



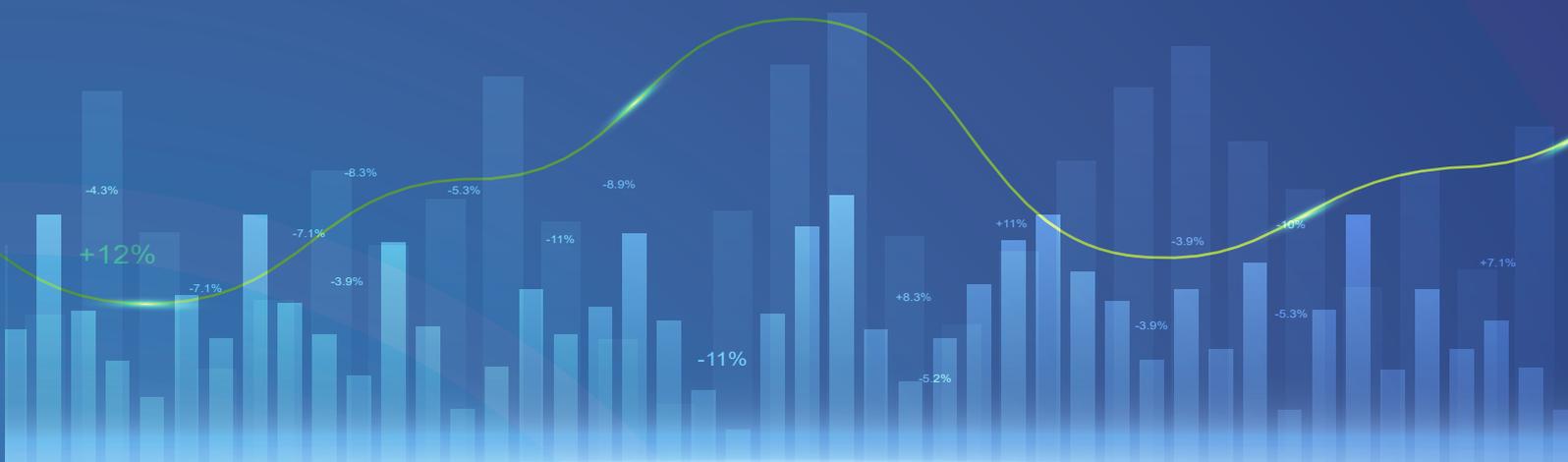
KEMENTERIAN EKONOMI  
JABATAN PERANGKAAN MALAYSIA

# AES

## STATISTIK EKONOMI TAHUNAN *Annual Economic Statistics*

# 2022

### PEMBINAAN *Construction*







KEMENTERIAN EKONOMI  
JABATAN PERANGKAAN MALAYSIA

# STATISTIK EKONOMI TAHUNAN PEMBINAAN *ANNUAL ECONOMIC STATISTICS CONSTRUCTION*

## 2022

### **Pemakluman**

Jabatan Perangkaan Malaysia (DOSM) akan menjalankan Banci Ekonomi pada tahun 2023. DOSM amat menghargai kerjasama daripada responden untuk memberikan maklumat kepada DOSM serta menjayakan banci ini. Sila layari [www.dosm.gov.my](http://www.dosm.gov.my) untuk maklumat lanjut.

DOSM telah melancarkan OpenDOSM NextGen sebagai platform yang menyediakan katalog data dan visualisasi bagi memudahkan pengguna menganalisis pelbagai jenis data. OpenDOSM NextGen ialah medium perkongsian data sumber terbuka dan boleh diakses melalui portal <https://open.dosm.gov.my>.

Dimaklumkan bahawa Kerajaan Malaysia telah mengisytiharkan Hari Statistik Negara (MyStats Day) pada 20 Oktober setiap tahun. Tema sambutan MyStats Day adalah "Connecting the World with Data We Can Trust".

### **Announcement**

*The Department of Statistics Malaysia (DOSM) will conduct the Economic Census in 2023. DOSM greatly appreciates the cooperation from respondents to provide information with DOSM and make this census a success. Please visit [www.dosm.gov.my](http://www.dosm.gov.my) for more information.*

*DOSM has launched OpenDOSM NextGen as a platform that provides a catalogue of data and visualisation that facilitates users in analysing various types of data. OpenDOSM NextGen is an open source data sharing medium and accessible through <https://open.dosm.gov.my> portal.*

*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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**Jabatan Perangkaan Malaysia**

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Pusat Pentadbiran Kerajaan Persekutuan

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**MALAYSIA**

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Portal : <https://www.dosm.gov.my>  
Facebook/ Twitter/ Instagram/ YouTube : StatsMalaysia  
Emel/ *Email* : info@dosm.gov.my (pertanyaan umum/ *general enquiries*)  
data@dosm.gov.my (pertanyaan & permintaan data/ *data request & enquiries*)  
  
Harga/ *Price* : RM20.00

Diterbitkan pada Mac 2023/ *Published in March 2023*

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Tiada bahagian daripada terbitan ini boleh diterbitkan semula, disimpan untuk pengeluaran atau ditukar dalam apa-apa bentuk atau alat apa jua pun kecuali setelah mendapat kebenaran daripada Jabatan Perangkaan Malaysia.

Pengguna yang mengeluarkan sebarang maklumat dari terbitan ini sama ada yang asal atau diolah semula hendaklah meletakkan kenyataan berikut:

“Sumber: Jabatan Perangkaan Malaysia.”

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“Source: Department of Statistics, Malaysia.”

**ISSN 2672-7013**

Penerbitan Statistik Ekonomi Tahunan 2022 memaparkan statistik utama bagi tahun rujukan 2021 untuk sektor Pembinaan. Klasifikasi industri yang digunakan adalah merujuk Piawaian Klasifikasi Industri Malaysia (MSIC) 2008 Ver. 1.0, selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4*.

Statistik yang dilaporkan dalam penerbitan ini adalah output kasar, input perantaraan, nilai ditambah, bilangan pekerja, gaji & upah dibayar dan nilai harta tetap. Statistik ini juga boleh digunakan sebagai sumber rujukan oleh kerajaan, ahli ekonomi, ahli akademik, pihak swasta serta individu bagi tujuan perancangan dan penggubalan dasar, analisis ekonomi, unjuran dan membantu dalam perancangan pembangunan perniagaan.

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

Jabatan Perangkaan Malaysia merakamkan setinggi-tinggi penghargaan atas kerjasama dan sumbangan yang diberikan oleh semua pihak dalam membekalkan data yang diperlukan dan menyumbang kepada kejayaan penerbitan 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**

*The Annual Economic Statistics 2022 publication presents main statistics for the reference year of 2021 on Construction sector. The classified industries refer to Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0, in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4.*

*Statistics reported in this publication are gross output, intermediate input, value added, numbers of persons engaged, salaries & wages paid and value of fixed assets. These statistics can be used by government agencies, economists, academicians, private sectors and individuals for planning and formulating policies, economic analysis, projections and assisting in business development planning.*

*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 such as scope & coverage, concepts & definitions as well as the key variables used to assist users to understand the published statistics.*

*Department of Statistics Malaysia (DOSM) gratefully acknowledges the co-operation and contribution of all parties who have provided the required data and contributed to the success of this publication. 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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# INFOGRAFIK & RINGKASAN PENEMUAN

## *INFOGRAPHIC & SUMMARY OF FINDINGS*



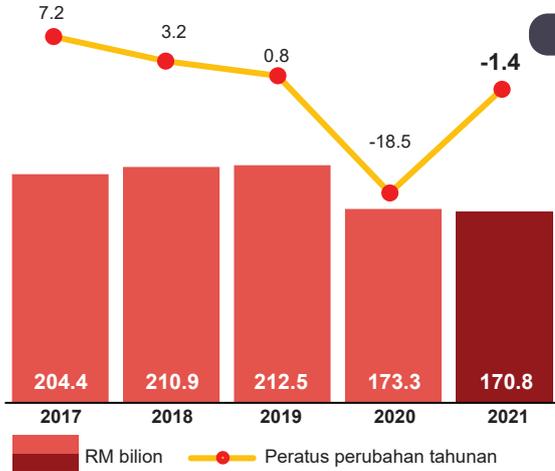
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# STATISTIK EKONOMI TAHUNAN 2022

## PEMBINAAN

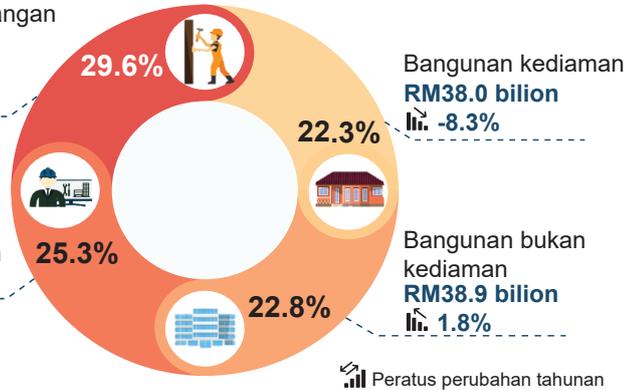
Output kasar bagi sektor Pembinaan menurun sebanyak 1.4 peratus pada tahun 2021 mencatatkan RM170.8 bilion Seramai 1.19 juta orang terlibat dalam sektor ini dengan gaji dan upah dibayar berjumlah RM33.4 bilion

### OUTPUT KASAR

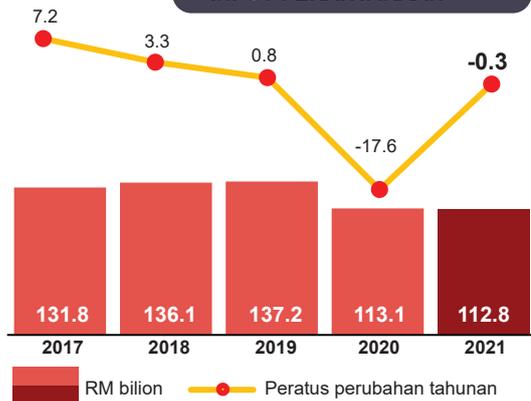


Aktiviti pertukangan khas  
**RM50.6 bilion**  
li. 26.6%

Kejuruteraan awam  
**RM43.2 bilion**  
li. -19.4%



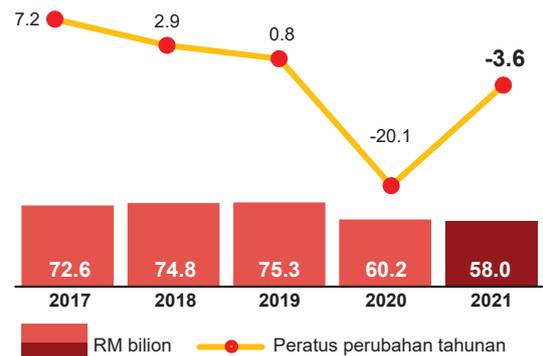
### INPUT PERANTARAAN



Input perantaraan menurun sebanyak 0.3 peratus pada 2021 kepada RM112.8 bilion

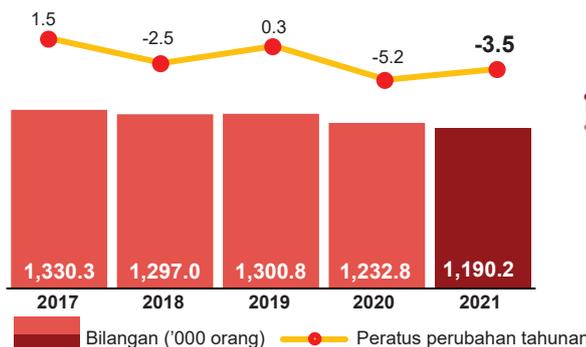
### NILAI DITAMBAH

Nilai ditambah untuk sektor Pembinaan menurun sebanyak 3.6 peratus merekodkan RM58.0 bilion pada tahun 2021



### PEKERJA

Bilangan pekerja dalam sektor ini berkurang 3.5 peratus pada tahun 2021 (2020: -5.2%)



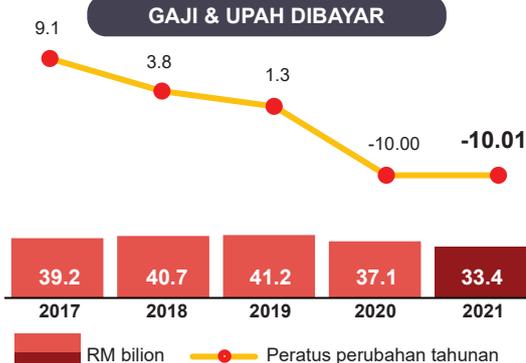
li. -2.7%  
279,976 orang  
Bangunan kediaman

li. -3.7%  
273,843 orang  
Bangunan bukan kediaman

li. -2.9%  
344,548 orang  
Kejuruteraan awam

li. -4.6%  
291,792 orang  
Aktiviti pertukangan khas

### GAJI & UPAH DIBAYAR



Gaji & upah dibayar bagi sektor Pembinaan menurun sebanyak 10.01 peratus dalam 2021 selari dengan pengurangan bilangan pekerja

### HARTA TETAP

Harta tetap turut merosot sebanyak 10.4 peratus pada 2021 berbanding setahun yang lalu



## STATISTIK EKONOMI TAHUNAN 2022

### PEMBINAAN

#### Johor



Output Kasar	: RM17.1b
Input Perantaraan	: RM11.4b
Nilai Ditambah	: RM5.6b
Bilangan Pekerja	: 151,194
Gaji & Upah Dibayar	: RM3.8b
Harta Tetap	: RM3.5b

#### Kedah



Output Kasar	: RM3.5b
Input Perantaraan	: RM2.3b
Nilai Ditambah	: RM1.2b
Bilangan Pekerja	: 27,577
Gaji & Upah Dibayar	: RM0.7b
Harta Tetap	: RM0.8b

#### Kelantan



Output Kasar	: RM2.6b
Input Perantaraan	: RM1.6b
Nilai Ditambah	: RM1.0b
Bilangan Pekerja	: 15,346
Gaji & Upah Dibayar	: RM0.4b
Harta Tetap	: RM0.2b

#### Melaka



Output Kasar	: RM2.0b
Input Perantaraan	: RM1.3b
Nilai Ditambah	: RM0.7b
Bilangan Pekerja	: 19,616
Gaji & Upah Dibayar	: RM0.5b
Harta Tetap	: RM0.6b

#### Negeri Sembilan



Output Kasar	: RM5.2b
Input Perantaraan	: RM3.5b
Nilai Ditambah	: RM1.7b
Bilangan Pekerja	: 48,376
Gaji & Upah Dibayar	: RM1.2b
Harta Tetap	: RM0.4b

#### Pahang



Output Kasar	: RM6.2b
Input Perantaraan	: RM3.9b
Nilai Ditambah	: RM2.3b
Bilangan Pekerja	: 45,704
Gaji & Upah Dibayar	: RM1.2b
Harta Tetap	: RM0.5b

#### Pulau Pinang



Output Kasar	: RM11.3b
Input Perantaraan	: RM7.4b
Nilai Ditambah	: RM3.8b
Bilangan Pekerja	: 73,134
Gaji & Upah Dibayar	: RM1.9b
Harta Tetap	: RM0.6b

#### Perak



Output Kasar	: RM6.9b
Input Perantaraan	: RM4.3b
Nilai Ditambah	: RM2.6b
Bilangan Pekerja	: 63,227
Gaji & Upah Dibayar	: RM1.7b
Harta Tetap	: RM0.8b

#### Perlis



Output Kasar	: RM0.3b
Input Perantaraan	: RM0.2b
Nilai Ditambah	: RM0.1b
Bilangan Pekerja	: 4,843
Gaji & Upah Dibayar	: RM0.1b
Harta Tetap	: RM0.01b

#### Selangor



Output Kasar	: RM55.7b
Input Perantaraan	: RM37.2b
Nilai Ditambah	: RM18.5b
Bilangan Pekerja	: 304,529
Gaji & Upah Dibayar	: RM9.6b
Harta Tetap	: RM6.4b

#### Terengganu



Output Kasar	: RM4.8b
Input Perantaraan	: RM3.0b
Nilai Ditambah	: RM1.8b
Bilangan Pekerja	: 32,264
Gaji & Upah Dibayar	: RM1.0b
Harta Tetap	: RM0.3b

#### Sabah



Output Kasar	: RM9.3b
Input Perantaraan	: RM6.2b
Nilai Ditambah	: RM3.2b
Bilangan Pekerja	: 64,399
Gaji & Upah Dibayar	: RM1.6b
Harta Tetap	: RM1.4b

#### Sarawak



Output Kasar	: RM14.5b
Input Perantaraan	: RM9.0b
Nilai Ditambah	: RM5.5b
Bilangan Pekerja	: 90,912
Gaji & Upah Dibayar	: RM2.5b
Harta Tetap	: RM2.8b

#### W.P. Kuala Lumpur



Output Kasar	: RM29.4b
Input Perantaraan	: RM19.9b
Nilai Ditambah	: RM9.5b
Bilangan Pekerja	: 232,957
Gaji & Upah Dibayar	: RM6.6b
Harta Tetap	: RM3.7b

#### W.P. Labuan



Output Kasar	: RM0.4b
Input Perantaraan	: RM0.3b
Nilai Ditambah	: RM0.1b
Bilangan Pekerja	: 2,574
Gaji & Upah Dibayar	: RM0.1b
Harta Tetap	: RM0.01b

#### W.P. Putrajaya



Output Kasar	: RM1.5b
Input Perantaraan	: RM1.0b
Nilai Ditambah	: RM0.5b
Bilangan Pekerja	: 13,507
Gaji & Upah Dibayar	: RM0.4b
Harta Tetap	: RM0.1b

b : bilion

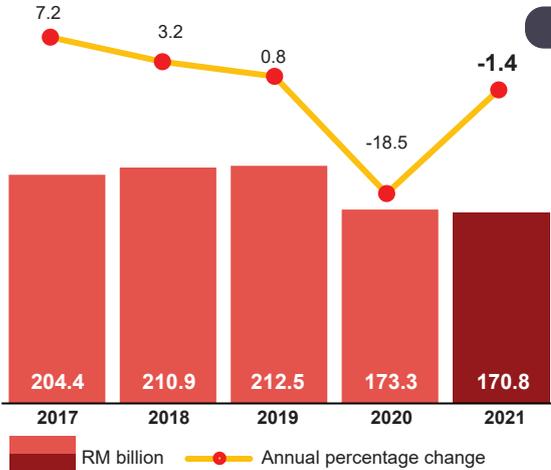


# ANNUAL ECONOMIC STATISTIC 2022

## CONSTRUCTION

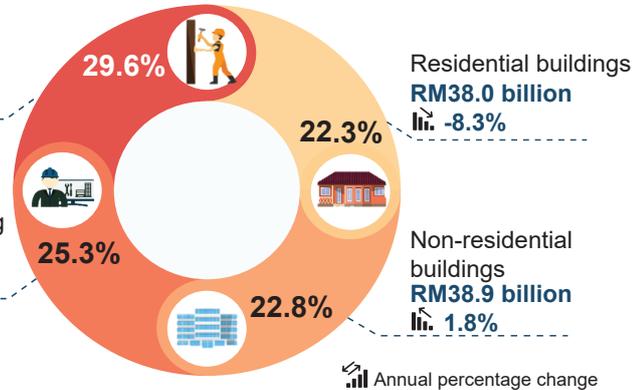
The gross output for Construction sector decreased by 1.4 per cent in 2021 to register RM170.8 billion  
A total of 1.19 million persons were engaged in this sector with salaries and wages paid amounting to RM33.4 billion

### GROSS OUTPUT

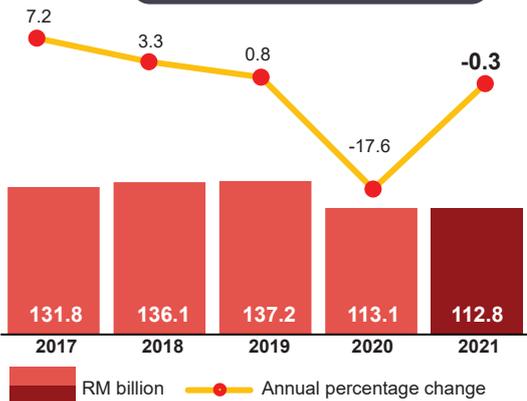


Special trade activities  
RM50.6 billion  
li. 26.6%

Civil engineering  
RM43.2 billion  
li. -19.4%



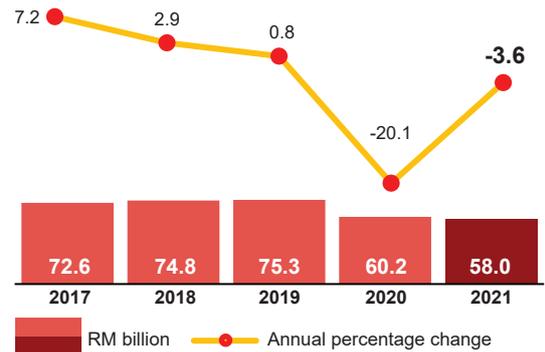
### INTERMEDIATE INPUT



Intermediate input decreased by 0.3 per cent in 2021 to RM112.8 billion

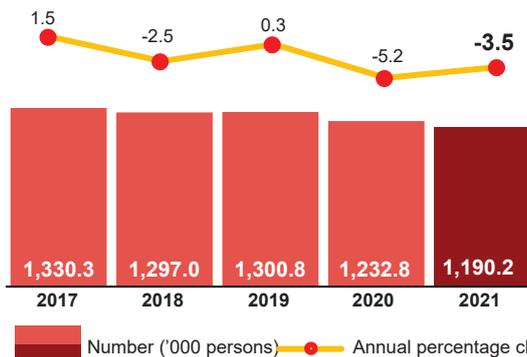
### VALUE ADDED

Value added of the Construction sector declined by 3.6 per cent recorded to RM58.0 billion in 2021



### PERSONS ENGAGED

Number of persons engaged in this sector declined by 3.5 per cent in 2021 (2020: -5.2%)



li. -2.7%  
279,976 persons  
Residential buildings

li. -2.9%  
344,548 persons  
Civil engineering

li. -3.7%  
273,843 persons  
Non-residential buildings

li. -4.6%  
291,792 persons  
Special trade activities

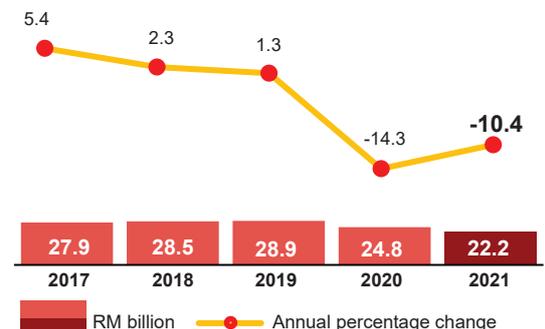
### SALARIES & WAGES PAID

Salaries & wages paid in Construction sector decreased by 10.01 per cent in 2021 in line with a reduction in the number of employees



### FIXED ASSETS

Fixed assets continued to decline by 10.4 per cent in 2021 compared to a year ago





# ANNUAL ECONOMIC STATISTICS 2022

## CONSTRUCTION

### Johor



Gross Output	: RM17.1b
Intermediate Input	: RM11.4b
Value Added	: RM5.6b
Persons Engaged	: 151,194
Salaries & Wages Paid	: RM3.8b
Fixed Assets	: RM3.5b

### Kedah



Gross Output	: RM3.5b
Intermediate Input	: RM2.3b
Value Added	: RM1.2b
Persons Engaged	: 27,577
Salaries & Wages Paid	: RM0.7b
Fixed Assets	: RM0.8b

### Kelantan



Gross Output	: RM2.6b
Intermediate Input	: RM1.6b
Value Added	: RM1.0b
Persons Engaged	: 15,346
Salaries & Wages Paid	: RM0.4b
Fixed Assets	: RM0.2b

### Melaka



Gross Output	: RM2.0b
Intermediate Input	: RM1.3b
Value Added	: RM0.7b
Persons Engaged	: 19,616
Salaries & Wages Paid	: RM0.5b
Fixed Assets	: RM0.6b

### Negeri Sembilan



Gross Output	: RM5.2b
Intermediate Input	: RM3.5b
Value Added	: RM1.7b
Persons Engaged	: 48,376
Salaries & Wages Paid	: RM1.2b
Fixed Assets	: RM0.4b

### Pahang



Gross Output	: RM6.2b
Intermediate Input	: RM3.9b
Value Added	: RM2.3b
Persons Engaged	: 45,704
Salaries & Wages Paid	: RM1.2b
Fixed Assets	: RM0.5b

### Pulau Pinang



Gross Output	: RM11.3b
Intermediate Input	: RM7.4b
Value Added	: RM3.8b
Persons Engaged	: 73,134
Salaries & Wages Paid	: RM1.9b
Fixed Assets	: RM0.6b

### Perak



Gross Output	: RM6.9b
Intermediate Input	: RM4.3b
Value Added	: RM2.6b
Persons Engaged	: 63,227
Salaries & Wages Paid	: RM1.7b
Fixed Assets	: RM0.8b

### Perlis



Gross Output	: RM0.3b
Intermediate Input	: RM0.2b
Value Added	: RM0.1b
Persons Engaged	: 4,843
Salaries & Wages Paid	: RM0.1b
Fixed Assets	: RM0.01b

### Selangor



Gross Output	: RM55.7b
Intermediate Input	: RM37.2b
Value Added	: RM18.5b
Persons Engaged	: 304,529
Salaries & Wages Paid	: RM9.6b
Fixed Assets	: RM6.4b

### Terengganu



Gross Output	: RM4.8b
Intermediate Input	: RM3.0b
Value Added	: RM1.8b
Persons Engaged	: 32,264
Salaries & Wages Paid	: RM1.0b
Fixed Assets	: RM0.3b

### Sabah



Gross Output	: RM9.3b
Intermediate Input	: RM6.2b
Value Added	: RM3.2b
Persons Engaged	: 64,399
Salaries & Wages Paid	: RM1.6b
Fixed Assets	: RM1.4b

### Sarawak



Gross Output	: RM14.5b
Intermediate Input	: RM9.0b
Value Added	: RM5.5b
Persons Engaged	: 90,912
Salaries & Wages Paid	: RM2.5b
Fixed Assets	: RM2.8b

### W.P. Kuala Lumpur



Gross Output	: RM29.4b
Intermediate Input	: RM19.9b
Value Added	: RM9.5b
Persons Engaged	: 232,957
Salaries & Wages Paid	: RM6.6b
Fixed Assets	: RM3.7b

### W.P. Labuan



Gross Output	: RM0.4b
Intermediate Input	: RM0.3b
Value Added	: RM0.1b
Persons Engaged	: 2,574
Salaries & Wages Paid	: RM0.1b
Fixed Assets	: RM0.01b

### W.P. Putrajaya



Gross Output	: RM1.5b
Intermediate Input	: RM1.0b
Value Added	: RM0.5b
Persons Engaged	: 13,507
Salaries & Wages Paid	: RM0.4b
Fixed Assets	: RM0.1b

b : billion



## 1. Pengenalan

Laporan ini membentangkan statistik bagi sektor Pembinaan yang diperolehi daripada Survei Ekonomi Tahunan 2022 untuk tahun rujukan 2021. Statistik utama terdiri daripada output kasar, input perantaraan, nilai ditambah, bilangan pekerja, gaji & upah dibayar dan nilai harta tetap.

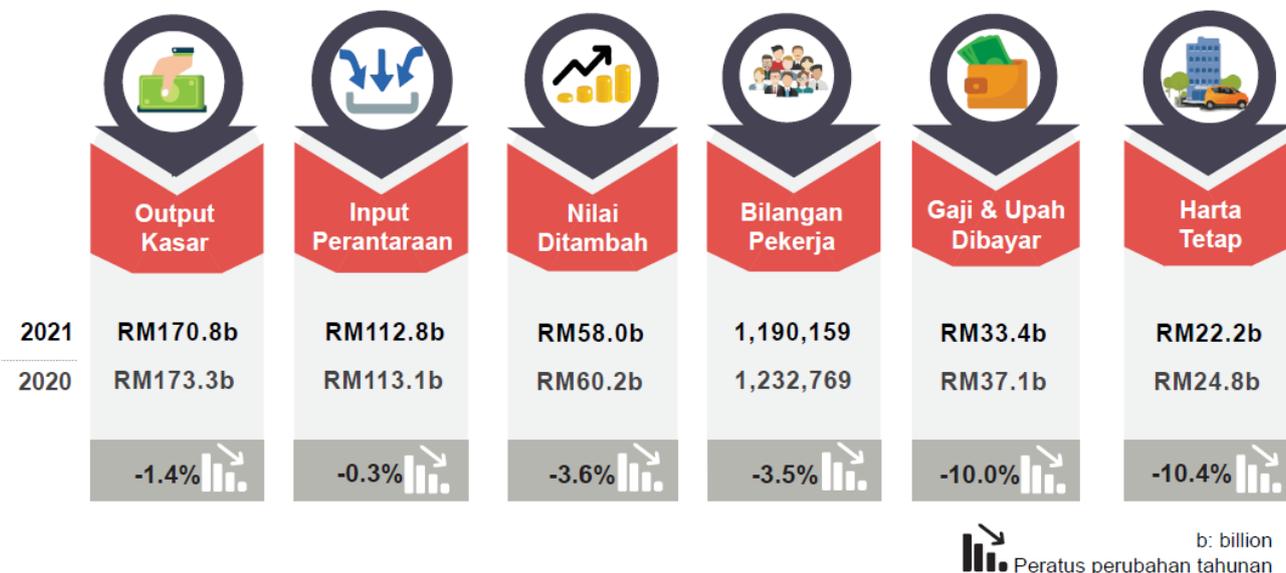
Oleh itu, nilai ditambah menurun sebanyak 3.6 peratus dari RM60.2 bilion pada tahun 2020 kepada RM58.0 bilion pada 2021.

## 2. Prestasi Sektor Pembinaan

Output kasar menurun 1.4 peratus berbanding tahun lalu kepada RM170.8 bilion pada 2021. Selaras dengan penurunan output kasar, input perantaraan menguncup sebanyak 0.3 peratus dengan nilai RM112.8 bilion.

Dalam pada itu, bilangan pekerja yang terlibat dalam sektor Pembinaan menurun sebanyak 3.5 peratus kepada 1,190,159 orang berbanding 1,232,769 orang pada tahun sebelumnya. Pada masa yang sama, gaji & upah dibayar turut menurun sebanyak 10.0 peratus kepada RM33.4 bilion pada 2021 (2020: RM37.1 bilion).

Paparan 1: Paparan utama sektor Pembinaan, 2020 dan 2021



### 3. Output Kasar

#### 3.1 Output Kasar mengikut Subsektor

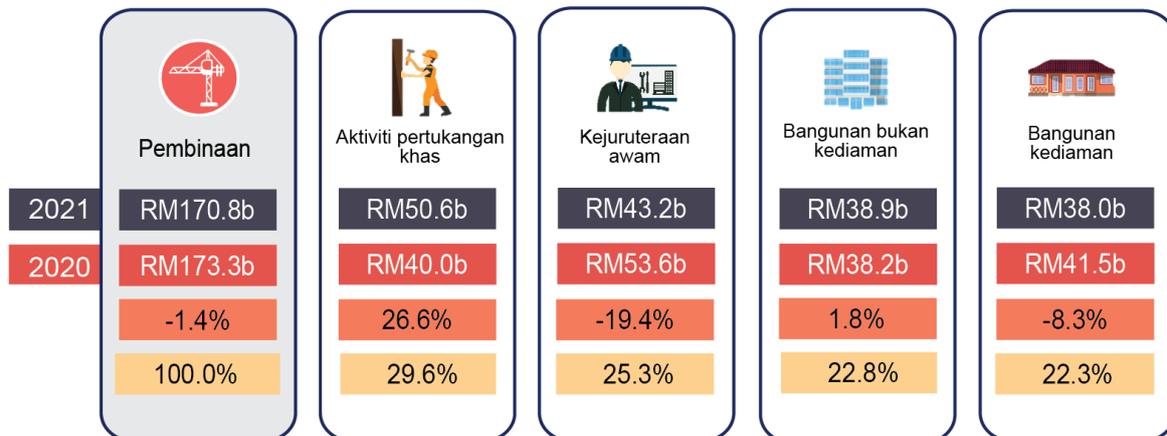
Subsektor Aktiviti pertukangan khas merupakan penyumbang utama sektor Pembinaan dengan sumbangan 29.6 peratus, meningkat 26.6 peratus kepada RM50.6 bilion pada 2021 berbanding RM40.0 bilion pada 2020.

Subsektor Kejuruteraan awam menduduki tempat kedua dengan nilai output kasar RM43.2 bilion pada 2021 (sumbangan: 25.3%), menurun sebanyak 19.4 peratus.

Subsektor Bangunan bukan kediaman menyumbang 22.8 peratus dengan peningkatan 1.8 peratus kepada RM38.9 bilion (2020: RM38.2 bilion).

Dalam pada itu, nilai output kasar bagi subsektor Bangunan kediaman merekodkan 22.3 peratus. Subsektor ini menunjukkan penurunan sebanyak 8.3 peratus, berjumlah RM38.0 bilion pada 2021 (2020: RM41.5 bilion).

**Paparan 2: Output kasar mengikut subsektor, 2020 dan 2021**



RM bilion  
 RM bilion  
 Peratus perubahan tahunan 2021  
 Peratus sumbangan 2021

### 3.2 Output Kasar mengikut Negeri

Selangor merupakan penyumbang nilai output kasar tertinggi sebanyak 32.5 peratus. Penyumbang kedua tertinggi adalah W.P. Kuala Lumpur dengan 17.2 peratus iaitu sebanyak RM29.4 bilion, diikuti Johor (RM17.1 bilion; sumbangan: 10.0%) dan Sarawak (RM14.5 bilion, sumbangan: 8.5%). Keempat-empat negeri ini menyumbang lebih daripada 60.0 peratus kepada jumlah nilai output kasar bagi sektor Pembinaan pada 2021.

*“Nilai output kasar tertinggi adalah  
Selangor,  
W.P. Kuala Lumpur,  
Johor dan Sarawak”*

### Paparan 3: Output kasar mengikut negeri, 2021

		RM bilion	Sumbangan (%)
	Malaysia	170.8	100.0
	Johor	17.1	10.0
	Kedah	3.5	2.1
	Kelantan	2.6	1.5
	Melaka	2.0	1.2
	Negeri Sembilan	5.2	3.1
	Pahang	6.2	3.7
	Pulau Pinang	11.3	6.6
	Perak	6.9	4.0
	Perlis	0.3	0.2
	Selangor	55.7	32.5
	Terengganu	4.8	2.8
	Sabah	9.3	5.5
	Sarawak	14.5	8.5
	W.P. Kuala Lumpur	29.4	17.2
	W.P. Labuan	0.4	0.2
	W.P. Putrajaya	1.5	0.9

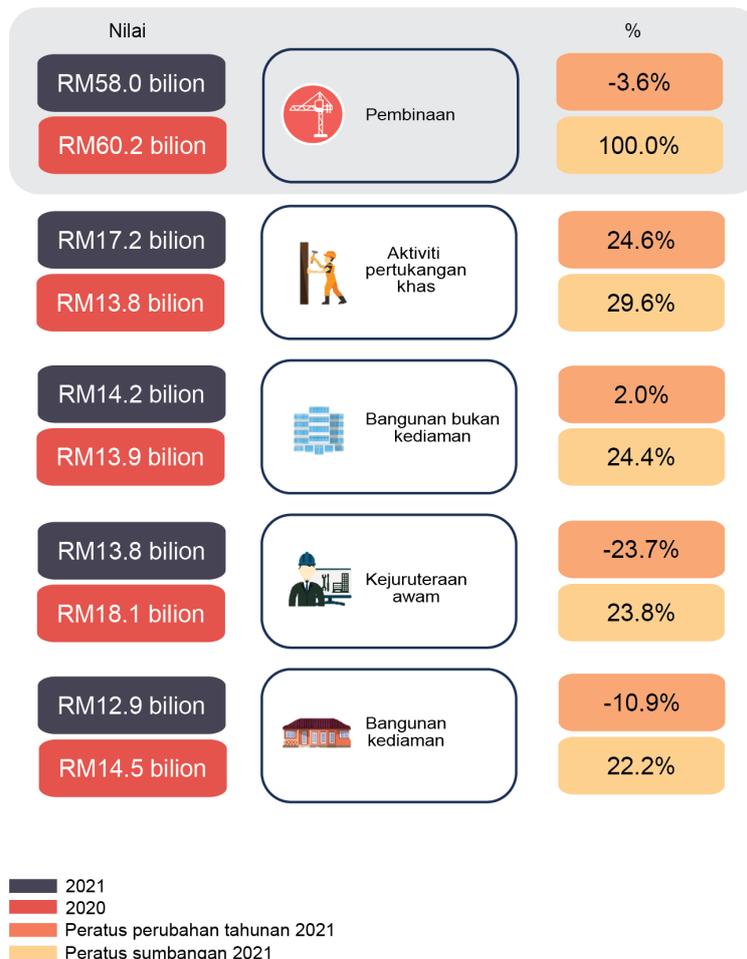
#### 4. Nilai Ditambah

##### 4.1 Nilai Ditambah bagi Subsektor

Nilai ditambah sektor Pembinaan mencatatkan RM58.0 bilion pada 2021, menyusut 3.6 peratus berbanding tahun sebelumnya. Subsektor Aktiviti pertukangan khas mencatatkan nilai ditambah tertinggi, berjumlah RM17.2 bilion dengan sumbangan sebanyak 29.6 peratus (2020: RM13.8 bilion; 22.9%).

Di samping itu, nilai ditambah bagi subsektor Bangunan bukan kediaman meningkat RM14.2 billion dengan sumbangan 24.4 peratus pada tahun 2021 (2020: RM13.9 bilion; 23.1%). Sementara itu, nilai ditambah bagi subsektor Kejuruteraan awam mencatatkan RM13.8 bilion iaitu sebanyak 23.8 peratus sumbangan, dengan penurunan 23.7 peratus kepada RM13.8 bilion (2020: RM18.1 bilion). Tambahan lagi, nilai ditambah subsektor Bangunan kediaman menurun kepada RM12.9 bilion pada 2021 dengan sumbangan 22.2 peratus (2020: RM14.5 bilion).

**Paparan 4: Nilai ditambah mengikut subsektor, 2020 dan 2021**



#### 4.2 Nilai Ditambah mengikut Negeri

Nilai ditambah bagi sektor Pembinaan pada 2021 diterajui oleh Selangor yang mencatatkan RM18.5 bilion dengan sumbangan 31.8 peratus. Seterusnya, W.P. Kuala Lumpur menyumbang nilai ditambah RM9.5 bilion dengan sumbangan 16.3 peratus, diikuti Johor (RM5.6 bilion, sumbangan: 9.7%) dan Sarawak (RM5.5 bilion, sumbangan: 9.5%). Keempat-empat negeri ini menyumbang lebih daripada 60.0 peratus daripada jumlah nilai ditambah bagi sektor Pembinaan pada 2021.

*“Nilai ditambah tertinggi adalah  
Selangor,  
W.P. Kuala Lumpur,  
Johor dan Sarawak”*

#### Paparan 5: Nilai ditambah mengikut negeri, 2021

		RM bilion	Sumbangan (%)
	Malaysia	58.0	100.0
	Johor	5.6	9.7
	Kedah	1.2	2.1
	Kelantan	1.0	1.6
	Melaka	0.7	1.2
	Negeri Sembilan	1.7	3.0
	Pahang	2.3	3.9
	Pulau Pinang	3.8	6.6
	Perak	2.6	4.5
	Perlis	0.1	0.2
	Selangor	18.5	31.8
	Terengganu	1.8	3.1
	Sabah	3.2	5.5
	Sarawak	5.5	9.5
	W.P. Kuala Lumpur	9.5	16.3
	W.P. Labuan	0.1	0.2
	W.P. Putrajaya	0.5	0.8

## 5. Pekerja dan Gaji & Upah Dibayar

### 5.1 Pekerja dan Gaji & Upah dibayar mengikut Subsektor

Sektor Pembinaan mencatatkan penurunan sebanyak 3.5 peratus dengan 1,190,159 orang pekerja pada tahun 2021, disumbangkan oleh subsektor Kejuruteraan awam yang mencatatkan sebanyak 28.9 peratus atau 344,548 orang. Selain itu, bilangan pekerja bagi subsektor Aktiviti pertukangan khas mencatatkan sumbangan 24.6 peratus dan subsektor Bangunan kediaman (sumbangan: 23.5%).

Gaji & upah yang dibayar pada tahun 2021 bagi sektor Pembinaan mencatatkan jumlah RM33.4 bilion, menurun sebanyak 10.0 peratus berbanding dengan tahun sebelumnya.

Gaji & upah dibayar yang tertinggi adalah dari subsektor Kejuruteraan awam dengan RM10.8 bilion (sumbangan: 32.3%), diikuti oleh subsektor Aktiviti pertukangan khas yang bernilai RM8.1 bilion (sumbangan: 24.4%), subsektor Bangunan bukan kediaman yang berjumlah RM7.4 bilion (sumbangan: 22.2%) dan Bangunan kediaman subsektor sebanyak RM7.1 bilion (sumbangan: 21.2%).

Purata gaji dan upah dibayar di dalam sektor Pembinaan adalah sebanyak RM2,378 sebulan pada tahun 2021.

**Paparan 6: Pekerja dan gaji & upah dibayar mengikut subsektor, 2021**

Purata Gaji & Upah sebulan	Pekerja		Gaji & Upah Dibayar	
	Orang	% Sumbangan	RM billion	% Sumbangan
RM2,378				
 <b>Pembinaan</b>	1,190,159	100.0	33.4	100.0
 Bangunan kediaman	279,976	23.5	7.1	21.2
 Bangunan bukan kediaman	273,843	23.0	7.4	22.2
 Kejuruteraan awam	344,548	28.9	10.8	32.3
 Aktiviti pertukangan khas	291,792	24.6	8.1	24.4

## 5.2 Pekerja Bergaji Sepenuh Masa dan Gaji & Upah dibayar mengikut Kategori dan Kemahiran Pekerja

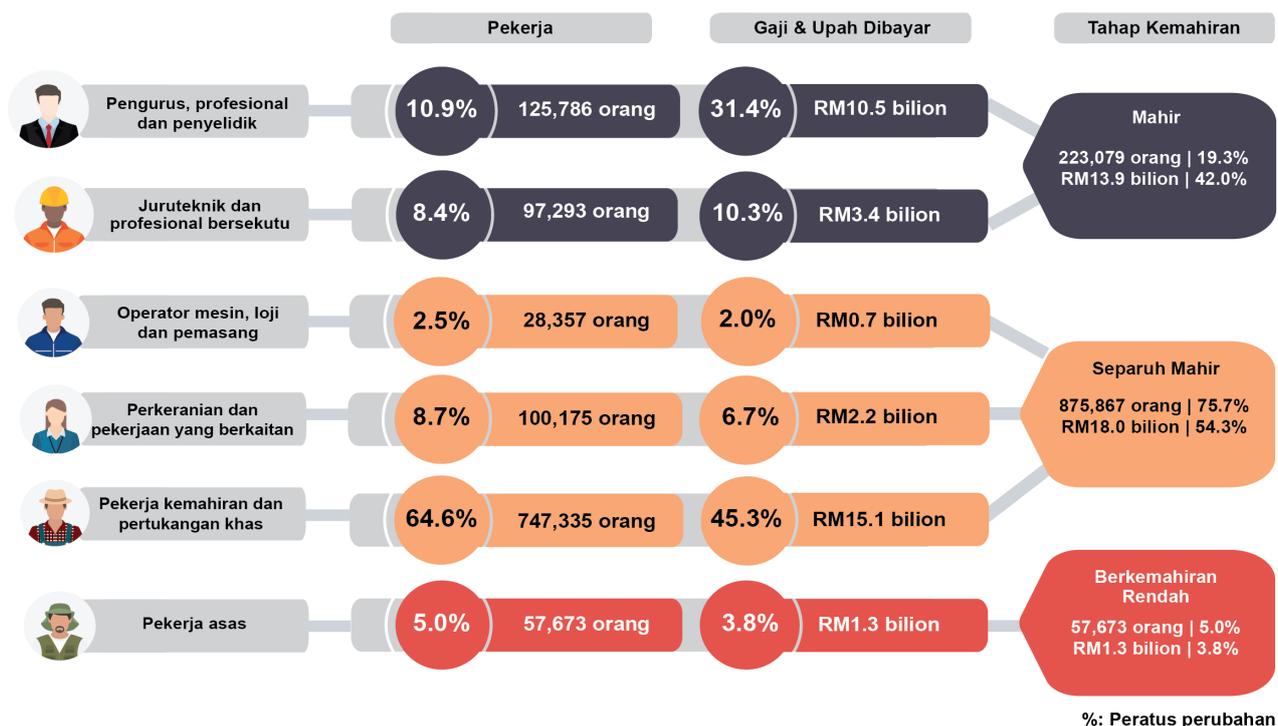
Bilangan pekerja yang terlibat dalam sektor Pembinaan ialah 1,190,159 orang pada 2021. Majoritinya adalah pekerja bergaji sepenuh masa iaitu seramai 1,156,619 orang dengan sumbangan 97.2 peratus manakala pemilik yang bekerja, rakan niaga yang aktif dan pekerja keluarga tanpa gaji pula berjumlah 20,486 orang dengan sumbangan 1.7 peratus.

Kebanyakan daripada pekerja bergaji sepenuh masa adalah daripada kumpulan pekerja kemahiran dan pertukangan khas. Kumpulan ini mendominasi tenaga kerja dengan 64.6 peratus sumbangan berjumlah 747,335 orang. Seterusnya, diikuti dengan 10.9 peratus sumbangan daripada kategori pengurus, profesional dan penyelidik dengan 125,786 orang dan 8.7 peratus sumbangan adalah daripada perkeranian dan pekerjaan yang berkaitan dengan 100,175 orang. Ketiga-tiga kategori ini mewakili 84.2 peratus atau 973,296 orang.

Jumlah gaji & upah dibayar untuk pekerja kemahiran dan pertukangan khas yang bernilai RM15.1 bilion yang merangkumi 45.3 peratus. Kategori pengurus, profesional dan penyelidik pula memperoleh purata gaji dan upah tertinggi iaitu RM6,953 sebulan pada 2021.

Bagi bilangan pekerja mengikut tahap kemahiran, pekerja separuh mahir mencatatkan bilangan pekerja tertinggi iaitu 875,867 orang (sumbangan: 75.7%), diikuti oleh pekerja mahir seramai 223,079 orang (sumbangan: 19.3%) dan pekerja berkemahiran rendah dengan 56,673 orang (sumbangan: 5.0%). Gaji & upah yang dibayar untuk pekerja separuh mahir mencatatkan lebih daripada separuh dengan jumlah sumbangannya pada nilai RM18.0 bilion (sumbangan: 54.3%), manakala kategori pekerja mahir dan berkemahiran rendah menerima jumlah bayaran sebanyak RM15.3 bilion pada tahun 2021.

### Paparan 7: Pekerja bergaji sepenuh masa mengikut kategori dan kemahiran pekerja, 2021



### 1. Introduction

This report presents statistics on the Construction sector acquired from the Annual Economic Survey 2022 for the reference year 2021. The key statistics consists of gross output, intermediate input, value added, number of persons engaged, salaries & wages paid and value of fixed assets.

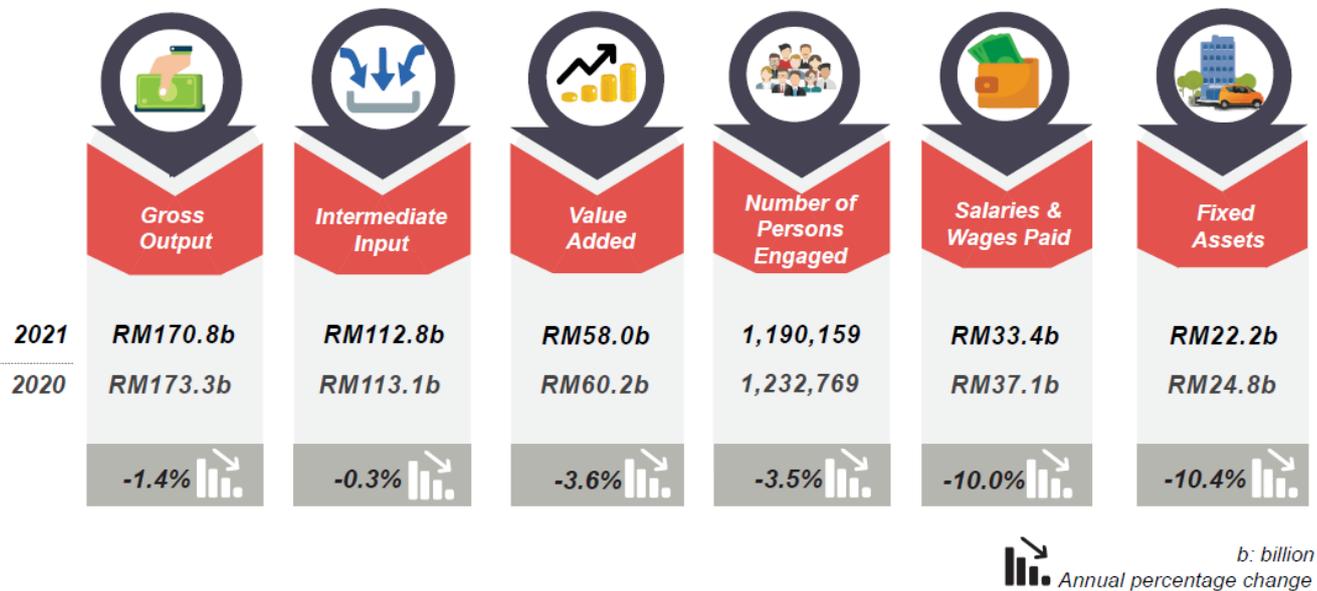
In line with the decrease in gross output, intermediate input declined by 0.3 per cent with a value of RM112.8 billion. Hence, the value added posted a decline by 3.6 per cent from RM60.2 billion in 2020 to RM58.0 billion in 2021.

### 2. Performance of Construction Sector

Gross output decreased by 1.4 per cent as compared to a year ago to record RM170.8 billion in 2021.

In view of the number of persons engaged in Construction sector, dropped by 3.5 per cent with 1,190,159 persons as compared to 1,232,769 persons in the preceding year. Concurrently, salaries & wages decreased by 10.0 per cent to RM33.4 billion in 2021 (2020: RM37.1 billion).

**Exhibit 1: Principal statistics of Construction sector, 2020 and 2021**



### 3. Gross Output

#### 3.1 Gross Output by Sub-sector

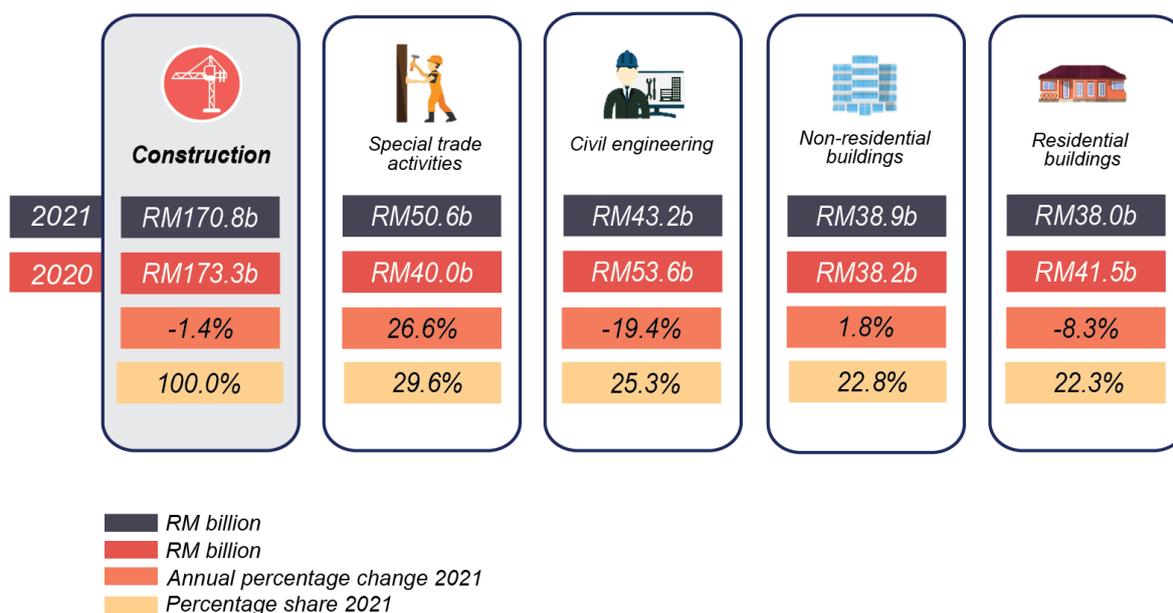
The largest contributor of output in Construction sector was Special trade activities sub-sector with a share of 29.6 per cent, increased by 26.6 per cent to RM50.6 billion in 2021 as compared to RM40.0 billion in 2020.

Civil Engineering sub-sector ranked second with value of gross output RM43.2 billion in 2021 (share: 25.3%), decreased by 19.4 per cent.

Non-residential buildings sub-sector contributed with a share of 22.8 per cent, increased by 1.8 per cent to record RM38.9 billion (2020: RM38.2 billion).

In the meantime, gross output for Residential buildings sub-sector comprised 22.3 per cent. This sub-sector indicated a decline of 8.3 per cent, amounted to RM38.0 billion in 2021 (2020: RM41.5 billion).

**Exhibit 2: Gross output by sub-sector, 2020 and 2021**



### 3.2 Gross Output by State

Selangor contributed most of the gross output with a share of 32.5 per cent. The second highest contributor was W.P. Kuala Lumpur with 17.2 per cent share and recorded a value of RM29.4 billion, followed by Johor (RM17.1 billion; share: 10.0%) and Sarawak (RM14.5 billion, share: 8.5%). These four states contributed more than 60.0 per cent share of the total gross output of Construction sector in 2021.

**“Selangor,  
W.P. Kuala Lumpur,  
Johor and Sarawak were the  
highest contributor in gross output”**

**Exhibit 3: Gross output by state, 2021**

		RM billion	Share (%)
	Malaysia	170.8	100.0
	Johor	17.1	10.0
	Kedah	3.5	2.1
	Kelantan	2.6	1.5
	Melaka	2.0	1.2
	Negeri Sembilan	5.2	3.1
	Pahang	6.2	3.7
	Pulau Pinang	11.3	6.6
	Perak	6.9	4.0
	Perlis	0.3	0.2
	Selangor	55.7	32.5
	Terengganu	4.8	2.8
	Sabah	9.3	5.5
	Sarawak	14.5	8.5
	W.P. Kuala Lumpur	29.4	17.2
	W.P. Labuan	0.4	0.2
	W.P. Putrajaya	1.5	0.9

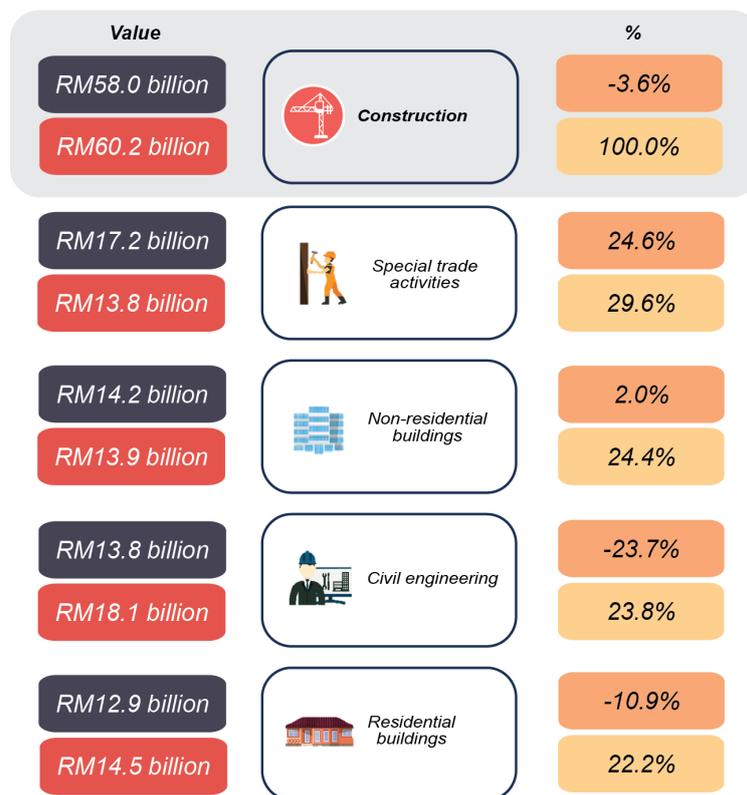
#### 4. Value Added

##### 4.1 Value Added by Sub-sector

The value added of Construction sector recorded RM58.0 billion in 2021, dropped by 3.6 per cent compared to the preceding year. The sub-sector of Special trade activities posted the highest value added, amounting to RM17.2 billion with a share of 29.6 per cent (2020: RM13.8 billion; 22.9%).

In addition, the value added for Non-residential buildings sub-sector increased by RM14.2 billion with a share of 24.4 per cent in 2021 (2020: RM13.9 billion; 23.1%). Meanwhile, the value added for Civil engineering sub-sector registered RM13.8 billion with a share of 23.8 per cent, decreased by 23.7 per cent (2020: RM18.1 billion). Furthermore, value added for Residential buildings sub-sector decreased to RM12.9 billion in 2021 with a share of 22.2 per cent (2020: RM14.5 billion).

**Exhibit 4: Value added by sub-sector, 2020 and 2021**



2021  
 2020  
 Annual percentage change 2021  
 Percentage share 2021

#### 4.2 Value Added by State

The value added for Construction sector in 2021 spearheaded by Selangor which registered a value of RM18.5 billion encompassing a 31.8 per cent share. Subsequently, W.P. Kuala Lumpur contributed a value added of RM9.5 billion with 16.3 per cent share, followed by Johor (RM5.6 billion, share: 9.7%) and Sarawak (RM5.5 billion, share: 9.5%). These four states accounted more than 60.0 per cent share from the total value added for Construction sector in 2021.

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**“Selangor,  
W.P. Kuala Lumpur,  
Johor and Sarawak were the  
highest contributor in value added”**

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**Exhibit 5: Value added by state, 2021**

		RM billion	Share (%)
	Malaysia	58.0	100.0
	Johor	5.6	9.7
	Kedah	1.2	2.1
	Kelantan	1.0	1.6
	Melaka	0.7	1.2
	Negeri Sembilan	1.7	3.0
	Pahang	2.3	3.9
	Pulau Pinang	3.8	6.6
	Perak	2.6	4.5
	Perlis	0.1	0.2
	Selangor	18.5	31.8
	Terengganu	1.8	3.1
	Sabah	3.2	5.5
	Sarawak	5.5	9.5
	W.P. Kuala Lumpur	9.5	16.3
	W.P. Labuan	0.1	0.2
	W.P. Putrajaya	0.5	0.8

## 5. Persons Engaged and Salaries & Wages Paid

### 5.1 Persons Engaged and Salaries & Wages Paid by Sub-sector

Construction sector registered a decrease of 3.5 per cent with 1,190,159 persons engaged in 2021, contributed by Civil engineering sub-sector which recorded a share of 28.9 per cent or equivalent to 344,548 persons. Moreover, the number of persons engaged was contributed by Special trade activities sub-sector with a share of 24.6 per cent, and Residential buildings sub-sector (share: 23.5%).

Salaries & wages paid in 2021 of Construction sector were recorded at RM33.4 billion, declined by a 10.0 per cent as against last year.

The highest salaries & wages paid was recorded by Civil engineering sub-sector with paid worth RM10.8 billion (share: 32.3%), followed by Special trade activities sub-sector paid worth RM8.1 billion (share: 24.4%), Non-residential sub-sector worth RM7.4 billion (share: 22.2%) and Residential buildings sub-sector worth RM7.1 billion (share: 21.2%).

The average salaries & wages paid in Construction sector were RM2,378 per month in 2021.

**Exhibit 6: Persons engaged and salaries & wages paid, 2021**

Average Salaries & Wages per month		Persons Engaged		Salaries & Wages Paid	
		Persons	% Share	RM billion	% Share
RM2,378					
	<b>Construction</b>	<b>1,190,159</b>	<b>100.0</b>	<b>33.4</b>	<b>100.0</b>
	Residential buildings	279,976	23.5	7.1	21.2
	Non-residential buildings	273,843	23.0	7.4	22.2
	Civil engineering	344,548	28.9	10.8	32.3
	Special trade activities	291,792	24.6	8.1	24.4

### 5.2 Full-time Paid Employees by Category of Workers and Skills

The number of persons engaged in the Construction sector was 1,190,159 persons in 2021. The majority were full-time paid employees with 1,156,619 persons at a share of 97.2 per cent while working proprietors, active business partners and unpaid family workers with 20,486 persons at a share of 1.7 per cent.

Furthermore, most of the full-time paid employees were in the group of craft and related trades workers. This group dominated the workforce by 64.6 per cent share with a total of 747,335 persons. This was followed by 10.9 per cent share from the category of managers, professionals and researchers with 125,786 persons and 8.7 per cent share were clerical and related occupations with 100,175 persons. These three categories represented 84.2 per cent or 973,296 persons.

Total salaries & wages paid for craft and related trades workers worth RM15.1 billion and encompassed 45.3 per cent. The category of managers, professionals and researchers earned the highest average salaries & wages which was RM6,953 per month in 2021.

In terms of persons engaged by skill level, semi-skilled workers recorded the highest number with 875,867 persons (share: 75.7%), followed by skilled workers with 223,079 persons (share: 19.3%) and low-skilled workers with 56,673 persons (share: 5.0%). Salaries & wages paid for semi-skilled workers registered more than half with a value of RM18.0 billion (share: 54.3%), while skilled and low-skilled employees categories received a total payout of RM15.3 billion in 2021.

**Exhibit 7: Full-time paid employees by category of workers and skills, 2021**



**JADUAL STATISTIK**

***STATISTICAL TABLES***

**2**



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**Jadual 1: Statistik utama sektor Pembinaan, 2015, 2017 - 2021**  
*Table 1: Principal statistics of Construction sector, 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 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>
2021	170,770,661	112,782,040	57,988,621	1,190,159	33,379,721	22,184,745
2020 <sup>f</sup>	173,270,942	113,092,631	60,178,311	1,232,769	37,091,528	24,766,397
2019	212,494,207	137,169,459	75,324,748	1,300,822	41,212,254	28,914,255
2018	210,901,470	136,139,206	74,762,264	1,297,038	40,683,186	28,536,052
2017	204,436,163	131,797,640	72,638,522	1,330,266	39,194,491	27,888,112
2015 *	177,938,694	114,754,354	63,184,340	1,290,474	32,899,322	25,105,605

**Nota / Note**

**<sup>f</sup>Merujuk kepada data semakan semula**

*Refer to revised data*

**\*Merujuk kepada tahun banci**

*Refer to census year*

**Jadual 1.1: Statistik utama sektor Pembinaan mengikut subsektor, 2015, 2017 - 2021**

*Table 1.1: Principal statistics of Construction sector by sub-sector, 2015, 2017 - 2021*

<b>Subsektor</b>	<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 dibayar</b>	<b>Nilai harta tetap</b>
<i>Subsector</i>	<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>Jumlah</b>	2021	170,770,661	112,782,040	57,988,621	1,190,159	33,379,721	22,184,745
<i>Total</i>	2020	173,270,942	113,092,631	60,178,311	1,232,769	37,091,528	24,766,397
	2019	212,494,207	137,169,459	75,324,748	1,300,822	41,212,254	28,914,255
	2018	210,901,470	136,139,206	74,762,264	1,297,038	40,683,186	28,536,052
	2017	204,436,163	131,797,640	72,638,522	1,330,266	39,194,491	27,888,112
	2015	177,938,694	114,754,354	63,184,340	1,290,474	32,899,322	25,105,605
<b>Bangunan kediaman</b>	2021	38,013,518	25,111,744	12,901,774	279,976	7,062,717	3,961,888
<i>Residential buildings</i>	2020	41,454,218	26,978,668	14,475,550	287,893	8,387,590	4,386,283
	2019	46,489,484	29,832,073	16,657,411	298,588	9,342,503	4,654,814
	2018	47,518,761	30,577,440	16,941,321	295,035	9,222,197	4,607,507
	2017	50,519,359	32,956,845	17,562,514	331,851	9,713,591	5,017,083
	2015	45,652,183	29,600,385	16,051,798	329,088	8,544,051	4,765,664
<b>Bangunan bukan kediaman</b>	2021	38,889,510	24,737,118	14,152,392	273,843	7,406,432	4,784,590
<i>Non-residential buildings</i>	2020	38,183,712	24,307,460	13,876,253	284,217	8,396,284	5,184,329
	2019	43,702,535	28,121,773	15,580,762	305,661	9,109,512	5,438,659
	2018	46,579,208	29,939,843	16,639,365	312,952	9,206,122	5,531,150
	2017	48,015,748	30,517,943	17,497,805	337,838	9,588,951	6,171,682
	2015	46,097,629	29,961,846	16,135,783	325,473	8,280,554	5,831,200
<b>Kejuruteraan awam</b>	2021	43,243,984	29,469,827	13,774,157	344,548	10,772,219	7,958,106
<i>Civil engineering</i>	2020	53,645,930	35,591,578	18,054,352	354,765	11,411,976	8,996,705
	2019	78,655,778	50,783,499	27,872,279	378,982	13,104,210	12,158,472
	2018	73,215,192	47,217,246	25,997,945	372,503	12,723,079	11,631,611
	2017	63,740,171	40,791,511	22,948,660	349,765	11,221,576	9,891,506
	2015	48,088,145	30,815,295	17,272,850	325,741	8,532,238	8,621,750
<b>Aktiviti pertukangan khas</b>	2021	50,623,649	33,463,351	17,160,298	291,792	8,138,353	5,480,161
<i>Special trade activities</i>	2020	39,987,081	26,214,925	13,772,157	305,894	8,895,679	6,199,080
	2019	43,646,410	28,432,113	15,214,296	317,591	9,656,028	6,662,309
	2018	43,588,309	28,404,676	15,183,633	316,548	9,531,788	6,765,783
	2017	42,160,885	27,531,341	14,629,544	310,812	8,670,372	6,807,841
	2015	38,100,736	24,376,828	13,723,909	310,172	7,542,479	5,886,991

**Jadual 2: Statistik utama sektor Pembinaan mengikut negeri, 2021**  
*Table 2: Principal statistics of Construction sector by state, 2021*

<b>Negeri</b>	<b>Nilai output kasar</b>	<b>Nilai input perantaraan</b>	<b>Nilai ditambah</b>	<b>Jumlah pekerja</b>	<b>Gaji &amp; upah dibayar</b>	<b>Nilai harta tetap</b>
<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>
	<b>(RM'000)</b>	<b>(RM'000)</b>	<b>(RM'000)</b>		<b>(RM'000)</b>	<b>(RM'000)</b>
<b>Jumlah Total</b>	<b>170,770,661</b>	<b>112,782,040</b>	<b>57,988,621</b>	<b>1,190,159</b>	<b>33,379,721</b>	<b>22,184,745</b>
<b>Johor</b>	17,050,480	11,434,573	5,615,907	151,194	3,838,822	3,512,286
<b>Kedah</b>	3,533,459	2,336,957	1,196,502	27,577	707,681	810,915
<b>Kelantan</b>	2,583,945	1,631,786	952,159	15,346	395,706	228,095
<b>Melaka</b>	2,003,537	1,305,155	698,382	19,616	499,257	640,159
<b>Negeri Sembilan</b>	5,227,193	3,492,749	1,734,444	48,376	1,214,078	367,434
<b>Pahang</b>	6,234,662	3,945,851	2,288,812	45,704	1,192,695	470,083
<b>Pulau Pinang</b>	11,282,563	7,436,797	3,845,766	73,134	1,922,326	588,320
<b>Perak</b>	6,912,426	4,322,719	2,589,707	63,227	1,716,920	822,069
<b>Perlis</b>	315,648	213,052	102,596	4,843	87,729	12,905
<b>Selangor</b>	55,705,389	37,245,226	18,460,163	304,529	9,603,063	6,436,184
<b>Terengganu</b>	4,844,713	3,023,070	1,821,643	32,264	1,009,896	328,686
<b>Sabah</b>	9,341,383	6,178,683	3,162,700	64,399	1,607,561	1,372,425
<b>Sarawak</b>	14,509,529	9,019,859	5,489,670	90,912	2,522,948	2,816,370
<b>W.P. Kuala Lumpur</b>	29,365,425	19,914,416	9,451,009	232,957	6,566,130	3,706,438
<b>W.P. Labuan</b>	367,305	274,145	93,160	2,574	63,270	13,796
<b>W.P. Putrajaya</b>	1,493,002	1,007,003	485,999	13,507	431,638	58,579

**Jadual 3: Bilangan pekerja dan gaji & upah dibayar sektor Pembinaan mengikut kategori pekerja, 2021**  
 Table 3: Number of persons engaged and salaries & wages paid of Construction sector by category of workers, 2021

Kategori pekerja <i>Category of workers</i>	Bilangan pekerja <i>Number of persons engaged</i>			Gaji & upah 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>1,190,159</b>	<b>1,077,587</b>	<b>112,572</b>	<b>33,379,721</b>
<b>Pemilik yang bekerja, rakan niaga yang aktif dan pekerja keluarga tanpa gaji</b> <i>Working proprietors, active business partners and unpaid family workers</i>	<b>20,486</b>	<b>18,216</b>	<b>2,270</b>	<b>n.a</b>
<b>Pekerja bergaji (sepenuh masa)</b> <i>Paid employees (full-time)</i>	<b>1,156,619</b>	<b>1,047,256</b>	<b>109,363</b>	<b>33,225,239</b>
<b>Pengurus, profesional dan penyelidik</b> <i>Manager, professionals and researchers</i>	125,786	107,745	18,041	10,494,724
<b>Juruteknik dan profesional bersekutu</b> <i>Technicians and associate professionals</i>	97,293	89,323	7,970	3,443,595
<b>Perkeranian dan pekerjaan yang berkaitan</b> <i>Clerical and related occupations</i>	100,175	33,175	67,000	2,210,048
<b>Pekerja kemahiran dan pertukangan khas</b> <i>Craft and related trades workers</i>	747,335	742,233	5,102	15,135,993
<b>Operator mesin, loji dan pemasang</b> <i>Plant and machine operators and assemblers</i>	28,357	27,786	571	679,030
<b>Pekerja asas</b> <i>Elementary occupations</i>	57,673	46,994	10,679	1,261,849
<b>Pekerja bergaji (sambilan)</b> <i>Paid employees (part-time)</i>	<b>13,054</b>	<b>12,115</b>	<b>939</b>	<b>154,482</b>

**Jadual 4: Bilangan pekerja bergaji sepenuh masa dan gaji & upah dibayar sektor Pembinaan mengikut kategori kemahiran dan jantina, 2021***Table 4: Number of paid full-time employees and salaries & wages of Construction sector by category of skills and sex, 2021*

<b>Kategori kemahiran</b> <i>Category of skills</i>	<b>Bilangan pekerja</b> <i>Number of persons engaged</i>			<b>Gaji &amp; upah dibayar</b> <i>Salaries &amp; wages paid</i>
	<b>Jumlah</b> <i>Total</i>	<b>Lelaki</b> <i>Male</i>	<b>Perempuan</b> <i>Female</i>	<b>(RM'000)</b>
<b>Jumlah</b> <i>Total</i>	<b>1,156,619</b>	<b>1,047,256</b>	<b>109,363</b>	<b>33,225,239</b>
<b>Mahir</b> <i>Skilled</i>	<b>223,079</b>	197,068	26,011	13,938,319
<b>Separuh mahir</b> <i>Semi-skilled</i>	<b>875,867</b>	803,194	72,673	18,025,070
<b>Berkemahiran rendah</b> <i>Low-skilled</i>	<b>57,673</b>	46,994	10,679	1,261,849

**Jadual 5: Perbelanjaan modal dan nilai harta tetap sektor Pembinaan mengikut subsektor, 2021***Table 5: Capital expenditure and value of fixed assets of Construction sector by sub-sector, 2021*

<b>Subsektor</b> <i>Sub-sector</i>	<b>Perbelanjaan modal</b> <i>Capital expenditure</i>	<b>Pelupusan</b> <i>Disposal</i>	<b>Susut nilai</b> <i>Depreciation</i>	<b>Nilai harta tetap</b> <i>Value of fixed assets</i>
	<b>(RM'000)</b>	<b>(RM'000)</b>	<b>(RM'000)</b>	<b>(RM'000)</b>
<b>Jumlah</b> <i>Total</i>	<b>3,342,475</b>	<b>120,185</b>	<b>1,651,830</b>	<b>22,184,745</b>
<b>Bangunan kediaman</b> <i>Residential buildings</i>	884,082	76,013	218,510	3,961,888
<b>Bangunan bukan kediaman</b> <i>Non-residential buildings</i>	664,729	11,956	327,819	4,784,590
<b>Kejuruteraan awam</b> <i>Civil engineering</i>	1,130,930	25,512	628,064	7,958,106
<b>Aktiviti pertukangan khas</b> <i>Special trades activities</i>	662,735	6,704	477,438	5,480,161

**NOTA TEKNIKAL**

***TECHNICAL NOTES***

**3**



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## 1. Skop dan Liputan

Penerbitan ini menggunakan data dari Survei Ekonomi Tahunan 2022 (Tahun Rujukan 2021). Survei ini meliputi semua pertubuhan berdaftar yang terlibat dalam Pembinaan sebagai aktiviti utamanya. Secara keseluruhan, sektor Pembinaan merangkumi sebanyak 72 industri di peringkat 3-digit mengikut Piawaian Klasifikasi Industri Malaysia (MSIC) 2008 Ver 1.0. Senarai lengkap industri yang diliputi ditunjukkan di Lampiran (**muka surat 49**).

## 2. Rangka Statistik

Rangka statistik bagi survei ini adalah daripada *Malaysia Statistical Business Register (MSBR)*. MSBR adalah senarai pertubuhan/perusahaan yang beroperasi di Malaysia yang merangkumi Daftar Syarikat (ROC), Daftar Perniagaan (ROS) dan Perkongsian Liabiliti Terhad (LLP) yang berdaftar dengan Suruhanjaya Syarikat Malaysia (SSM) serta pertubuhan yang berdaftar dengan pihak berkuasa tempatan (PBT) dan badan profesional. Senarai di MSBR dikemaskini secara berkala berdasarkan survei dan banci yang dijalankan oleh Jabatan Perangkaan Malaysia (DOSM) dan sumber data pentadbiran daripada agensi lain. Sumber utama data pentadbiran adalah daripada SSM. Selain itu, DOSM juga bekerjasama untuk mendapatkan maklumat terkini daripada agensi lain seperti Kumpulan Wang Simpanan Pekerja (KWSP), Jabatan Kastam Diraja Malaysia (JKDM), Lembaga Hasil Dalam Negeri Malaysia (LHDNM) dan PBT.

Rangka dikemaskini dengan mengambil kira pertubuhan baharu dan merekodkan perubahan status yang berlaku terhadap pertubuhan tersebut seperti tutup, tidak beroperasi, perubahan jenis aktiviti dan lokasi perniagaan/alamat pos bagi memastikan maklumat yang terdapat dalam rangka adalah yang 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 memberi sumbangan besar dari segi pendapatan. Aktiviti sekunder didefinisikan sebagai aktiviti sampingan kepada aktiviti utama. Klasifikasi industri bagi pertubuhan adalah berasaskan kepada aktiviti utama berdasarkan kepada MSIC 2008 Ver. 1.0. MSIC 2008 adalah selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4, United Nations* dengan pengubahsuaian mengikut keperluan tempatan.

## 4. Konsep dan Definisi

**4.1** Konsep dan definisi yang digunakan selari dengan *International Recommendations for Industrial Statistics, United Nations Statistical Division*. Takrif Pembinaan yang digunakan dalam survei ini adalah selaras dengan MSIC 2008 Ver. 1.0.

**4.2** Pembinaan ditakrifkan sebagai:

Pembinaan baru, pengubahsuaian, pembaikan dan perobohan. Pemasangan sebarang jenis jentera atau peralatan yang dipasang ketika pembinaan asal adalah diambil kira, demikian juga bagi pemasangan jentera atau peralatan selepas pembinaan asal tetapi memerlukan perubahan struktur bagi pemasangannya.

## 5. Tahun Survei

Tahun survei adalah merujuk kepada tahun pelaksanaan survei.

## 6. Tahun Rujukan

Tahun rujukan bagi survei ini adalah tahun takwim 2021. Pertubuhan yang mempunyai tahun kewangan yang berbeza daripada tahun takwim diminta menyediakan laporan mengikut tahun perakaunan atau kewangan yang meliputi sekurang-kurangnya 6 (enam) bulan dalam tahun rujukan.

Penyediaan data bagi tahun 2018 hingga 2020 bagi sektor ini adalah menggunakan kaedah penganggaran berdasarkan data sekunder bersumberkan survei jangka pendek DOSM dan data pentadbiran yang berkaitan daripada agensi lain.

## 7. Kaedah Pengumpulan

Survei ini secara umumnya dijalankan dengan menggunakan tiga (3) kaedah pengumpulan data seperti berikut:

### 7.1 Kaedah atas talian melalui portal e-AES

Kaedah ini menyasarkan responden yang telah menggunakan kaedah ini bagi survei rutin terdahulu.

### 7.2 Kaedah kutipan data melalui e-mel, pos, faks dan telefon

Kaedah ini menyasarkan responden yang pernah terlibat dengan survei rutin terdahulu. Responden diberi tempoh satu bulan untuk melengkapkan dan mengembalikan borang soal selidik tersebut kepada DOSM.

### 7.3 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 menyasarkan 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 3-digit MSIC di peringkat negeri telah diklasifikasikan sebagai strata manakala pertubuhan sebagai unit pensampelan.

Setiap strata (industri) telah dibentuk kepada empat (4) 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 micro, kecil dan sederhana (PMKS).

## 9. Saiz Sampel

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  $i$
- $S_i$  = Sisihan piawai bagi strata  $i$
- $V$  = Varian sasaran

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

di mana;

- $\hat{Y}_i$  = Jumlah hasil bagi strata  $i$
- $RSE$  = Ralat piawai relatif
- $Z$  = Nilai aras keyakinan

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

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

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

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

di mana;

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

Saiz sampel optimum bagi survei ini adalah 6,547 pertubuhan. Pertubuhan kategori besar diliputi sepenuhnya, manakala pertubuhan bagi substrata kedua hingga keempat dipilih secara rawak mengikut kaedah pensampelan bersistematik.

**10. Wajaran**

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 respon.

Wajaran reka bentuk pensampelan pada substrata  $h$  adalah seperti berikut :

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

di mana;

$N_h$  = Bilangan populasi bagi substrata  $h$  ; dan

$n_h$  = Bilangan sampel bagi substrata  $h$

Wajaran tiada respon pada substrata  $h$  adalah seperti berikut :

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

di mana;

$n'_h$  = Bilangan sampel respon bagi substrata  $h$

$n_h$  = Bilangan sampel bagi substrata  $h$

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 respon pada substrata  $h$

## 11. Unit Pelapor

Unit melapor 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 dan menjalankan satu jenis aktiviti ekonomi utama di satu lokasi fizikal”. Setiap pertubuhan diberikan klasifikasi industri berdasarkan aktiviti utamanya dan bukannya mengikut aktiviti syarikat induk. Bagi kes entiti yang mempunyai pelbagai aktiviti, unit yang terlibat dalam aktiviti yang berlainan dalam lokasi yang sama membentuk pertubuhan yang berbeza.

Oleh itu, setiap cawangan daripada organisasi yang mempunyai pelbagai 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.

## 12. Nilai Output Kasar

Nilai output kasar ditakrifkan seperti berikut:

Nilai jualan produk pembinaan

- + Nilai kerja pembinaan yang dibuat pada tahun rujukan
- + Pendapatan daripada perkhidmatan perindustrian yang diberikan : Bayaran diterima bagi kerja memproses yang dibuat untuk pertubuhan lain yang menggunakan bahan mereka sendiri
- + Pendapatan daripada perkhidmatan perindustrian yang diberi : Pendapatan daripada kerja membaiki dan menyelenggara jentera dan kelengkapan pertubuhan lain
- + Nilai jualan (daripada barang / bahan yang dibeli untuk dijual semula tanpa melalui proses selanjutnya)
- + Nilai daripada kerja perindustrian lain (cth. Pembuatan, Kuari dsb.) Sila nyatakan
- + Pendapatan output lain t.t.t.l. (cth. skrap, tenaga elektrik, produk sisa dsb.)
- + Pendapatan daripada perkhidmatan profesional (cth. perakaunan, pengurusan, kejuruteraan, guaman, penyelidikan dan pembangunan, dsb.)
- + Komisen dan brokeraj yang diterima
- + Pendapatan daripada sewa: Bangunan tempat kediaman
- + Pendapatan daripada sewa: Bangunan bukan tempat kediaman
- + Pendapatan daripada sewa: Alat pengangkutan
- + Pendapatan daripada sewa: Jentera dan kelengkapan
- + Pendapatan daripada sewa: Perabot dan pemasangan
- + Pendapatan daripada sewa: Lain-lain
- + Royalti, hakcipta, pelesenan dan yuran francais
- + Lain-lain pendapatan operasi
- Kos barang yang dijual (barang / bahan yang dibeli untuk dijual semula tanpa melalui proses selanjutnya)
- + Perbelanjaan penyelidikan dan pembangunan (dalaman)/ 100 x jumlah perbelanjaan penyelidikan dan pembangunan
- Stok awal: Lain-lain
- + Stok akhir: Lain-lain
- + Membuat / membina sendiri: Jumlah

### 13. Nilai Input Perantaraan

Nilai input perantaraan ditakrifkan seperti berikut:

Nilai bahan mentah dan bekalan yang digunakan

- + Kos bahan binaan yang digunakan pada tahun rujukan
- + Bahan yang digunakan bagi pembaikan dan penyelenggaraan
- + Alat tulis dan bekalan pejabat
- + Air yang dibeli
- + Tenaga elektrik yang dibeli
- + Bahan pembakar, pelincir dan gas
- + Bayaran bagi kerja memproses yang dibuat oleh pihak lain yang menggunakan bahan yang dibekal oleh pertubuhan ini
- + Bayaran pembaikan dan penyelenggaraan semasa yang dibuat oleh pihak lain bagi harta tetap pertubuhan ini : termasuk bangunan (pejabat, kilang, gudang dsb.), alat pengangkutan, jentera dan kelengkapan, perabot dan pemasangan, komputer
- + Pengangkutan barang (pengangkutan keluar)
- + Perbelanjaan perjalanan (termasuk perjalanan dalam dan luar negara, bil petrol / diesel dan bayaran letak kereta sendiri)
- + Bayaran perakaunan, kesetiausahaan dan audit
- + Bayaran guaman
- + Bayaran pengurusan
- + Perbelanjaan keraian
- + Bayaran pos (termasuk perkhidmatan kurier)
- + Bayaran bank
- + Premium insurans dibayar ke atas bangunan, jentera, alat pengangkutan dan barang
- + Komisen dan bayaran agensi
- + Pengiklanan dan promosi
- + Bayaran perkhidmatan profesional lain (cth. bayaran perundingan arkitek, kejuruteraan, juruukur dsb.)
- + Bayaran pemprosesan data dan lain-lain perkhidmatan yang berkaitan dengan teknologi maklumat
- + Bayaran telekomunikasi (cth. telefon, internet dsb.)
- + Lain-lain bayaran perkhidmatan bukan perindustrian
- + Bayaran sewa: Sewaan operasi (tidak termasuk bayaran bagi sewa tanah) dan lain-lain
- + Bayaran royalti kepada: Organisasi bukan kerajaan / tajaan korporat
- + Lain-lain perbelanjaan operasi
- + Kos pekerjaan: Bayaran kepada pengarah tidak bekerja kerana kehadiran mereka dalam mesyuarat Lembaga Pengarah
- + Kos pekerjaan: Nilai pakaian percuma yang disediakan
- + Kos pekerjaan: Kos latihan kepada pekerja
- + Bayaran kepada pertubuhan lain yang membekalkan pekerja
- + Bayaran bagi perkhidmatan keselamatan
- + Stok awal: Bahan binaan
- Stok akhir: Bahan binaan

### 14. Nilai Ditambah

Nilai ditambah adalah perbezaan di antara output kasar dan input perantaraan. Ini hampir menyamai dengan keuntungan perniagaan, gaji dan upah, susut nilai dan cukai tidak langsung; campur faedah yang dibayar dan tolak faedah yang diterima.

**15. 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:

**15.1 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. Justeru, ini tidak termasuk rakan niaga yang tidak aktif.

**15.2 Pekerja keluarga tanda gaji**

Kategori ini meliputi semua ahli isi rumah 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. Kebiasanya pekerja berkenaan menerima makanan, tempat tinggal dan bantuan lain sebagai sebahagian daripada ahli isi rumah pemilik dan akan berterusan menerimanya sama ada mereka bekerja atau tidak di pertubuhan tersebut.

**15.3 Pekerja bergaji (sepenuh masa)**

Ini merujuk kepada semua pekerja bergaji yang bekerja sekurang-kurangnya enam (6) jam sehari dan sekurang-kurangnya 20 hari sebulan.

**15.4 Pekerja bergaji (sambilan)**

Ini merujuk kepada semua pekerja bergaji yang bekerja kurang daripada enam (6) jam sehari dan/atau kurang daripada 20 hari sebulan.

**16. Kategori Kemahiran**

Kategori kemahiran pekerjaan telah dikelaskan berdasarkan Piawaian Pengkelasan Pekerjaan Malaysia (MASCO) 2020 adalah seperti berikut:

**16.1 Mahir**

Pengurus, profesional & penyelidik; dan Juruteknik & Profesional Bersekutu;

**16.2 Separuh Mahir**

Pekerja sokongan perkeranian; Pekerja perkhidmatan & jualan; Pekerja kemahiran & Pekerja pertukangan yang berkaitan; dan Operator mesin & loji dan pemasang; dan

**16.3 Berkemahiran Rendah**

Pekerja asas

**17. Nilai Harta Tetap**

Harta tetap meliputi semua barangan, baharu atau terpakai, ketara atau tidak ketara yang mempunyai hayat produktif lebih daripada setahun. Ini termasuk tanah, bangunan dan struktur, alat pengangkutan, komputer dan peralatan periferal, perisian komputer, peralatan mesin dan lain-lain, serta perabot dan pemasangan lain. Nilai harta awal dan akhir tahun 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.

**18. Pembundaran**

Jumlah bagi komponen-komponen mungkin berbeza daripada jumlah besar dalam jadual penerbitan ini disebabkan oleh pembundaran angka.

**19. Kadar Pertumbuhan Tahunan**

Pengiraan kadar pertumbuhan tahunan ( $r$ ) adalah berdasarkan formula berikut:

$$Y_{t_1} = Y_{t_0} (1 + r)^t$$

di mana  $r$ ,

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

di mana,

$Y_{t_1}$  = Nilai pada tahun semasa

$Y_{t_0}$  = Nilai pada tahun sebelum

$t$  = Bilangan tahun,  $t_t - t_0$

$r$  = Kadar pertumbuhan tahunan

**20. Simbol dan Singkatan**

Simbol dan singkatan berikut digunakan dalam penerbitan ini:

&	: dan
%	: peratus
}	: digabungkan
0	: nilai yang dilaporkan kurang dari 1,000
0.0	: kurang dari 0.05 bilion
cth	: contoh
dll.	: dan lain-lain
dsb	: dan sebagainya
n.a.	: tidak berkaitan
RM	: Ringgit Malaysia
t.t.t.l.	: tidak terkelas di tempat lain
Ver.	: Versi
W.P.	: Wilayah Persekutuan

## 1. Scope and Coverage

*This publication used data from Annual Economic Survey 2022 (reference year 2021). The survey covered registered establishments engaged in Construction as main activity. Overall coverage of the survey for Construction sector consists of 72 industries at 3-digit level according to Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0. The complete list of industries covered as shown in the Appendix (page 49).*

## 2. Statistical Frame

*The statistical frame of this survey from the Malaysia Statistical Business Register (MSBR). MSBR is a list of organisations/enterprises operating in Malaysia that includes the Register of Companies (ROC), Register of Business (ROB) and Limited Liability Partnership (LLP) registered with the Companies Commission of Malaysia (CCM) as well as organisations registered with local authorities (PBT) and professional bodies. The list in MSBR is updated regularly based on surveys and censuses conducted by the Department of Statistics Malaysia (DOSM) and administrative data sources from various agencies. The main source of administrative data is from the CCM. In addition, DOSM also cooperates together to obtain the latest information from other agencies such as the Employees' Provident Fund (EPF), the Royal Malaysian Customs Department (JKDM), the Inland Revenue Board of Malaysia (LHDNM) and PBT.*

*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 to ensure the frame is at the current status.*

## 3. Type of Business Activity

*Type of business activity refers to both principal and secondary activities. The principal activity refers to the activities to which the establishment devoted most of its resources or activity which derived most of its income. Secondary activities are defined as those incidental or ancillary to the principal activity. The classification of the industry of the establishment is based on the principal activity and is in accordance with the MSIC 2008 Ver. 1.0. The MSIC 2008 Ver. 1.0 conforms to the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4, United Nations, with modifications to suit local conditions.*

## 4. Concept and Definition

**4.1** *Concepts and definitions used are based on the recommendations of the International Recommendations for Industrial Statistics, United Nations Statistical Division. The definition of Construction used in this survey accordance with the MSIC 2008 Ver 1.0.*

**4.2** *Construction is defined as:*

*New construction, alteration, repair and demolition. Installation of any machinery or equipment which built-in at the time of the original construction is included, as well as installation of machinery or equipment after the original construction but which requires structural alteration in order to install.*

## 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. Establishments whose accounting year differed from calendar year were requested to report according to the accounting year or financial year covering at least six (6) months in the reference year.

The data for this sectors in the year of 2018 to 2020 was prepared using an estimation method based on secondary data sourced from short-term surveys in DOSM and administrative data in other related agencies.

**7. Method of Collection**

This survey was generally conducted through three (3) methods of data collection, namely:

**7.1 Data collection method via online method through the e-AES portal**

This method targets respondents who have used this method for previous routine surveys.

**7.2 Data collection method via e-mail, post, fax and telephone**

This method targets respondents who have used this method for previous routine surveys. Respondents were given a period of one month to complete and return the questionnaire to the DOSM.

**7.3 Face-to-face data collection method**

Field work operation is carried out to get feedback from establishments that have not yet given answers from the two methods above and this method also targets establishments that have never been involved in a routine survey the DOSM.

**8. Sampling Design**

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

Each stratum (industry) has been set up to four (4) substrata to ensure the distributed sample takes into account the economic characteristics of the industry. The main substratum is heterogeneous was fully covered, whereas other substratum that are homogeneous were sampled.

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

**9. Sample Size**

The main statistics used to estimate the sample size is the total revenue. The formula used in the estimation of the sample size for a stratum is as follows:

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

where;

- $n$  = Sample size
- $N_i$  = Population size for stratum  $i$
- $S_i$  = Variance for stratum  $i$
- $V$  = Desired variance

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

where;

- $\hat{Y}_i$  = Estimated total revenues for stratum  $i$
- $RSE$  = Relative standard error
- $Z$  = Value of confidence level

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

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

- $h$  = 2,3 dan 4
- $i$  = 1,2,...k

where;

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

The optimum sample size for this survey is 6,547 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. Weighted**

Weighted analysis is done using sampling weight to ensure that the selected sample can reflect population survey. The weights required are the sampling design weight and non-response weight.

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

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

where,

$N_h$  = Total population of substratum  $h$ ; and

$n_h$  = Total sample of substratum  $h$

Non-response weight at substratum  $h$  as below:

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

where,

$n'_h$  = Numbers of respond sample size for substratum  $h$

$n_h$  = Numbers of sample size for substratum  $h$

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

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

where,

$W_h$  = Sampling design weight at substratum  $h$

$NRW_h$  = Non-response weight at substratum  $h$

### 11. Reporting Unit

The reporting unit used in the survey was the **establishment**. The establishment is defined as “an economic unit 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. In the case of a multi-activity entity, units engaged in separate activities in the same location constituted distinct establishments.

Thus, each branch of a multi-branch organization at a different location was conceptually treated as a different establishment. The establishment was requested to give separate returns for each activity in terms of value. However, if in practice, the accounts were centrally kept such that it was not possible to obtain separate data for each individual unit or branch. The entity or enterprise was treated as a single reporting unit and allowed to submit a consolidated questionnaire covering all the units or branches.

### 12. Value of Gross Output

The value of gross output is defined as follow:

Value of sales of construction products

- + Value of construction work done during the reference year
- + Income from industrial services rendered: Fees received for processing of goods for other establishments' on their materials
- + Income from industrial services rendered: Income from repairs and maintenance work for other establishments machinery and equipment
- + Values of sales (from goods / material purchases for resale without further processing)
- + Value of other industrial work done (e.g.: Manufacturing, Quarry etc.)
- + Income from other output n.e.c. (e.g. scrap, electricity, waste product etc.)
- + Professional fees received (e.g. accounting, management, engineering, legal services, research and development etc.)
- + Commissions and brokerage earned
- + Rental income received: Residential building
- + Rental income received: Non-Residential building
- + Rental income received: Transport equipment
- + Rental income received: Machinery and equipment
- + Rental income received: Furniture and fittings
- + Rental income received: Others
- + Royalties, copyrights, licensing and franchise fees
- + Others operating income
- Cost of goods sold (goods / materials purchased for resale without undergoing further processing)
- + Research and development expenditure (in-house)/100 x total research and development expenditure
- Opening stocks: Others
- + Closing stocks: Others
- + Built / self-produced: Total

**13. Value of Intermediate Input**

*The value of intermediate input is defined as follow:*

*Value of raw materials and supplies consumed*

- + *Cost of building materials used for the reference year*
- + *Materials used for repairs and maintenance*
- + *Stationery and office supplies*
- + *Water purchased*
- + *Electricity purchased*
- + *Fuels, lubricants and gas*
- + *Payments for processing work done by others on materials supplied by this establishment*
- + *Payments for current repairs and maintenance work done by others on this establishment's fixed assets: includes buildings (office, factory, warehouse etc.), transport equipment, machinery & equipment, furniture & fittings and computer*
- + *Transportation of goods (carriage outwards)*
- + *Travelling expenses (include both local and overseas travelling, petrol / diesel bills and parking fees for own vehicles)*
- + *Accounting, secretarial and audit fees*
- + *Legal fees*
- + *Management fees*
- + *Entertainment expenses*
- + *Postage (includes courier services)*
- + *Bank charges*
- + *Insurance premium on building, machinery, transport equipment and goods*
- + *Commissions and agency fees*
- + *Advertising and promotion*
- + *Payment for other professional services (e.g. architectural, engineering, surveying consultancy fees etc.)*
- + *Payment for data processing and other services related to information technology*
- + *Telecommunication fees (e.g. telephone, internet etc.)*
- + *Other payments for non-industrial services*
- + *Rental payments: Operational lease (exclude payment for rent of land) and others*
- + *Royalties paid to: Non-government organisations / corporate sponsorship*
- + *Others operating expenditure*
- + *Employment costs: Fees paid to non-working directors for their attendance at Board of Directors' meetings*
- + *Employment costs: Value of free wearing apparel provided*
- + *Employment costs: Staff training cost*
- + *Payment to other establishment for providing workers*
- + *Opening stocks: Building materials*
- *Closing stocks : Building materials*

**14. Value Added**

*Value added is the difference between gross output and intermediate input. It is approximately equivalent to commercial profit, salaries and wages, depreciation and indirect taxes; plus, interest paid less interest received.*

## 15. Persons Engaged

Number of persons engaged refers to all persons working during December or the last pay period of the reference year. The number persons engaged was classified under the following categories:

### 15.1 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, excludes silent and inactive partners.

### 15.2 Unpaid family workers

This category encompasses all persons (full-time or part-time) in the household of the owners of the establishment who perform a specified job and work for a minimum of one third of the normal working time of the establishment but do not receive regular payment, either in cash or in kind for work done. Such workers generally receive food, shelter and other support as part of the household of an owner and this would continue whether they worked in the establishment not.

### 15.3 Paid employees (full-time)

It refers to all paid workers who work for at least six (6) hours a day and for at least 20 days a month.

### 15.4 Paid employees (part-time)

It refers to all paid workers who work for less than six (6) hours a day and/or less than 20 days a month.

## 16. Category of Skills

Category of skills has also been categorized according to Malaysia Standard Classification of Occupations 2020 (MASCO) as follow:

### 16.1 Skilled

Managers, professionals & researchers; and Technicians & associate professionals;

### 16.2 Semi-skilled

Clerical support workers; Service & sales workers; Craft and related trade workers; and Plant & machine operators & Assemblers; and

### 16.3 Low-skilled

Elementary occupations

## 17. Value of Fixed Assets

Assets cover all goods, new or used, tangible or intangible, which have a normal economics life span of more than one year (e.g. land, building and structure, transport equipment, computer and peripheral equipment, computer software, other machinery, equipment and furniture and fittings). Value of assets as at the beginning and end of 2021 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 actual value.

**18. Rounding**

The sum of components may not add up to the total in the tables presented in this publication due to rounding.

**19. Annual Growth Rate**

The calculation of annual growth rate (*r*) is based on the following formula:

$$Y_{t1} = Y_{t0}(1 + r)^t$$

where *r*,

$$r = \left[ e^{\frac{1}{t} \ln \left( \frac{Y_{t1}}{Y_{t0}} \right)} - 1 \right] \times 100$$

where,

$Y_{t1}$  = Value at current year

$Y_{t0}$  = Value at previous year

*t* = Number of years,  $t_1 - t_0$

*r* = Annual growth rate

**20. Symbols and Abbreviations**

The following symbols and abbreviation have been used throughout the publication:

&	:	and
%	:	per cent
}	:	combine
0	:	the value reported has less than 1,000
0.0	:	less than 0.05 billion
e.g.	:	for example
etc.	:	et cetera
n.a	:	not applicable
RM	:	Ringgit Malaysia
n.e.c	:	not elsewhere classified
Ver.	:	Version
W.P.	:	Wilayah Persekutuan

**LAMPIRAN**

***APPENDIX***



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Piawaian Klasifikasi Industri Malaysia, 2008 Ver. 1.0  
Malaysia Standard Industrial Classification, 2008 Ver.1.0

MSIC 2008 dan keterangan  
MSIC 2008 and description

**BANGUNAN KEDIAMAN / BANGUNAN BUKAN KEDIAMAN**  
*RESIDENTIAL BUILDINGS / NON-RESIDENTIAL BUILDINGS*

**410 PEMBINAAN BANGUNAN**  
*CONSTRUCTION OF BUILDINGS*

- 41001** **Bangunan kediaman**  
*Residential buildings*
- 41002** **Bangunan bukan kediaman**  
*Non-residential buildings*
- 41003** **Pemasangan dan pendirian bangunan pasang siap di tapak pembinaan**  
*Assembly and erection of prefabricated constructions on the site*
- 41009** **Pembinaan bangunan t.t.t.l.**  
*Construction of buildings n.e.c.*

**KEJURUTERAAN AWAM**  
*CIVIL ENGINEERING*

**421 PEMBINAAN JALANRAYA DAN LANDASAN KERETA API**  
*CONSTRUCTION OF ROADS AND RAILWAYS*

- 42101** **Pembinaan laluan kenderaan bermotor, lorong, jalan, laluan pejalan kaki dan kenderaan lain**  
*Construction of motorways, streets, roads, other vehicular and pedestrian ways*
- 42102** **Kerja penurapan jalan, jalan raya, lebuh raya, jambatan atau terowong**  
*Surface work on streets, roads, highways, bridges or tunnels*
- 42103** **Pembinaan jambatan termasuk untuk lebuh raya bertingkat**  
*Construction of bridges, including those for elevated highways*
- 42104** **Pembinaan terowong**  
*Construction of tunnels*
- 42105** **Pembinaan landasan kereta api dan laluan bawah tanah**  
*Construction of railways and subways*
- 42106** **Pembinaan landasan lapangan terbang**  
*Construction of airfield/airports runways*
- 42109** **Pembinaan jalan raya dan landasan kereta api t.t.t.l.**  
*Construction of roads and railways n.e.c.*

Piawaian Klasifikasi Industri Malaysia, 2008 Ver. 1.0  
Malaysia Standard Industrial Classification, 2008 Ver. 1.0MSIC 2008 dan keterangan  
MSIC 2008 and descriptionBANGUNAN KEDIAMAN / BANGUNAN BUKAN KEDIAMAN  
RESIDENTIAL BUILDINGS / NON-RESIDENTIAL BUILDINGS

## 422 PEMBINAAN PROJEK UTILITI

## CONSTRUCTION OF UTILITY PROJECTS

- 42201** Saluran paip jarak jauh, talian komunikasi dan kuasa  
*Long distance pipelines, communication and powerlines*
- 42202** Saluran paip dalam bandar, talian komunikasi dan kuasa dalam bandar , kerja-kerja berkaitan dalam bandar  
*Urban pipelines, urban communication and powerlines; ancillary works*
- 42203** Pembinaan punca dan saluran air  
*Water main and line construction*
- 42204** Logi takungan  
*Reservoirs*
- 42205** Pembinaan sistem pengairan (terusan)  
*Construction of irrigation systems (canals)*
- 42206** Pembinaan system pembentungan (termasuk pembaikan) dan loji pelupusan sisa kumbahan  
*Construction of sewer systems (including repair) and sewage disposal plants*
- 42207** Pembinaan janakuasa  
*Construction of power plants*
- 42209** Pembinaan projek utility t.t.t.l  
*Construction of utility projects n.e.c.*

## 429 PEMBINAAN PROJEK KEJURUTERAAN AWAM LAIN

## CONSTRUCTION OF OTHER CIVIL ENGINEERING PROJECTS

- 42901** Pembinaan loji penapisan  
*Construction of refineries*
- 42902** Pembinaan laluan air, kerja pelabuhan dan sungai, pleasure ports (marinas), kunci air  
*Construction of waterways, harbor and river works, pleasure ports (marinas), locks*
- 42903** Pembinaan empangan dan daik  
*Construction of dams and dykes*
- 42904** Penggalian laluan air  
*Dredging of waterways*
- 42905** Kemudahan sukan luar dewan  
*Outdoor sports facilities*

Piawaian Klasifikasi Industri Malaysia, 2008 Ver. 1.0  
Malaysia Standard Industrial Classification, 2008 Ver.1.0

**MSIC 2008 dan keterangan**  
*MSIC 2008 and description*

- 42906** Pembahagian tanah berserta dengan penambahbaikan tanah  
*Land subdivision with land improvement*
- 42909** Pembinaan projek kejuruteraan awam lain t.t.t.l.  
*Construction of other engineering projects n.e.c.*

**PERTUKANGAN KHAS**  
*SPECIAL TRADES*

**431 PEROBOHAN**  
*DEMOLITION*

- 43110** Perobohan atau peranapan bangunan dan struktur lain  
*Demolition or wrecking of buildings and other structures*
- Penyediaan tapak**  
*Site preparation*
- 43121** Pembersihan tapak bangunan  
*Clearing of building sites*
- 43122** Pengalihan tanah  
*Earth moving*
- 43123** Pengujian tanah, penggerudian dan penggalian tanah untuk tujuan pembinaan, geofizikal, geological atau tujuan seumpamanya  
*Drilling, boring and core sampling for construction, geophysical, geological or similar purposes*
- 43124** Penyediaan tapak bagi perlombongan  
*Site preparation for mining*
- 43125** Perparitan bagi tanah pertanian atau perhutanan  
*Drainage of agricultural or forestry land*
- 43126** Kerja penebusan tanah  
*Land reclamation work*
- 43129** Aktiviti penyediaan tapak lain t.t.t.l  
*Other site preparation activities n.e.c*

Piawaian Klasifikasi Industri Malaysia, 2008 Ver. 1.0  
Malaysia Standard Industrial Classification, 2008 Ver.1.0MSIC 2008 dan keterangan  
MSIC 2008 and description**432 ELEKTRIK, PERTUKANGAN PAIP DAN AKTIVITI PEMASANGAN PEMBINAAN LAIN**  
*ELECTRICAL, PLUMBING AND OTHER CONSTRUCTION INSTALLATION ACTIVITIES*

- 43211 Pendawaian dan pemasangan elektrik**  
*Electrical wiring and fittings*
- 43212 Pendawaian telekomunikasi**  
*Telecommunication wiring*
- 43213 Pendawaian rangkaian computer dan kabel televisyen**  
*Computer network and cable television wiring*
- 43214 Piring satelit**  
*Satellite dishes*
- 43215 Sistem pencahayaan**  
*Lighting systems*
- 43216 Sistem keselamatan**  
*Security systems*
- 43219 Pemasangan elektrik t.t.t.l**  
*Electrical installation n.e.c*
- 43126 Kerja penebusan tanah**  
*Land reclamation work*

**432 PEMASANGAN SYSTEM PAIP, PEMANASAN DAN PENDINGINAN UDARA**  
*PLUMBING, HEAT AND AIR-CONDITIONING INSTALLATION*

- 43221 Pemasangan sistem pemanasan (elektrik, gas dan minyak)**  
*Installation of heating systems (electric, gas and oil)*
- 43222 Pemasangan relau, menara pendinginan**  
*Installation of furnaces, cooling towers*
- 43223 Pemasangan pengumpul tenaga solar bukan elektrik**  
*Installation for non-electric solar energy collectors*
- 43224 Pemasangan system paip dan peralatan sanitasi**  
*Installation of plumbing and sanitary equipment*
- 43225 Pemasangan peralatan dan saluran pengudaraan, penyejukan dan pendinginan udara**  
*Installation of ventilation, refrigeration or air-conditioning equipment and ducts*

Piawaian Klasifikasi Industri Malaysia, 2008 Ver. 1.0  
Malaysia Standard Industrial Classification, 2008 Ver.1.0MSIC 2008 dan keterangan  
MSIC 2008 and description

43226	<b>Pemasangan kelengkapan gas</b> <i>Installation of gas fittings</i>
43227	<b>Pemasangan system perenjis air untuk kebakaran dan padang</b> <i>Installation of fire and lawn sprinkler systems</i>
43228	<b>Pemasangan paip untuk wap</b> <i>Steam piping</i>
43229	<b>Pemasangan system paip, pemanasan dan pendinginan udara t.t.t.l</b> <i>Plumbing, heat and air-conditioning installation n.e.c</i>
	<b>Pemasangan pembinaan lain</b> <i>Other construction installation</i>
43291	<b>Pemasangan lif, escalator dalam bangunan atau projek pembinaan lain</b> <i>Installation of elevators, escalators in buildings or other construction projects</i>
43292	<b>Pemasangan pintu automatic dan berputar dalam bangunan atau projek pembinaan lain</b> <i>Installation of automated and revolving doors in buildings or other construction projects</i>
43293	<b>Pemasangan konduktor kilat dalam bangunan atau projek pembinaan lain</b> <i>Installation of lightning conductors in buildings or other construction projects</i>
43294	<b>Pemasangan system pembersihan vakum dalam bangunan atau projek pembinaan lain</b> <i>Installation vacuum cleaning systems in buildings or other construction projects</i>
43295	<b>Pemasangan system penebatan haba, bunyi, atau gegaran dalam bangunan atau projek pembinaan lain</b> <i>Installation thermal, sound or vibration insulation in buildings or other construction projects</i>
43299	<b>Pemasangan pembinaan lain t.t.t.l.</b> <i>Other construction installation n.e.c.</i>
43301	<b>Pemasangan rangka pintu, tingkap, rangka/bingkai pintu dan tingkap daripada kayu atau bahan lain, dapur pasang siap, tangga kelengkapan kedai dan perabot</b> <i>Installation of doors, windows, door and window frames of wood or other materials, fitted kitchens, staircases, shop fittings and furniture</i>
43302	<b>Melapis, memasang Jubin, menggantung atau memasang kelengkapan bangunan atau projek pembinaan lain daripada pelbagai bahan</b> <i>Laying, tiling, hanging or fitting in buildings or other construction projects of various types of materials</i>

**Piawaian Klasifikasi Industri Malaysia, 2008 Ver. 1.0**  
*Malaysia Standard Industrial Classification, 2008 Ver.1.0***MSIC 2008 dan keterangan**  
*MSIC 2008 and description*

<b>43303</b>	<b>Mengecat dalam dan luar bangunan</b> <i>Interior and exterior paintings of buildings</i>
<b>43304</b>	<b>Mengecat struktur kejuruteraan awam</b> <i>Painting of civil engineering structures</i>
<b>43305</b>	<b>Pemasangan kaca, cermin</b> <i>Installation of glass, mirrors</i>
<b>43306</b>	<b>Penyiapan dalaman bangunan</b> <i>Interior completion</i>
<b>43307</b>	<b>Pembersihan bangunan baru selepas kerja pembinaan</b> <i>Cleaning of new buildings after construction</i>
<b>43309</b>	<b>Penyiapan dan kemasan bangunan lain t.t.t.l.</b> <i>Other building completion and finishing work n.e.c.</i>
<b>43901</b>	<b>Pembinaan tapak, termasuk memantak cerucuk</b> <i>Construction of foundations, including pile driving</i>
<b>43902</b>	<b>Pembinaan elemen keluli yang bukan dibuat sendiri</b> <i>Erection of non-self-manufactured steel elements</i>
<b>43903</b>	<b>Memasang dan membuka semula perancah dan platform kerja</b> <i>Scaffolds and work platform erecting and dismantling</i>
<b>43904</b>	<b>Kerja mengikat dan menyusun bata</b> <i>Bricklaying and stone setting</i>
<b>43905</b>	<b>Pembinaan kolam renang luar bangunan</b> <i>Construction of outdoor swimming pools</i>
<b>43906</b>	<b>Pembersihan menggunakan stim, pancutan air deras berpasir dan aktiviti seumpamanya untuk luar bangunan</b> <i>Steam cleaning, sand blasting and similar activities for building exteriors</i>
<b>43907</b>	<b>Penyewaan jentera dan peralatan pembinaan dengan operator (cth. kren)</b> <i>Renting of construction machinery and equipment with operator (e.g. cranes)</i>
<b>43909</b>	<b>Aktiviti pembinaan pertukangan khas lain t.t.t.l.</b> <i>Other specialized construction activities, n.e.c.</i>

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