52292	<b>Pembrokeran ruang kapal dan kapal terbang</b> <i>Brokerage for ship and aircraft space</i>
52299	<b>Aktiviti sokongan pengangkutan lain t.t.t.l.</b> <i>Other transportation support activities n.e.c.</i>
<b>53</b>	<b>Perkhidmatan pos dan kurier</b> <i>Postal and courier activities</i>
53100	<b>Perkhidmatan pos nasional</b> <i>National postal services</i>
53200	<b>Aktiviti kurier selain daripada aktiviti pos nasional</b> <i>Courier activities other than national post activities</i>

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