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KEMENTERIAN EKONOMI
JABATAN PERANGKAAN MALAYSIA

AES

STATISTIK EKONOMI TAHUNAN

Annual Economic Statistics

2022

PEMBUATAN

Manufacturing



JABATAN PERANGKAAN MALAYSIA
DEPARTMENT OF STATISTICS MALAYSIA



KEMENTERIAN EKONOMI
JABATAN PERANGKAAN MALAYSIA

STATISTIK EKONOMI TAHUNAN PEMBUATAN ANNUAL ECONOMIC STATISTICS MANUFACTURING 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 untuk maklumat lanjut.

DOSM telah melancarkan OpenDOSM NextGen sebagai medium yang menyediakan katalog data dan visualisasi bagi memudahkan pengguna menganalisis pelbagai data. OpenDOSM NextGen ialah platform 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 for more information.

DOSM has launched OpenDOSM NextGen as a medium that provides a catalogue of data and visualisation to facilitate users in analysing various data. OpenDOSM NextGen is an open source data sharing platform 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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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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Penerbitan Statistik Ekonomi Tahunan 2022 memaparkan statistik utama bagi tahun rujukan 2021 untuk sektor Pembuatan. 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 Manufacturing 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, number 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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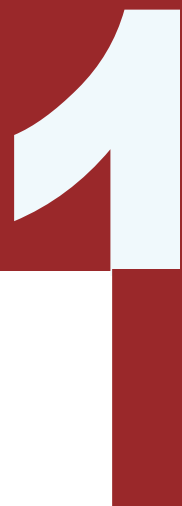
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INFOGRAFIK & RINGKASAN PENEMUAN

*INFOGRAPHIC &
SUMMARY OF FINDINGS*



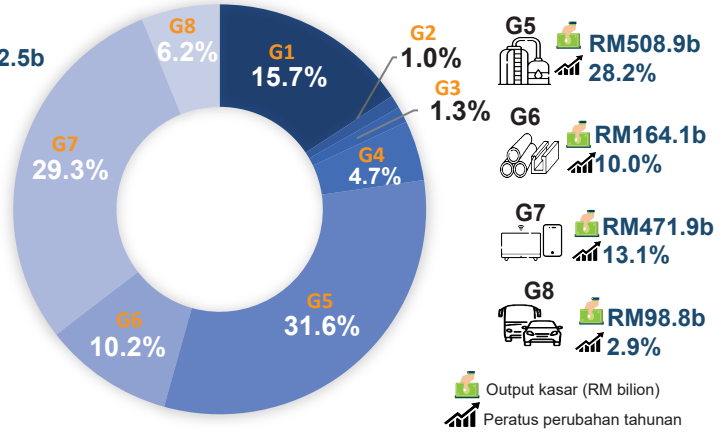
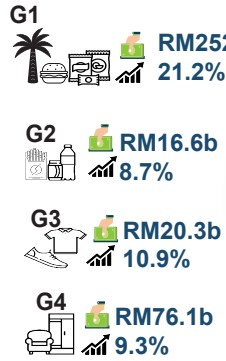
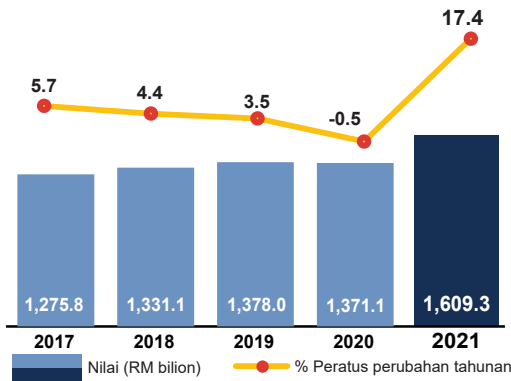
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STATISTIK EKONOMI TAHUNAN 2022

PEMBUATAN

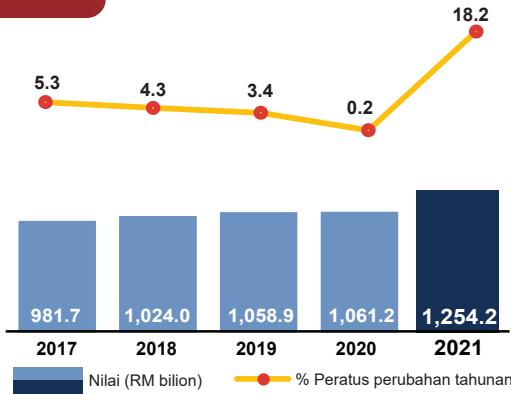
Output kasar sektor Pembuatan meningkat 17.4 peratus pada 2021 merekodkan RM1,609.3 bilion
Seramai 2.3 juta orang pekerja dalam sektor ini dengan gaji dan upah dibayar berjumlah RM89.5 bilion

OUTPUT KASAR



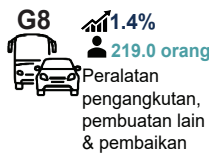
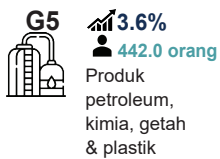
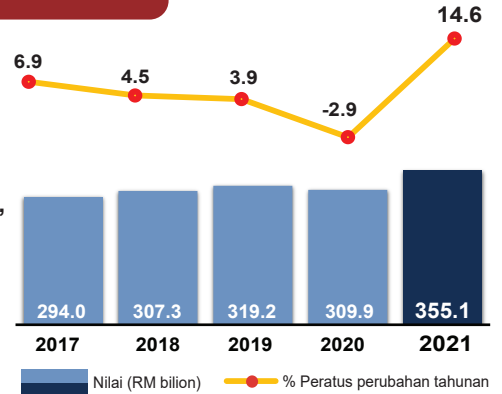
INPUT PERANTARAAN

Input perantara sektor Pembuatan meningkat 18.2 peratus, merekodkan nilai RM1,254.2 bilion



NILAI DITAMBAH

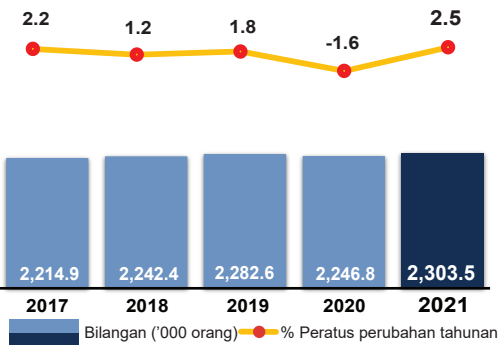
Nilai ditambah sektor Pembuatan pada 2021 merekodkan RM355.1 bilion, bertumbuh kukuh sebanyak 14.6 peratus



Peratus perubahan tahunan

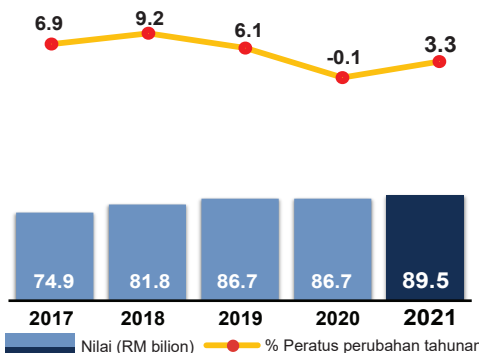
Bilangan ('000 orang)

PEKERJA



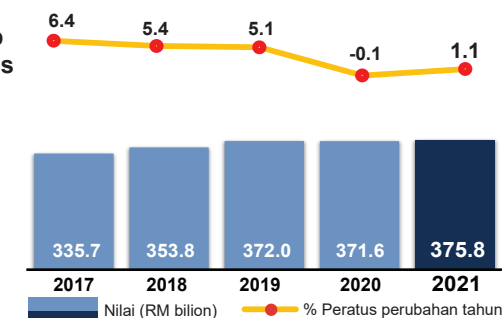
GAJI & UPAH DIBAYAR

Jumlah gaji & upah dibayar sektor Pembuatan meningkat 3.3 peratus pada 2021 selepas mencatatkan penurunan 0.1 peratus pada tahun sebelumnya, disokong oleh kenaikan dalam bilangan pekerja



HARTA TETAP

Nilai harta tetap pulih 1.1 peratus pada 2021 dengan nilai RM375.8 bilion





STATISTIK EKONOMI TAHUNAN 2022

PEMBUATAN

Johor



Output Kasar	: RM256.7b
Input Perantaraan	: RM206.2b
Nilai Ditambah	: RM50.5b
Bilangan Pekerja	: 452,311
Gaji & Upah Dibayar	: RM15.7b
Harta Tetap	: RM66.1b

Kedah



Output Kasar	: RM82.8b
Input Perantaraan	: RM66.4b
Nilai Ditambah	: RM16.4b
Bilangan Pekerja	: 119,745
Gaji & Upah Dibayar	: RM4.4b
Harta Tetap	: RM19.4b

Kelantan



Output Kasar	: RM5.1b
Input Perantaraan	: RM4.0b
Nilai Ditambah	: RM1.1b
Bilangan Pekerja	: 21,563
Gaji & Upah Dibayar	: RM0.4b
Harta Tetap	: RM1.4b

Melaka



Output Kasar	: RM95.1b
Input Perantaraan	: RM80.7b
Nilai Ditambah	: RM14.3b
Bilangan Pekerja	: 91,571
Gaji & Upah Dibayar	: RM4.1b
Harta Tetap	: RM24.9b

Negeri Sembilan



Output Kasar	: RM100.5b
Input Perantaraan	: RM85.1b
Niai Ditambah	: RM15.4b
Bilangan Pekerja	: 83,920
Gaji & Upah Dibayar	: RM3.7b
Harta Tetap	: RM17.2b

Pahang



Output Kasar	: RM59.3b
Input Perantaraan	: RM48.7b
Nilai Ditambah	: RM10.6b
Bilangan Pekerja	: 49,856
Gaji & Upah Dibayar	: RM2.0b
Harta Tetap	: RM18.0b

Pulau Pinang



Output Kasar	: RM238.1b
Input Perantaraan	: RM188.2b
Nilai Ditambah	: RM49.9b
Bilangan Pekerja	: 308,981
Gaji & Upah Dibayar	: RM15.3b
Harta Tetap	: RM43.0b

Perak



Output Kasar	: RM71.8b
Input Perantaraan	: RM55.7b
Nilai Ditambah	: RM16.1b
Bilangan Pekerja	: 148,006
Gaji & Upah Dibayar	: RM4.8b
Harta Tetap	: RM19.5b

Perlis



Output Kasar	: RM3.5b
Input Perantaraan	: RM2.7b
Nilai Ditambah	: RM0.9b
Bilangan Pekerja	: 6,442
Gaji & Upah Dibayar	: RM0.2b
Harta Tetap	: RM0.9b

Selangor



Output Kasar	: RM432.7b
Input Perantaraan	: RM331.2b
Nilai Ditambah	: RM101.5b
Bilangan Pekerja	: 720,600
Gaji & Upah Dibayar	: RM28.5b
Harta Tetap	: RM79.6b

Terengganu



Output Kasar	: RM43.0b
Input Perantaraan	: RM30.4b
Nilai Ditambah	: RM12.6b
Bilangan Pekerja	: 24,729
Gaji & Upah Dibayar	: RM1.5b
Harta Tetap	: RM23.8b

Sabah



Output Kasar	: RM40.6b
Input Perantaraan	: RM33.4b
Nilai Ditambah	: RM7.1b
Bilangan Pekerja	: 70,222
Gaji & Upah Dibayar	: RM1.6b
Harta Tetap	: RM10.7b

Sarawak



Output Kasar	: RM152.1b
Input Perantaraan	: RM101.9b
Nilai Ditambah	: RM50.1b
Bilangan Pekerja	: 106,286
Gaji & Upah Dibayar	: RM3.7b
Harta Tetap	: RM40.4b

W.P. Kuala Lumpur



Output Kasar	: RM25.1b
Input Perantaraan	: RM17.7b
Nilai Ditambah	: RM7.4b
Bilangan Pekerja	: 96,180
Gaji & Upah Dibayar	: RM3.7b
Harta Tetap	: RM6.4b

W.P. Labuan



Output Kasar	: RM3.0b
Input Perantaraan	: RM1.7b
Nilai Ditambah	: RM1.3b
Bilangan Pekerja	: 3,023
Gaji & Upah Dibayar	: RM0.2b
Harta Tetap	: RM4.4b

W.P. Putrajaya



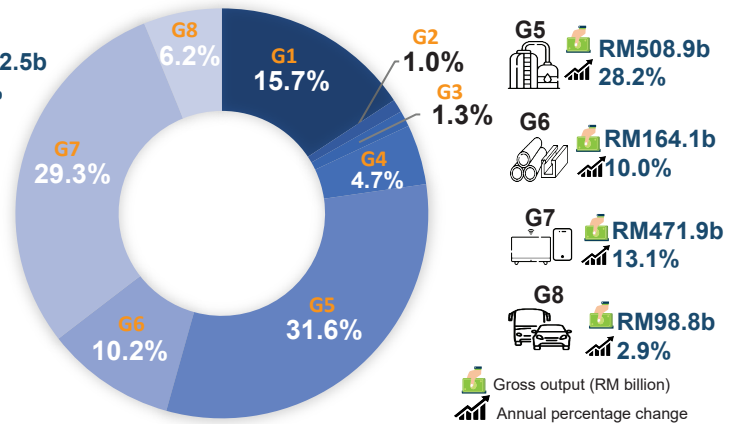
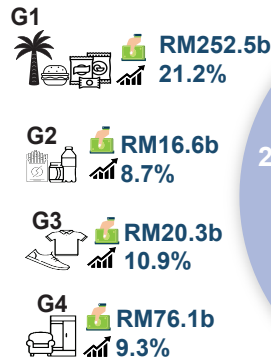
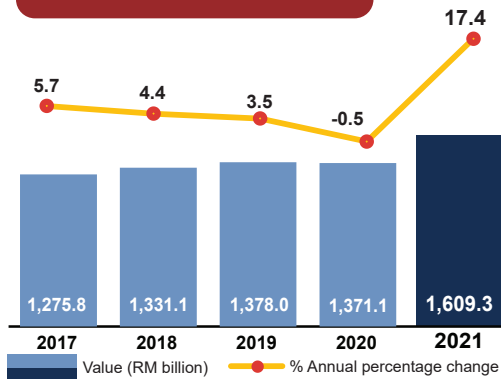
Output Kasar	: RM2.3j
Input Perantaraan	: RM1.5j
Nilai Ditambah	: RM0.8j
Bilangan Pekerja	: 59
Gaji & Upah Dibayar	: RM1.0j
Harta Tetap	: RM0.4j

ANNUAL ECONOMIC STATISTICS 2022

MANUFACTURING

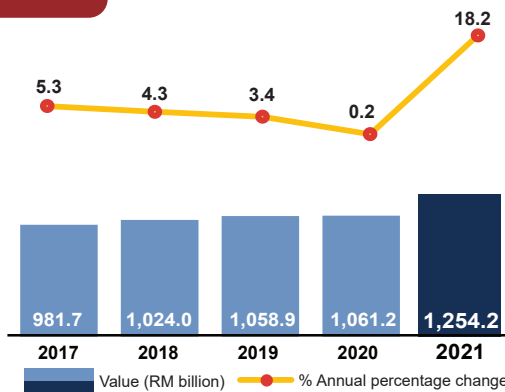
The gross output for Manufacturing sector increased by 17.4 per cent in 2021 to register RM1,609.3 billion. A total of 2.3 million employees were engaged in this sector with salaries and wages paid amounting to RM89.5 billion.

GROSS OUTPUT



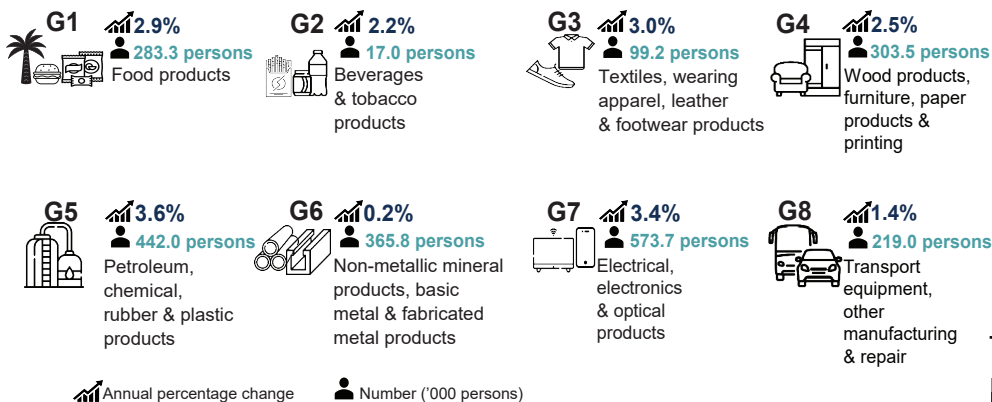
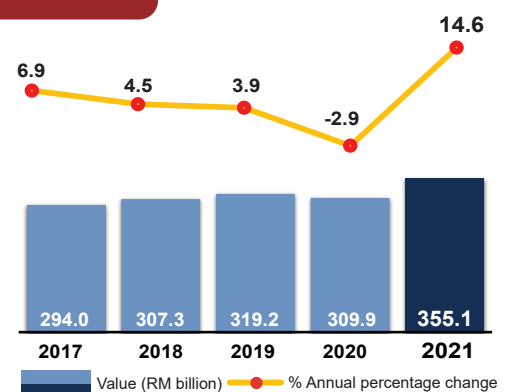
INTERMEDIATE INPUT

Intermediate input for Manufacturing increased by 18.2 per cent recording a value of RM1,254.2 billion

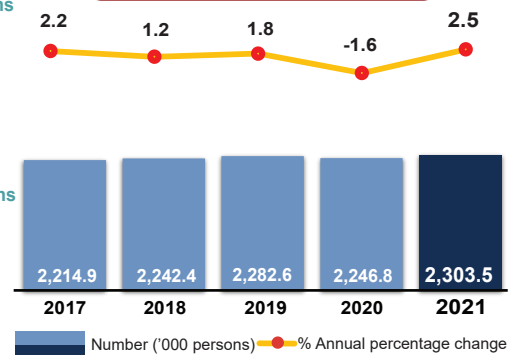


VALUE ADDED

Value added in Manufacturing sector for 2021 recorded RM355.1 billion with a strong growth of 14.6 per cent

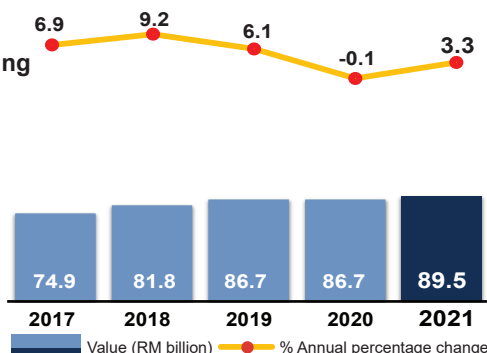


PERSONS ENGAGED



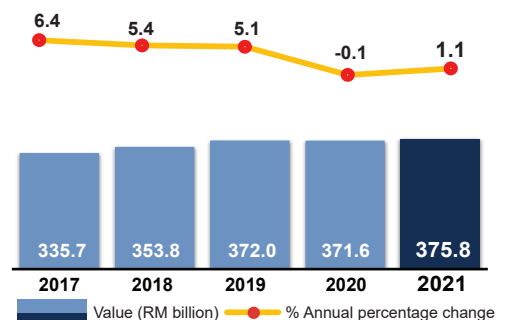
SALARIES & WAGES PAID

The salaries & wages paid in the Manufacturing sector turned around by 3.3 per cent in 2021 after a decline of 0.1 per cent in the preceding year, supported by the increment in the number of persons engaged



FIXED ASSETS

Fixed assets rebounded 1.1 per cent in 2021 with a value of RM375.8 billion





ANNUAL ECONOMIC STATISTICS 2022

MANUFACTURING

Johor



Gross Output : **RM256.7b**
Intermediate Input : **RM206.2b**
Value Added : **RM50.5b**
Persons Engaged : **452,311**
Salaries & Wages Paid : **RM15.7b**
Fixed Assets : **RM66.1b**

Kedah



Gross Output : **RM82.8b**
Intermediate Input : **RM66.4b**
Value Added : **RM16.4b**
Persons Engaged : **119,745**
Salaries & Wages Paid : **RM4.4b**
Fixed Assets : **RM19.4b**

Kelantan



Gross Output : **RM5.1b**
Intermediate Input : **RM4.0b**
Value Added : **RM1.1b**
Persons Engaged : **21,563**
Salaries & Wages Paid : **RM0.4b**
Fixed Assets : **RM1.4b**

Melaka



Gross Output : **RM95.1b**
Intermediate Input : **RM80.7b**
Value Added : **RM14.3b**
Persons Engaged : **91,571**
Salaries & Wages Paid : **RM4.1b**
Fixed Assets : **RM24.9b**

Negeri Sembilan



Gross Output : **RM100.5b**
Intermediate Input : **RM85.1b**
Value Added : **RM15.4b**
Persons Engaged : **83,920**
Salaries & Wages Paid : **RM3.7b**
Fixed Assets : **RM17.2b**

Pahang



Gross Output : **RM59.3b**
Intermediate Input : **RM48.7b**
Value Added : **RM10.6b**
Persons Engaged : **49,856**
Salaries & Wages Paid : **RM2.0b**
Fixed Assets : **RM18.0b**

Pulau Pinang



Gross Output : **RM238.1b**
Intermediate Input : **RM188.2b**
Value Added : **RM49.9b**
Persons Engaged : **308,981**
Salaries & Wages Paid : **RM15.3b**
Fixed Assets : **RM43.0b**

Perak



Gross Output : **RM71.8b**
Intermediate Input : **RM55.7b**
Value Added : **RM16.1b**
Person Engaged : **148,006**
Salaries & Wages Paid : **RM4.8b**
Fixed Assets : **RM19.5b**

Perlis



Gross Output : **RM3.5b**
Intermediate Input : **RM2.7b**
Value Added : **RM0.9b**
Persons Engaged : **6,442**
Salaries & Wages Paid : **RM0.2b**
Fixed Assets : **RM0.9b**

Selangor



Gross Output : **RM432.7b**
Intermediate Input : **RM331.2b**
Value Added : **RM101.5b**
Persons Engaged : **720,600**
Salaries & Wages Paid : **RM28.5b**
Fixed Assets : **RM79.6b**

Terengganu



Gross Output : **RM43.0b**
Intermediate Input : **RM30.4b**
Value Added : **RM12.6b**
Persons Engaged : **24,729**
Salaries & Wages Paid : **RM1.5b**
Fixed Assets : **RM 23.8b**

Sabah



Gross Output : **RM40.6b**
Intermediate Input : **RM33.4b**
Value Added : **RM7.1b**
Person Engaged : **70,222**
Salaries & Wages Paid : **RM1.6b**
Fixed Assets : **RM10.7b**

Sarawak



Gross Output : **RM152.1b**
Intermediate Input : **RM101.9b**
Value Added : **RM50.1b**
Persons Engaged : **106,286**
Salaries & Wages Paid : **RM3.7b**
Fixed Assets : **RM40.4b**

W.P. Kuala Lumpur



Gross Output : **RM25.1b**
Intermediate Input : **RM17.7b**
Value Added : **RM7.4b**
Persons Engaged : **96,180**
Salaries & Wages Paid : **RM3.7b**
Fixed Assets : **RM6.4b**

W.P. Labuan



Gross Output : **RM3.0b**
Intermediate Input : **RM1.7b**
Value Added : **RM1.3b**
Persons Engaged : **3,023**
Salaries & Wages Paid : **RM0.2b**
Fixed Assets : **RM4.4b**

W.P. Putrajaya



Gross Output : **RM2.3m**
Intermediate Input : **RM1.5m**
Value Added : **RM0.8m**
Person Engaged : **59**
Salaries & Wages Paid : **RM1.0m**
Fixed Assets : **RM0.4m**

1. Pengenalan

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

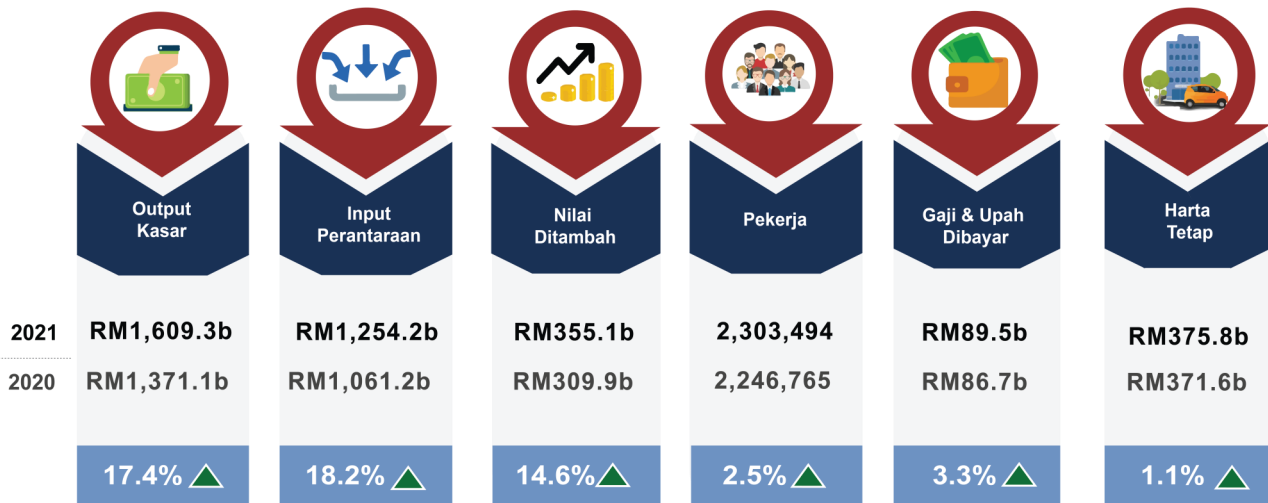
Selari dengan pengembangan output kasar, input perantaraan meningkat 18.2 peratus dengan nilai RM1,254.2 bilion. Seterusnya, nilai ditambah pulih kepada 14.6 peratus daripada negatif 2.9 peratus pada tahun sebelumnya dengan merekodkan nilai RM355.1 bilion pada 2021.

2. Prestasi Sektor Pembuatan

Sektor Pembuatan menunjukkan prestasi positif pada 2021 dengan merekodkan pertumbuhan kukuh bagi output kasar sebanyak 17.4 peratus kepada RM1,609.3 bilion berbanding RM1,371.1 bilion pada 2020.

Melihat kepada bilangan pekerja di sektor Pembuatan, meningkat 2.5 peratus dengan jumlah pekerja 2.3 juta orang berbanding 2.2 juta orang pada tahun sebelumnya. Pada masa yang sama, gaji & upah yang dibayar meningkat 3.3 peratus dengan mencatatkan RM89.5 bilion (2020: RM86.7 bilion).

Paparan 1: Statistik utama sektor Pembuatan, 2020 dan 2021



▲ Peratus Perubahan Tahunan
b - bilion

3. Output Kasar

3.1 Output Kasar mengikut Subsektor

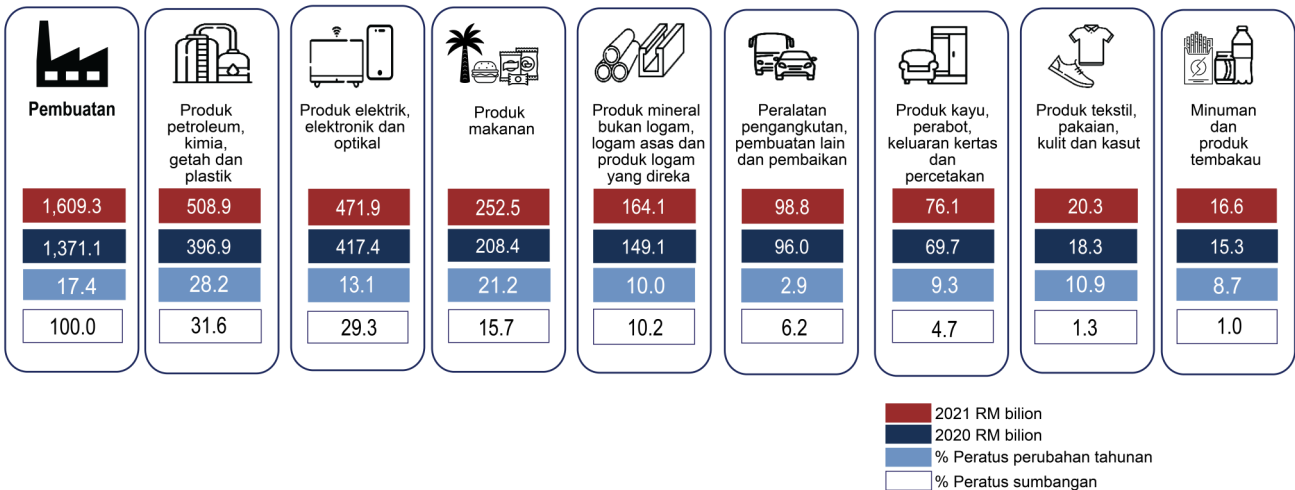
Output kasar sektor Pembuatan pada 2021 mencatatkan pertumbuhan kukuh sebanyak 17.4 peratus, bernilai RM1,609.3 bilion berbanding RM1,371.1 bilion pada tahun sebelumnya. Subsektor Produk petroleum, kimia, getah dan plastik merupakan penyumbang terbesar sebanyak 31.6 peratus dengan peningkatan 28.2 peratus kepada RM508.9 bilion (2020: RM396.9 bilion).

Selain itu, subsektor Produk elektrik, elektronik dan optikal menyumbang 29.3 peratus dengan nilai RM471.9 bilion (2020: RM417.4 bilion), berkembang 13.1 peratus pada 2021.

Subsektor seterusnya adalah Produk makanan dengan sumbangan 15.7 peratus dan melonjak 21.2 peratus merekodkan nilai RM252.5 bilion pada 2021 (2020: RM208.4 bilion).

Subsektor Minuman dan produk tembakau menyumbang output kasar terendah sebanyak 1.0 peratus dalam sektor ini. Walaupun merupakan penyumbang terendah pada 2021, subsektor ini menunjukkan peningkatan sebanyak 8.7 peratus berjumlah RM16.6 bilion pada 2021 (2020: RM15.3 bilion).

Paparan 2: Output kasar mengikut subsektor, 2020 dan 2021
















3.2 Output Kasar mengikut Negeri

Output kasar bagi sektor Pembuatan didominasi oleh Selangor dengan nilai RM432.7 bilion dengan sumbangan sebanyak 26.9 peratus. Penyumbang kedua terbesar ialah Johor dengan sumbangan 16.0 peratus dan merekodkan nilai RM256.7 bilion, diikuti oleh Pulau Pinang (RM238.1 bilion, sumbangan: 14.8%) dan Sarawak (RM152.1 bilion, sumbangan: 9.4%). Keempat-empat negeri ini menyumbang lebih daripada 60.0 peratus kepada jumlah output kasar bagi sektor Pembuatan pada 2021.

**“Selangor, Johor,
Pulau Pinang dan
Sarawak
merupakan penyumbang
tertinggi kepada
output kasar”**

Paparan 3: Output kasar mengikut negeri, 2021

	RM bilion	% Peratus sumbangan		RM bilion	% Peratus sumbangan
 Malaysia	1,609.3	100.0			
 Johor	256.7	16.0	 Perlis	3.5	0.2
 Kedah	82.8	5.1	 Selangor	432.7	26.9
 Kelantan	5.1	0.3	 Terengganu	43.0	2.7
 Melaka	95.1	5.9	 Sabah	40.6	2.5
 Negeri Sembilan	100.5	6.2	 Sarawak	152.1	9.4
 Pahang	59.3	3.7	 W.P. Kuala Lumpur	25.1	1.6
 Pulau Pinang	238.1	14.8	 W.P. Labuan	3.0	0.2
 Perak	71.8	4.5	 W.P. Putrajaya	0.002	0.0001

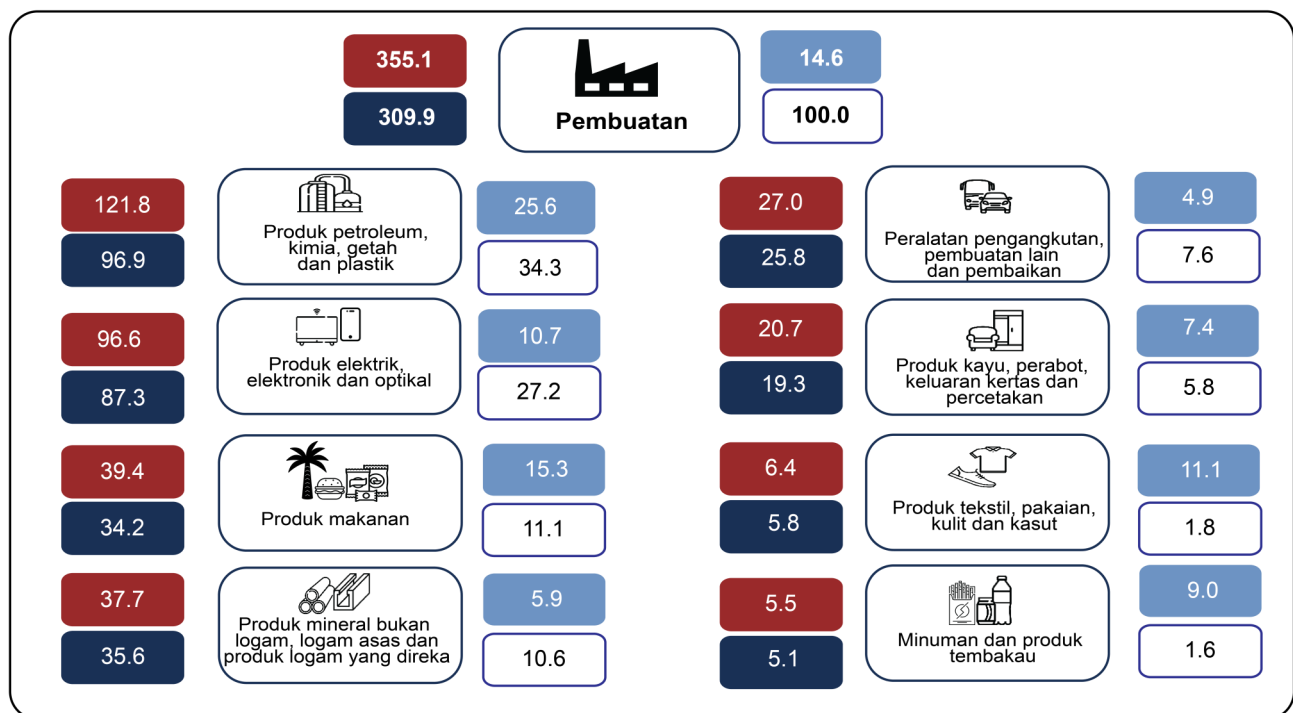
4. Nilai Ditambah

4.1 Nilai Ditambah mengikut Subsektor

Nilai ditambah sektor Pembuatan berkembang 14.6 peratus kepada RM355.1 bilion berbanding RM309.9 bilion pada 2020. Dari segi sumbangan, subsektor Produk petroleum, kimia, getah dan plastik adalah penyumbang utama dengan sumbangan 34.3 peratus. Nilai ditambah untuk subsektor ini mencatatkan nilai RM121.8 bilion (2020: RM96.9 bilion) dengan pertumbuhan dua digit 25.6 peratus.

Nilai ditambah sektor ini diperkukuhkan lagi oleh pengembangan dalam subsektor Produk elektrik, elektronik dan optikal dengan sumbangan 27.2 peratus dan pertumbuhan tahunan sebanyak 10.7 peratus dengan merekodkan RM96.6 bilion (2020: RM87.3 bilion). Ini diikuti oleh subsektor Produk makanan yang meningkat 15.3 peratus dengan sumbangan 11.1 peratus yang berjumlah RM39.4 bilion (2020: RM34.2 bilion).

Paparan 4: Nilai ditambah mengikut subsektor, 2020 dan 2021


















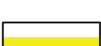

■ 2021 RM bilion
■ 2020 RM bilion
■ % Peratus perubahan tahunan
 % Peratus sumbangan

4.2 Nilai Ditambah mengikut Negeri

Nilai ditambah bagi sektor Pembuatan pada 2021 dipacu oleh Selangor, mencatatkan nilai RM101.5 bilion dengan sumbangan 28.7 peratus. Seterusnya, Johor menyumbang nilai ditambah RM50.5 bilion dengan sumbangan 14.2 peratus, diikuti oleh Sarawak (RM50.1 bilion, sumbangan: 14.1%) dan Pulau Pinang (RM49.9 bilion, sumbangan: 14.1%). Keempat-empat negeri ini menyumbang lebih daripada 70.0 peratus daripada jumlah nilai ditambah bagi sektor Pembuatan pada 2021.

“Selangor, Johor, Sarawak dan Pulau Pinang merupakan penyumbang utama kepada nilai ditambah”

Paparan 5: Nilai ditambah mengikut negeri, 2021

		RM bilion	% Peratus sumbangan			RM bilion	% Peratus sumbangan
		355.1	100.0				
	Johor	50.5	14.2		Perlis	0.9	0.2
	Kedah	16.4	4.6		Selangor	101.5	28.7
	Kelantan	1.1	0.3		Terengganu	12.6	3.5
	Melaka	14.3	4.0		Sabah	7.1	2.0
	Negeri Sembilan	15.4	4.3		Sarawak	50.1	14.1
	Pahang	10.6	3.0		W.P. Kuala Lumpur	7.4	2.1
	Pulau Pinang	49.9	14.1		W.P. Labuan	1.3	0.4
	Perak	16.1	4.5		W.P. Putrajaya	0.001	0.0002

5. Pekerja dan Gaji & Upah Dibayar

5.1 Pekerja dan Gaji & Upah Dibayar mengikut Subsektor










Bilangan pekerja dalam sektor Pembuatan meningkat 2.5 peratus dengan merekodkan 2,303,494 orang pada 2021, dengan sumbangan terbesar oleh subsektor Produk elektrik, elektronik dan optikal yang mencatatkan 24.9 peratus atau bersamaan dengan 573,675 orang. Tambahan pula, bilangan pekerja turut disumbangkan oleh subsektor Produk petroleum, kimia, getah dan plastik (sumbangan: 19.2%), dan subsektor Produk mineral bukan logam, logam asas dan produk logam yang direka (sumbangan: 15.9%).

Gaji & upah dibayar bagi sektor Pembuatan merekodkan nilai RM89.5 bilion pada 2021,

meningkat 3.3 peratus berbanding tahun lalu sejajar dengan peningkatan dalam bilangan pekerja. Gaji & upah dibayar tertinggi direkodkan oleh subsektor Produk elektrik, elektronik dan optikal bernilai RM27.6 bilion (sumbangan: 30.9%), diikuti oleh subsektor Produk petroleum, kimia, getah dan plastik bernilai RM19.5 bilion (sumbangan: 21.8%), dan subsektor Produk mineral bukan logam, logam asas dan produk logam yang direka bernilai RM13.5 bilion (sumbangan: 15.0%).

Purata gaji & upah dibayar sebulan dalam sektor Pembuatan bernilai RM3,298 dicatatkan pada tahun 2021.

Paparan 6: Pekerja dan gaji & upah dibayar, 2021

	Purata Gaji & Upah Sebulan	Pekerja		Gaji & Upah Dibayar	
	RM3,298	Orang	% Peratus sumbangan	RM bilion	% Peratus sumbangan
 Pembuatan		2,303,494	100.0	89.5	100.0
 Produk elektrik, elektronik dan optikal		573,675	24.9	27.6	30.9
 Produk petroleum, kimia, getah dan plastik		441,962	19.2	19.5	21.8
 Produk mineral bukan logam, logam asas dan produk logam yang direka		365,813	15.9	13.5	15.0
 Produk kayu, perabot, keluaran kertas dan percetakan		303,543	13.2	8.5	9.5
 Produk makanan		283,301	12.3	9.5	10.6
 Peralatan pengangkutan, pembuatan lain dan pembaikan		219,044	9.5	8.1	9.1
 Produk tekstil, pakaian, kulit dan kasut		99,199	4.3	2.2	2.5
 Minuman dan produk tembakau		16,957	0.7	0.6	0.6

5.2 Pekerja dan Gaji & Upah Dibayar mengikut Kategori Pekerja dan Kemahiran

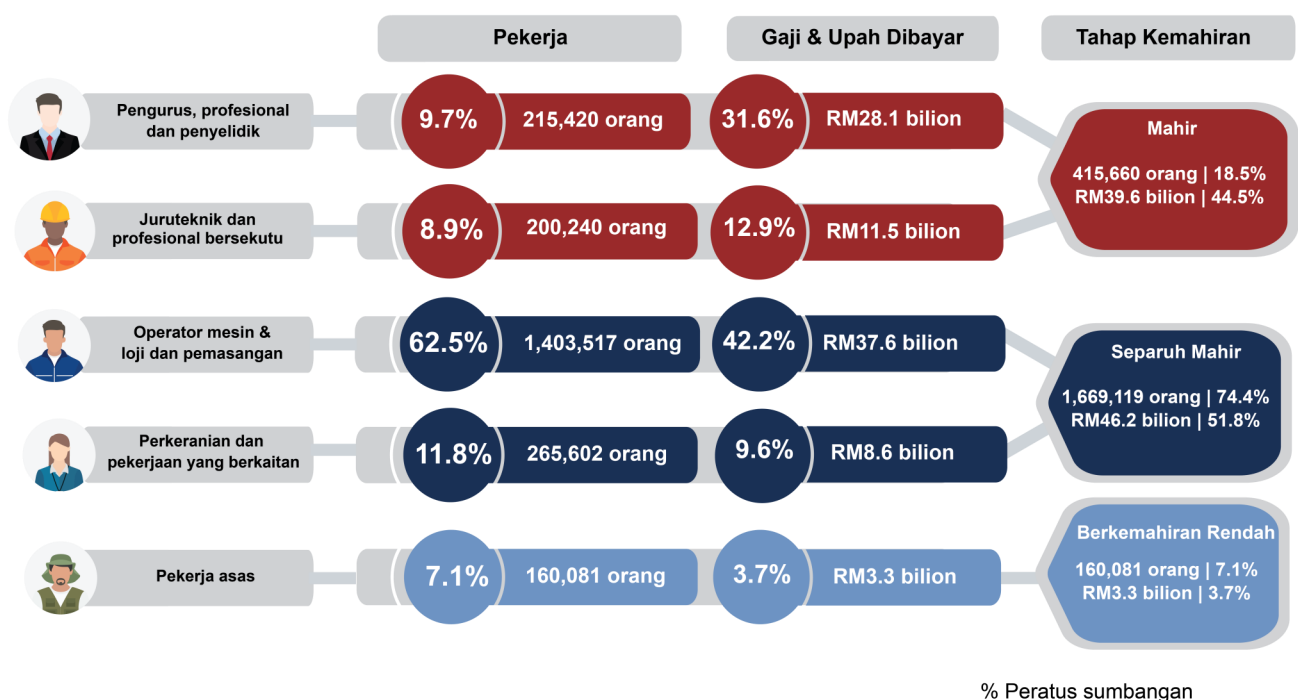
Bilangan pekerja dalam sektor Pembuatan mencatatkan 2,303,494 orang pada tahun 2021. Majoriti pekerja adalah daripada pekerja bergaji sepenuh masa seramai 2,244,860 orang dengan sumbangan 97.5 peratus, manakala pemilik yang bekerja, rakan niaga yang aktif dan pekerja keluarga tanpa gaji seramai 42,007 orang (sumbangan: 1.8%).

Tambahan pula, kebanyakan pekerja bergaji sepenuh masa adalah daripada kumpulan operator mesin & loji dan pemasangan. Kumpulan ini mendominasi tenaga kerja dengan sumbangan 62.5 peratus dengan jumlah 1,403,517 orang. Ini diikuti oleh kategori perkeranian dan pekerjaan yang berkaitan menyumbang 11.8 peratus atau 265,602 orang, dan 9.7 peratus sumbangan daripada pengurus, profesional dan penyelidik dengan 215,420 orang. Ketiga-tiga kategori ini mewakili

84.0 peratus atau 1,884,539 orang. Jumlah gaji & upah dibayar untuk operator mesin & loji dan pemasangan bernilai RM37.6 bilion dengan sumbangan 42.2 peratus. Kategori pengurus, profesional, dan penyelidik menerima purata gaji & upah tertinggi iaitu RM10,880 sebulan pada 2021.

Bagi bilangan pekerja mengikut tahap kemahiran, pekerja separuh mahir mencatatkan bilangan tertinggi iaitu 1,669,119 orang (sumbangan: 74.4%), diikuti oleh pekerja mahir dengan 415,660 orang (sumbangan: 18.5%) dan pekerja berkemahiran rendah seramai 160,081 orang (sumbangan: 7.1%). Gaji & upah dibayar bagi pekerja mahir mencatatkan sumbangan 44.5 peratus dengan nilai RM39.6 bilion, manakala pekerja separuh mahir dan berkemahiran rendah menerima jumlah bayaran sebanyak RM49.5 bilion pada 2021.

Paparan 7: Pekerja dan gaji & upah dibayar mengikut kategori pekerja dan kemahiran, 2021



1. Introduction

This report presents statistics on the Manufacturing 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.

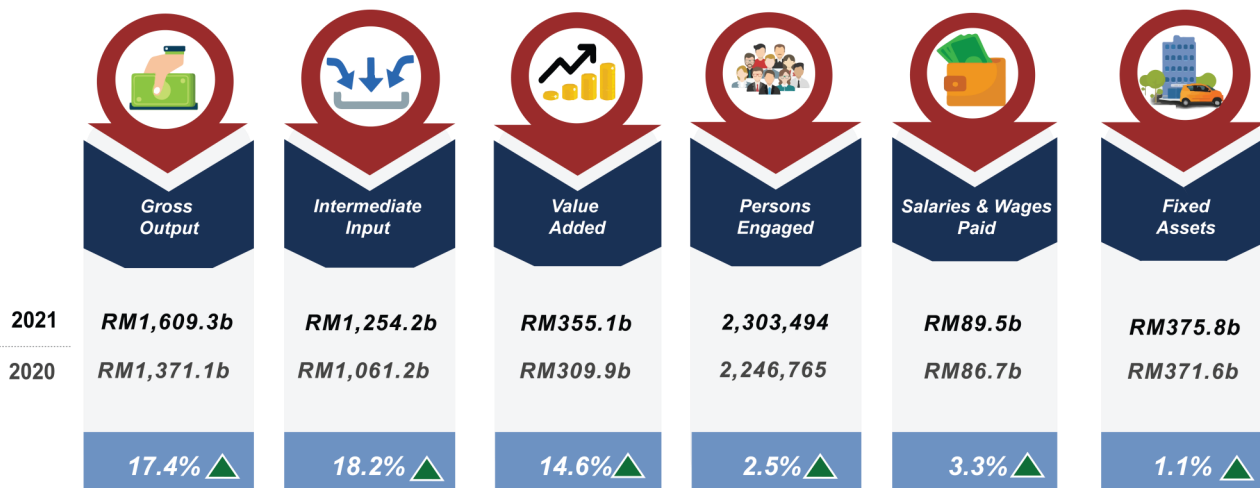
In line with the expansion of gross output, intermediate input increased by 18.2 per cent with a value of RM1,254.2 billion. Thus, the value added turned around to 14.6 per cent from negative 2.9 per cent in the previous year to record a value of RM355.1 billion in 2021.

2. Performance of Manufacturing Sector

The Manufacturing sector showed a positive performance in 2021 by recording a strong growth of gross output by 17.4 per cent to RM1,609.3 billion as compared to RM1,371.1 billion in 2020.

In view of the number of persons engaged in Manufacturing sector, grew by 2.5 per cent with 2.3 million persons as compared to 2.2 million persons in the preceding year. Concurrently, salaries & wages paid increased by 3.3 per cent to register RM89.5 billion (2020: RM86.7 billion).

Exhibit 1: Principal statistics of Manufacturing sector, 2020 and 2021



▲ Annual Percentage Change
b - billion

3. Gross Output

3.1 Gross Output by Sub-sector

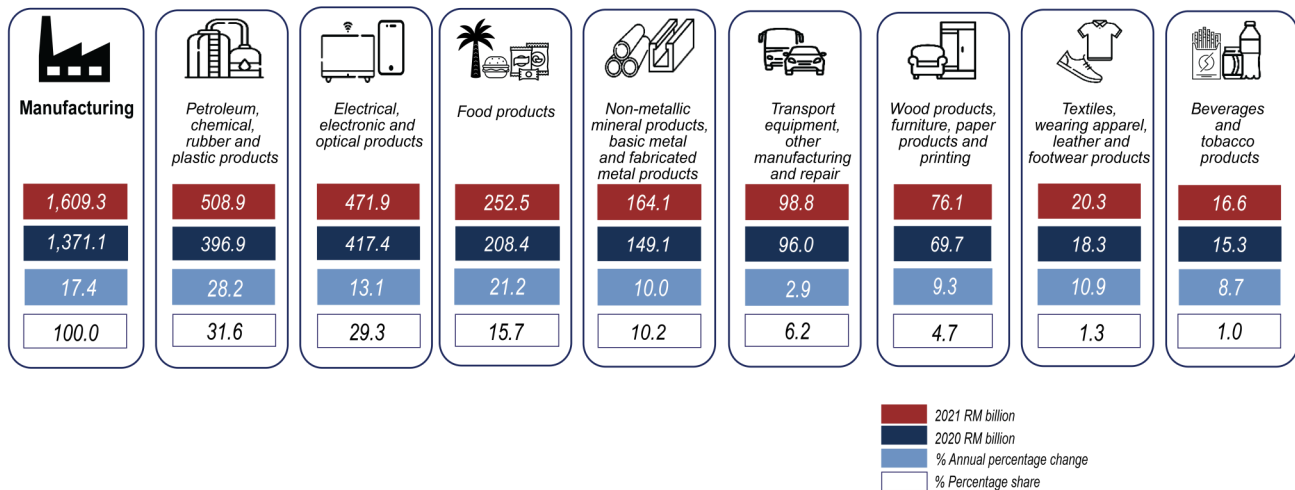
Manufacturing sector's gross output in 2021 registered a strong growth of 17.4 per cent, stood at RM1,609.3 billion as against RM1,371.1 billion in the previous year. Petroleum, chemical, rubber and plastic products sub-sector contributed the largest share of 31.6 per cent with an increase of 28.2 per cent to RM508.9 billion (2020: RM396.9 billion).

In addition, Electrical, electronic and optical products sub-sector contributed 29.3 per cent share with a value of RM471.9 billion (2020: RM417.4 billion), expanded by 13.1 per cent in 2021.

The subsequent sub-sector was Food products with 15.7 per cent share and accelerated 21.2 per cent to record RM252.5 billion in 2021 (2020: RM208.4 billion).

Beverages and tobacco products sub-sector had the least share of gross output at 1.0 per cent in this sector. Despite being the smallest contributor in 2021, this sub-sector indicated an increase of 8.7 per cent, amounted to RM16.6 billion in 2021 (2020: RM15.3 billion).

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




















3.2 Gross Output by State

The gross output for Manufacturing sector was dominated by Selangor with RM432.7 billion with a share of 26.9 per cent. The second largest contributor was Johor with 16.0 per cent share and recorded a value of RM256.7 billion, followed by Pulau Pinang (RM238.1 billion, share: 14.8%) and Sarawak (RM152.1 billion, share: 9.4%). These four states contributed more than 60.0 per cent share of total gross output for Manufacturing sector in 2021.

“Selangor, Johor, Pulau Pinang and Sarawak were the highest contributors in gross output”

Exhibit 3: Gross output by state, 2021

	RM billion	% Percentage share		RM billion	% Percentage share
 Malaysia	1,609.3	100.0			
 Johor	256.7	16.0	 Perlis	3.5	0.2
 Kedah	82.8	5.1	 Selangor	432.7	26.9
 Kelantan	5.1	0.3	 Terengganu	43.0	2.7
 Melaka	95.1	5.9	 Sabah	40.6	2.5
 Negeri Sembilan	100.5	6.2	 Sarawak	152.1	9.4
 Pahang	59.3	3.7	 W.P. Kuala Lumpur	25.1	1.6
 Pulau Pinang	238.1	14.8	 W.P. Labuan	3.0	0.2
 Perak	71.8	4.5	 W.P. Putrajaya	0.002	0.0001

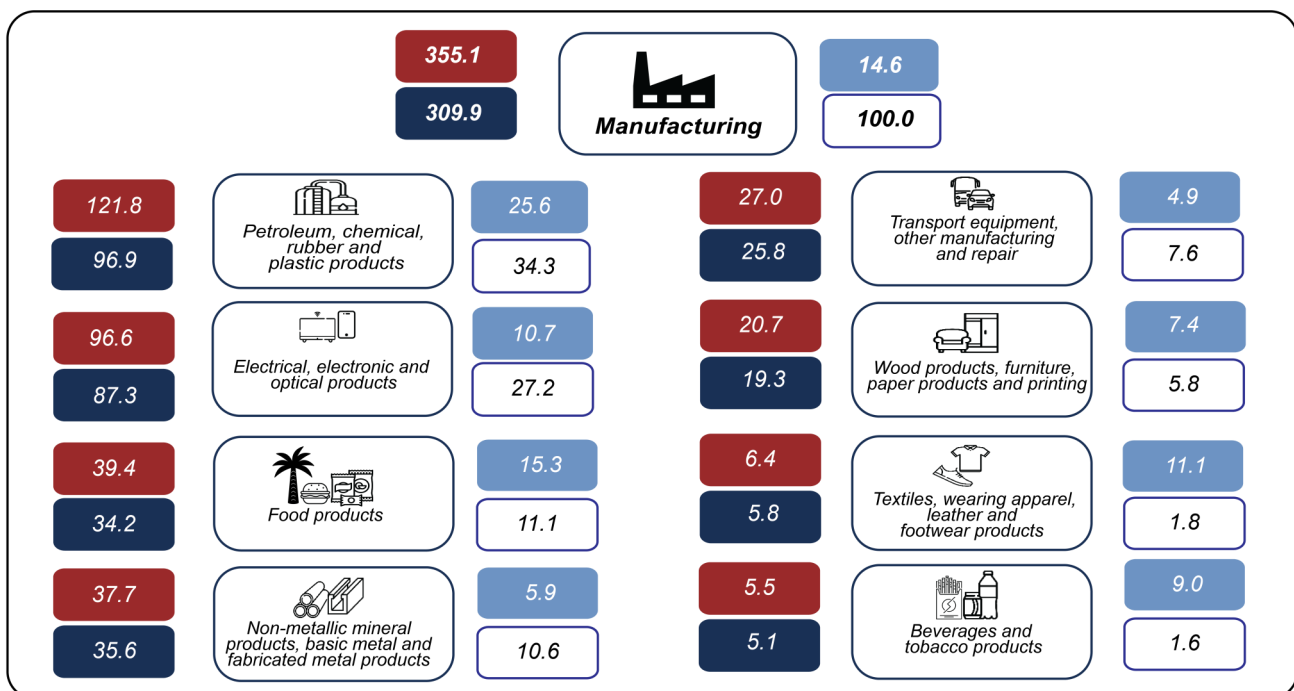
4. Value Added

4.1 Value Added by Sub-sector

The value added of Manufacturing sector expanded by 14.6 per cent to RM355.1 billion as compared to RM309.9 billion in 2020. In terms of contribution, sub-sector of Petroleum, chemical, rubber and plastic products was the main contributor with a share of 34.3 per cent. The value added for this sub-sector stood at RM121.8 billion (2020: RM96.9 billion) with a double-digit growth of 25.6 per cent.

Value added in this sector was reinforced by a strong expansion in Electrical, electronic and optical products sub-sector with a share of 27.2 per cent and an annual growth of 10.7 per cent to record RM96.6 billion (2020: RM87.3 billion). This was followed by Food products sub-sector which increased by 15.3 per cent with a share of 11.1 per cent which amounted to RM39.4 billion (2020: RM34.2 billion).

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



■ 2021 RM billion
■ 2020 RM billion
■ % Annual percentage change
 % Percentage share

4.2 Value Added by State

The value added for Manufacturing sector in 2021 was anchored by Selangor which registered a value of RM101.5 billion with a share of 28.7 per cent. Next, Johor contributed a value added of RM50.5 billion with 14.2 per cent share, followed by Sarawak (RM50.1 billion, share: 14.1%) and Pulau Pinang (RM49.9 billion, share: 14.1%). These four states accounted more than 70.0 per cent share of total value added for Manufacturing sector in 2021.

“Selangor, Johor, Sarawak and Pulau Pinang were the major contributors in value added”

Exhibit 5: Value added by state, 2021

		RM billion	% Percentage share			RM billion	% Percentage share
		355.1	100.0				
	Johor	50.5	14.2		Perlis	0.9	0.2
	Kedah	16.4	4.6		Selangor	101.5	28.7
	Kelantan	1.1	0.3		Terengganu	12.6	3.5
	Melaka	14.3	4.0		Sabah	7.1	2.0
	Negeri Sembilan	15.4	4.3		Sarawak	50.1	14.1
	Pahang	10.6	3.0		W.P. Kuala Lumpur	7.4	2.1
	Pulau Pinang	49.9	14.1		W.P. Labuan	1.3	0.4
	Perak	16.1	4.5		W.P. Putrajaya	0.001	0.0002

5. Persons Engaged and Salaries & Wages Paid

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

Number of persons engaged in the Manufacturing sector increased by 2.5 per cent to record 2,303,494 persons in 2021, largely contributed by Electrical, electronic and optical products sub-sector which registered a share of 24.9 per cent or equivalent to 573,675 persons. Moreover, the number of persons engaged were also contributed by Petroleum, chemical, rubber and plastic products (share: 19.2%), and Non-metallic mineral products, basic metal and fabricated metal products (share: 15.9%) sub-sectors.

Salaries & wages paid in Manufacturing sector recorded at RM89.5 billion in 2021, increased 3.3 per cent as against

preceding year, in tandem with the rise in the number of persons engaged. The highest salaries & wages paid was recorded by Electrical, electronic and optical products sub-sector worth RM27.6 billion (share: 30.9%), followed by Petroleum, chemical, rubber and plastic products sub-sector worth RM19.5 billion (share: 21.8%), and Non-metallic mineral products, basic metal and fabricated metal products sub-sector worth RM13.5 billion (share: 15.0%).

The average salaries & wages paid in Manufacturing sector were RM3,298 per month in 2021.

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

	Average Monthly Salaries & Wages	Persons Engaged		Salaries & Wages Paid	
	RM3,298	Persons	% Percentage share	RM billion	% Percentage share
Manufacturing		2,303,494	100.0	89.5	100.0
Electrical, electronic and optical products		573,675	24.9	27.6	30.9
Petroleum, chemical, rubber and plastic products		441,962	19.2	19.5	21.8
Non-metallic mineral products, basic metal and fabricated metal products		365,813	15.9	13.5	15.0
Wood products, furniture, paper products and printing		303,543	13.2	8.5	9.5
Food products		283,301	12.3	9.5	10.6
Transport equipment, other manufacturing and repair		219,044	9.5	8.1	9.1
Textiles, wearing apparel, leather and footwear products		99,199	4.3	2.2	2.5
Beverages and tobacco products		16,957	0.7	0.6	0.6

5.2 Persons Engaged and Salaries & Wages Paid by Category of Workers and Skills

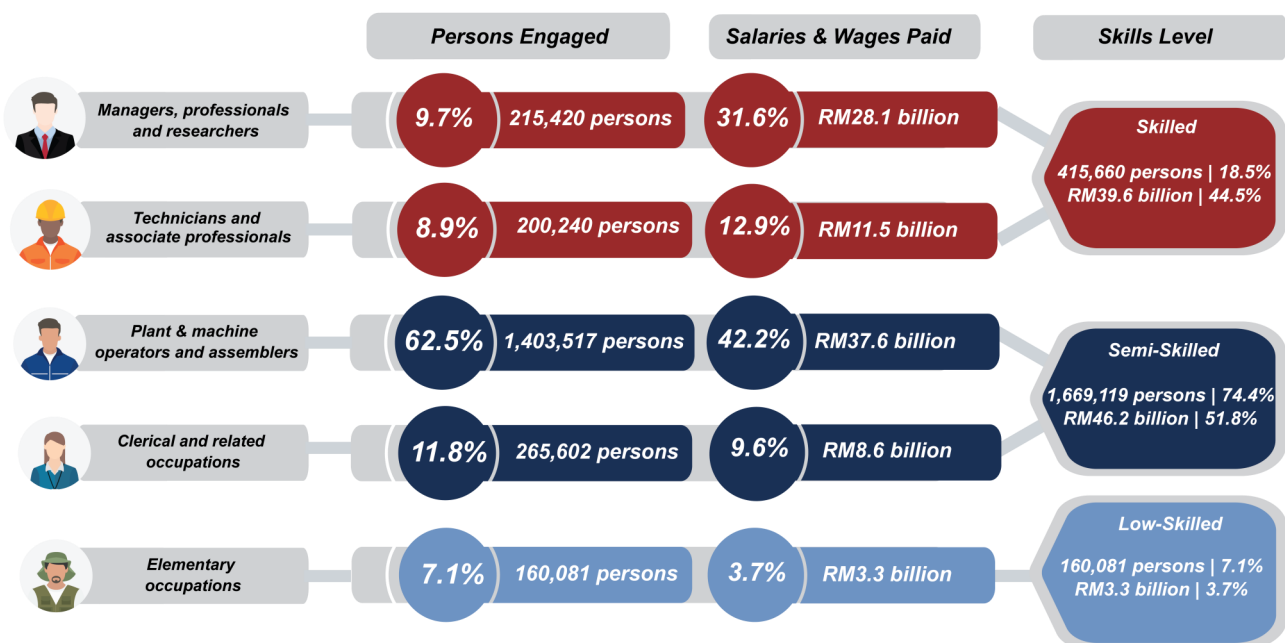
The number of persons engaged in the Manufacturing sector was 2,303,494 persons in 2021. The majority were full-time paid employees with 2,244,860 persons at a share of 97.5 per cent, while working proprietors, active business partners and unpaid family workers were 42,007 persons (share: 1.8%).

Furthermore, most of the full-time paid employees were in the group of plant & machine operators and assemblers. This group dominated the workforce by 62.5 per cent share with a total of 1,403,517 persons. This was followed by the category of clerical and related occupations with 11.8 per cent share or 265,602 persons, and 9.7 per cent share were managers, professionals and researchers with 215,420 persons. These three categories represented 84.0 per cent

or 1,884,539 persons. Total salaries & wages paid for plant & machine operators and assemblers worth RM37.6 billion encompassed 42.2 per cent. The category of managers, professionals and researchers earned the highest average salaries & wages which was RM10,880 per month in 2021 .

As for persons engaged by skills level, semi-skilled workers recorded the highest number with 1,669,119 persons (share: 74.4%), followed by skilled workers with 415,660 persons (share: 18.5%) and low-skilled workers with 160,081 persons (share: 7.1%). Salaries & wages paid for skilled workers registered 44.5 per cent share at a value of RM39.6 billion, while semi-skilled and low-skilled employees received a total payout of RM49.5 billion in 2021 .

Exhibit 7: Persons engaged and salaries & wages paid by category of workers and skills,



% Percentage share

JADUAL STATISTIK

STATISTICAL TABLES

2



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Jadual 1 - Statistik utama sektor Pembuatan, 2015, 2017 - 2021
Table 1 - Principal statistics of Manufacturing sector, 2015, 2017 - 2021

Tahun Year	Nilai output kasar Value of gross output (RM Juta) (RM Million)	Nilai input perantara Value of intermediate input (RM Juta) (RM Million)	Nilai ditambah Value added (RM Juta) (RM Million)	Jumlah pekerja Total number of persons engaged	Gaji & upah dibayar Salaries & wages paid (RM Juta) (RM Million)	Nilai harta tetap Value of fixed assets (RM Juta) (RM Million)
2021	1,609,320	1,254,200	355,120	2,303,494	89,510	375,767
2020 ^r	1,371,054	1,061,193	309,861	2,246,765	86,676	371,645
2019	1,378,013	1,058,857	319,156	2,282,558	86,744	371,968
2018	1,331,285	1,023,979	307,306	2,242,364	81,760	353,771
2017	1,275,758	981,714	294,044	2,214,883	74,881	335,704
2015 *	1,141,963	884,845	257,118	2,119,158	65,495	296,801

Nota / Note

^r Merujuk kepada data semakan semula

^r Refer to revised data

* Merujuk kepada tahun banci

* Refer to census year

Jadual 1.1 - Statistik utama subsektor Produk makanan mengikut kumpulan, 2015, 2017 dan 2021
Table 1.1 - Principal statistics of Food products sub-sector by group, 2015, 2017 and 2021

Subsektor Sub-sector	Kod kumpulan Group	Tahun Year	Nilai output kasar Value of gross output	Nilai input perantara Value of intermediate input	Nilai ditambah Value added	Jumlah pekerja Number of persons engaged	Gaji & upah dibayar Salaries & wages paid	Nilai harta tetap Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021 2017 2015	252,518,646 214,039,827 199,799,660	213,088,187 182,162,338 171,973,343	39,430,460 31,877,490 27,826,317	283,301 273,933 256,908	9,504,130 8,051,917 7,193,136	50,283,614 42,337,965 37,947,827
Pemrosesan dan pengawetan daging <i>Processing and preserving of meat</i>	101	2021 2017 2015	7,608,321 5,765,814 5,555,304	6,420,292 4,457,507 4,268,845	1,188,029 1,308,306 1,286,459	14,208 13,780 13,217	394,112 441,679 363,760	1,348,496 901,729 906,593
Pemrosesan dan pengawetan ikan, krustasea dan moluska <i>Processing and preserving of fish, crustaceans and molluscs</i>	102	2021 2017 2015	4,018,681 3,426,035 3,531,102	3,391,169 2,574,496 2,779,114	627,512 851,540 751,988	15,298 15,706 16,364	439,890 317,617 301,391	1,271,596 1,110,641 945,402
Pemrosesan dan pengawetan buah-buahan dan sayur-sayuran <i>Processing and preserving of fruit and vegetables</i>	103	2021 2017 2015	1,857,617 1,337,720 1,218,755	1,567,553 973,232 839,502	290,064 364,488 379,253	9,145 9,506 8,165	238,325 221,156 175,709	377,222 472,570 383,473
Pembuatan minyak dan lemak daripada sayuran dan haiwan <i>Manufacture of vegetable and animal oils and fats</i>	104	2021 2017 2015	160,345,241 145,601,834 136,782,340	135,307,539 129,546,207 122,801,222	25,037,702 16,055,627 13,981,119	57,741 63,226 74,975	2,194,589 2,055,527 2,402,392	30,693,894 23,301,500 20,601,212
Pembuatan produk tenusu <i>Manufacture of dairy products</i>	105	2021 2017 2015	10,360,784 7,836,595 9,085,893	8,742,961 5,779,387 7,298,377	1,617,823 2,057,208 1,787,516	10,233 9,700 12,326	557,944 437,735 501,525	2,190,998 1,901,532 2,575,058
Pembuatan produk bijian, kanji dan produk berkanji <i>Manufacture of grain mill products, starches and starch products</i>	106	2021 2017 2015	8,592,423 6,347,810 6,093,384	7,250,728 5,291,896 5,216,081	1,341,696 1,055,914 877,303	9,864 9,028 9,112	347,995 295,858 287,772	1,507,192 1,520,173 1,754,710
Pembuatan produk makanan lain <i>Manufacture of other food products</i>	107	2021 2017 2015	49,787,384 34,501,631 28,546,850	42,013,148 26,187,738 21,561,787	7,774,236 8,313,893 6,985,063	154,828 142,493 112,290	4,712,994 3,813,249 2,751,864	11,763,776 12,070,654 9,775,452
Pembuatan makanan haiwan tersedia <i>Manufacture of prepared animal feeds</i>	108	2021 2017 2015	9,948,195 9,222,389 8,986,032	8,394,797 7,351,875 7,208,415	1,553,398 1,870,514 1,777,617	11,984 10,494 10,459	618,282 469,097 408,723	1,130,440 1,059,165 1,005,928

Jadual 1.2 - Statistik utama subsektor Minuman dan produk tembakau mengikut kumpulan, 2015, 2017 dan 2021
Table 1.2 - Principal statistics of Beverages and tobacco products sub-sector by group, 2015, 2017 and 2021

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
<i>Sub-sector</i>	<i>Group</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 & wages paid</i>	<i>Value of fixed assets</i>
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021	16,583,516	11,065,584	5,517,932	16,957	560,388	3,566,327
		2017	14,709,459	9,738,477	4,970,983	17,929	608,224	3,407,636
		2015	13,416,482	9,032,815	4,383,667	16,971	548,257	3,132,694
Pembuatan minuman	110	2021	13,016,891	9,384,716	3,632,175	16,116	509,074	3,217,734
<i>Manufacture of beverages</i>		2017	10,674,118	7,665,635	3,008,484	16,830	541,368	3,009,892
		2015	9,213,259	6,774,476	2,438,784	14,792	436,755	2,694,123
Pembuatan produk tembakau	120	2021	3,566,625	1,680,868	1,885,757	841	51,314	348,593
<i>Manufacture of tobacco products</i>		2017	4,035,341	2,072,842	1,962,499	1,099	66,856	397,744
		2015	4,203,222	2,258,339	1,944,883	2,179	111,503	438,571

Jadual 1.3 - Statistik utama subsektor Produk tekstil, pakaian, kulit dan kasut mengikut kumpulan, 2015, 2017 dan 2021
Table 1.3 - Principal statistics of Textiles, wearing apparel, leather and footwear products sub-sector by group, 2015, 2017 and 2021

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
<i>Sub-sector</i>	<i>Group</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 & wages paid</i>	<i>Value of fixed assets</i>
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021	20,314,664	13,886,849	6,427,815	99,199	2,219,764	5,621,866
		2017	19,486,294	13,444,971	6,041,323	107,619	2,450,904	6,593,308
		2015	18,164,029	13,163,236	5,000,793	102,243	2,037,381	5,975,931
Pemintalan, penenunan dan penyiajan tekstil	131	2021	5,109,840	3,467,099	1,642,741	12,603	443,562	2,320,409
<i>Spinning, weaving and finishing of textiles</i>		2017	5,421,991	3,895,538	1,526,453	15,088	448,850	2,336,452
		2015	6,042,225	4,521,150	1,521,075	15,033	354,686	2,043,042
Pembuatan tekstil lain	139	2021	3,450,161	2,363,728	1,086,433	17,890	414,113	1,977,808
<i>Manufacture of other textiles</i>		2017	3,287,831	2,143,621	1,144,210	17,354	400,195	2,112,018
		2015	2,670,427	2,019,331	651,096	14,848	317,103	1,924,300
Pembuatan pakaian, kecuali pakaian berbulu	141	2021	9,002,764	6,185,424	2,817,340	54,763	985,095	766,822
<i>Manufacture of wearing apparel, except fur apparel</i>		2017	8,452,080	5,835,048	2,617,031	61,757	1,230,265	1,448,390
		2015	7,222,553	5,019,696	2,202,857	59,628	1,047,071	1,456,799
Pembuatan artikel daripada kulit bulu	142	2021	24,250	15,904	8,346	248	5,007	177,399
<i>Manufacture of articles of fur</i>		2017	25,969	15,084	10,884	269	5,120	143,872
		2015	53,304	37,711	15,592	321	6,456	120,195
Pembuatan pakaian yang dikait dan dikrusy	143	2021	246,056	161,368	84,688	1,196	23,792	44,239
<i>Manufacture of knitted and crocheted apparel</i>		2017	166,965	117,033	49,932	1,447	31,056	49,116
		2015	277,822	225,333	52,490	1,583	29,329	49,722
Penyamakan dan pembersihan kulit, pembuatan begasi, beg tangan, pelana dan abah-abah; pembersihan dan pewarnaan bulu	151	2021	1,376,233	939,079	437,154	4,993	164,030	147,906
<i>Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness; dressing and dyeing of fur</i>		2017	1,005,249	694,239	311,010	4,736	148,066	240,954
		2015	888,082	662,645	225,437	4,495	111,892	157,670
Pembuatan kasut	152	2021	1,105,360	754,247	351,113	7,506	184,165	187,283
<i>Manufacture of footwear</i>		2017	1,126,210	744,408	381,801	6,968	187,351	262,506
		2015	1,009,616	677,370	332,246	6,335	170,844	224,203

Jadual 1.4 - Statistik utama subsektor Produk kayu, perabot, keluaran kertas dan percetakan mengikut kumpulan, 2015, 2017 dan 2021
Table 1.4 - Principal statistics of Wood products, furniture, paper products and printing sub-sector by group, 2015, 2017 and 2021

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantaraan	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
Sub-sector	Group	Year	Value of gross output	Value of intermediate input	Value added	Total number of persons engaged	Salaries & wages paid	Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021	76,143,724	55,446,438	20,697,286	303,543	8,488,094	25,962,539
		2017	67,358,752	48,355,867	19,002,885	301,212	8,477,207	25,805,315
		2015	62,919,734	45,734,199	17,185,535	298,437	7,221,339	23,131,323
Pengilangan dan pengetaman kayu	161	2021	5,813,760	4,497,811	1,315,948	29,799	651,763	1,190,294
<i>Sawmilling and planing of wood</i>		2017	5,874,739	4,515,745	1,358,994	30,141	698,287	1,415,984
		2015	5,726,243	4,415,867	1,310,376	30,060	642,243	1,379,201
Pembuatan produk daripada kayu, gabus, jerami dan bahan jalinan lain	162	2021	21,023,944	16,265,160	4,758,784	64,359	1,637,354	6,816,905
<i>Manufacture of products of wood, cork, straw and plaiting materials</i>		2017	18,572,421	13,962,434	4,609,986	67,794	1,673,526	6,306,027
		2015	17,327,118	13,216,041	4,111,076	73,055	1,644,617	6,241,371
Pembuatan kertas dan produk kertas	170	2021	23,798,514	18,008,525	5,789,989	51,847	1,800,606	10,991,353
<i>Manufacture of paper and paper products</i>		2017	18,212,917	13,596,608	4,616,309	51,714	1,741,498	9,556,056
		2015	16,886,500	12,540,531	4,344,968	53,730	1,560,879	7,249,827
Percetakan dan aktiviti perkhidmatan berkaitan percetakan	181	2021	10,394,626	6,639,584	3,755,041	59,330	1,916,611	3,280,587
<i>Printing and service activities related to printing</i>		2017	10,342,565	6,614,928	3,727,638	55,552	1,928,225	3,998,334
		2015	9,926,983	6,449,876	3,477,107	56,651	1,528,460	3,922,806
Penerbitan semula media rakaman	182	2021	60,142	38,413	21,729	314	8,703	12,973
<i>Reproduction of recorded media</i>		2017	42,420	28,247	14,173	274	9,613	12,559
		2015	43,580	29,056	14,524	288	7,569	18,450
Pembuatan perabot	310	2021	15,052,738	9,996,945	5,055,794	97,894	2,473,055	3,670,427
<i>Manufacture of furniture</i>		2017	14,313,690	9,637,906	4,675,785	95,737	2,426,059	4,516,354
		2015	13,010,311	9,082,828	3,927,483	84,653	1,837,571	4,319,668

Jadual 1.5 - Statistik utama subsektor Produk petroleum, kimia, getah dan plastik mengikut kumpulan, 2015, 2017 dan 2021
Table 1.5 - Principal statistics of Petroleum, chemical, rubber and plastic products sub-sector by group, 2015, 2017 and 2021

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
Sub-sector	Group	Year	Value of gross output	Value of intermediate input	Value added	Total number of persons engaged	Salaries & wages paid	Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021	508,890,329	387,134,724	121,755,605	441,962	19,486,935	133,460,430
		2017	340,432,262	250,854,616	89,577,646	391,763	14,637,212	109,949,187
		2015	299,113,642	221,528,178	77,585,464	376,084	12,590,579	91,888,392
Pembuatan produk petroleum bertapis <i>Manufacture of refined petroleum products</i>	192	2021	212,761,218	159,576,455	53,184,763	14,430	1,848,246	41,738,774
		2017	151,353,646	109,680,028	41,673,619	13,839	1,292,526	39,572,211
		2015	137,901,958	102,660,928	35,241,030	16,939	1,328,148	29,911,390
Pembuatan kimia asas, baja dan sebatian nitrogen, plastik dan getah sintetik dalam bentuk primer <i>Manufacture of basic chemicals, fertilizer and nitrogen compounds, plastics and synthetic rubber in primary forms</i>	201	2021	115,437,629	91,123,439	24,314,190	44,481	2,360,679	42,930,308
		2017	88,271,150	67,197,034	21,074,115	45,398	2,382,810	34,878,986
		2015	72,604,643	53,911,397	18,693,246	51,814	2,354,407	33,231,471
Pembuatan produk kimia lain <i>Manufacture of other chemical products</i>	202	2021	34,048,044	26,783,125	7,264,919	51,756	2,387,894	6,822,053
		2017	21,787,719	16,450,442	5,337,276	50,323	1,847,919	6,836,602
		2015	18,821,151	13,612,677	5,208,474	49,142	1,679,141	5,031,614
Pembuatan serat buatan manusia <i>Manufacture of man-made fibres</i>	203	2021	875,628	688,793	186,835	454	34,936	533,861
		2017	509,145	413,472	95,673	492	24,379	466,372
		2015	494,109	403,356	90,753	495	18,838	403,928
Pembuatan produk farmaseutikal, kimia perubatan dan botani <i>Manufacture of pharmaceuticals, medicinal chemical and botanical products</i>	210	2021	6,024,348	3,548,296	2,476,051	28,044	786,018	4,101,387
		2017	3,997,237	2,518,058	1,479,178	22,667	746,718	3,616,321
		2015	4,121,332	2,662,293	1,459,040	17,335	535,180	1,771,224
Pembuatan produk getah <i>Manufacture of rubber products</i>	221	2021	83,139,619	62,715,857	20,423,762	137,853	3,961,038	17,460,575
		2017	37,933,055	28,170,950	9,762,105	116,030	3,033,902	12,158,772
		2015	33,981,752	25,617,052	8,364,700	104,285	2,744,720	10,966,188
Pembuatan produk plastik <i>Manufacture of plastics products</i>	222	2021	56,603,844	42,698,759	13,905,085	164,944	8,108,124	19,873,471
		2017	36,580,311	26,424,632	10,155,679	143,014	5,308,958	12,419,923
		2015	31,188,698	22,660,476	8,528,222	136,074	3,930,145	10,572,577

Jadual 1.6 - Statistik utama subsektor Produk mineral bukan logam, logam asas dan produk logam yang direka mengikut kumpulan, 2015, 2017 dan 2021
Table 1.6 - Principal statistics of Non-metallic mineral products, basic metal and fabricated metal products sub-sector by group, 2015, 2017 and 2021

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
Sub-sector	Group	Year	Value of gross output	Value of intermediate input	Value added	Total number of persons engaged	Salaries & wages paid	Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021	164,098,493	126,409,173	37,689,319	365,813	13,464,525	57,761,042
		2017	157,461,775	119,318,206	38,143,570	352,151	11,515,752	58,205,402
		2015	134,817,140	100,466,003	34,351,137	332,058	10,018,334	53,625,217
Pembuatan kaca dan produk kaca <i>Manufacture of glass and glass products</i>	231	2021	4,373,309	3,134,252	1,239,057	19,280	788,992	3,279,266
		2017	6,164,548	4,623,483	1,541,065	17,793	575,446	3,010,636
		2015	5,063,338	3,619,051	1,444,287	15,014	525,224	3,026,068
Pembuatan pengeluaran galian bukan logam t.t.t.l. <i>Manufacture of non-metallic mineral products n.e.c.</i>	239	2021	31,068,932	22,266,406	8,802,526	74,648	3,363,341	12,009,990
		2017	36,035,125	26,030,726	10,004,399	77,589	2,656,144	13,772,663
		2015	35,240,604	25,463,521	9,777,083	83,663	2,670,817	13,347,525
Pembuatan besi dan keluli asas <i>Manufacture of basic iron and steel</i>	241	2021	37,272,895	31,109,601	6,163,294	51,838	2,200,389	21,376,187
		2017	30,936,966	25,288,254	5,648,712	46,679	1,776,436	18,601,708
		2015	25,633,501	20,093,379	5,540,122	49,895	1,726,863	16,431,218
Pembuatan logam asas berharga dan logam bukan ferus lain <i>Manufacture of basic precious and other non-ferrous metals</i>	242	2021	29,027,399	24,227,547	4,799,852	28,853	1,029,603	8,892,179
		2017	20,569,471	17,107,941	3,461,530	29,853	986,876	8,576,504
		2015	14,213,998	11,540,929	2,673,069	33,824	1,069,554	7,554,355
Penuangan logam <i>Casting of metals</i>	243	2021	2,841,060	2,371,274	469,786	17,396	501,127	1,187,480
		2017	2,867,396	2,108,099	759,298	16,030	449,515	1,141,135
		2015	2,245,223	1,610,145	635,079	13,556	361,560	1,117,614
Pembuatan produk struktur logam, tangki, takungan dan penjana wap; Pembuatan senjata dan peluru <i>Manufacture of structural metal products, tanks, reservoirs and steam generators;</i> <i>Manufacture of weapons and ammunition</i>	251 252	2021	20,448,016	14,876,783	5,571,233	67,356	1,858,470	3,558,848
		2017	20,582,556	14,754,825	5,827,731	58,533	1,606,455	4,135,893
		2015	18,797,483	13,571,480	5,226,003	50,645	1,259,803	3,524,193
Pembuatan produk lain yang direka daripada logam; aktiviti perkhidmatan kerja logam <i>Manufacture of other fabricated metal products; metal working service activities</i>	259	2021	39,066,881	28,423,310	10,643,571	106,442	3,722,602	7,457,092
		2017	40,537,172	29,592,655	10,944,517	106,171	3,480,362	8,981,299
		2015	33,622,993	24,567,498	9,055,495	85,461	2,404,513	8,624,245

Jadual 1.7 - Statistik utama subsektor Produk elektrik, elektronik dan optikal mengikut kumpulan, 2015, 2017 dan 2021
Table 1.7 - Principal statistics of Electrical, electronic and optical products sub-sector by group, 2015, 2017 and 2021

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
Sub-sector	Group	Year	Value of gross output	Value of intermediate input	Value added	Total number of persons engaged	Salaries & wages paid	Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total		2021	471,945,521	375,360,485	96,585,037	573,675	27,636,674	73,761,114
		2017	361,774,101	283,154,215	78,619,885	556,149	21,645,198	66,675,748
		2015	258,056,531	205,785,339	52,271,192	355,800	13,563,806	42,959,055
Pembuatan komponen dan papan elektronik <i>Manufacture of electronic components and boards</i>	261	2021	269,868,309	217,059,604	52,808,704	214,547	12,702,893	39,852,300
		2017	181,244,146	145,158,102	36,086,044	207,191	8,938,262	36,251,337
		2015	146,046,376	117,109,522	28,936,854	194,101	7,664,979	29,894,869
Pembuatan komputer dan kelengkapan peranti <i>Manufacture of computers and peripheral equipment</i>	262	2021	35,682,335	28,698,888	6,983,447	50,445	2,485,375	5,225,167
		2017	30,989,982	24,281,907	6,708,075	50,269	2,035,758	4,607,731
		2015	36,358,401	29,520,841	6,837,560	61,624	2,179,575	4,249,613
Pembuatan peralatan komunikasi <i>Manufacture of communication equipment</i>	263	2021	13,507,621	10,864,406	2,643,215	18,412	613,686	1,905,927
		2017	15,346,750	11,863,027	3,483,722	19,222	751,458	1,115,881
		2015	14,856,650	11,434,069	3,422,581	23,676	851,874	1,650,176
Pembuatan peralatan elektronik pengguna <i>Manufacture of consumer electronics</i>	264	2021	40,271,211	32,390,810	7,880,401	42,306	1,464,669	1,689,206
		2017	49,219,129	39,347,256	9,871,873	38,998	1,374,509	2,110,619
		2015	47,581,261	38,425,799	9,155,463	31,868	1,138,817	1,884,703
Pembuatan kelengkapan mengukur, menguji, memandu arah dan kawalan; jam tangan dan jam <i>Manufacture of measuring, testing, navigating and control equipment; watches and clocks</i>	265	2021	16,466,856	13,244,568	3,222,288	28,066	1,859,835	5,716,694
		2017	8,005,588	5,354,752	2,650,837	26,578	1,262,429	5,054,058
		2015	7,568,247	5,495,908	2,072,340	25,879	1,057,508	2,847,151
Pembuatan peralatan penyinaran, perubahan elektro dan elektroterapeutik <i>Manufacture of irradiation, electromedical and electrotherapeutic equipment</i>	266	2021	7,983,709	6,421,431	1,562,278	5,261	381,814	810,989
		2017	4,681,898	3,023,870	1,658,027	5,199	299,561	929,984
		2015	4,292,196	2,779,728	1,512,468	13,214	495,974	2,106,217
Pembuatan instrumen optikal dan kelengkapan fotografi <i>Manufacture of optical instruments and photographic equipment</i>	267	2021	1,506,112	1,211,391	294,721	5,729	261,769	1,105,150
		2017	1,448,681	966,138	482,542	6,839	197,539	486,250
		2015	1,353,399	1,019,471	333,928	5,438	175,079	326,325

Jadual 1.7 - Statistik utama subsektor Produk elektrik, elektronik dan optikal mengikut kumpulan, 2015, 2017 dan 2021 (samb.)
Table 1.7 - Principal statistics of Electrical, electronic and optical products sub-sector by group, 2015, 2017 and 2021 (cont'd)

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
Sub-sector	Group	Year	Value of gross output	Value of intermediate input	Value added	Total number of persons engaged	Salaries & wages paid	Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Pembuatan media magnetik dan optikal <i>Manufacture of magnetic and optical media</i>	268	2021	64,421	51,815	12,606	106	1,742	18,944
		2017	61,318	34,865	26,453	186	5,302	18,972
		2015	54,415	29,247	25,167	496	14,862	22,475
Pembuatan motor elektrik, penjana, transformer dan perkakasan pengagihan dan pengawalan elektrik <i>Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus</i>	271	2021	12,646,236	9,711,959	2,934,277	42,834	1,523,893	2,544,407
		2017	8,979,241	6,461,351	2,517,891	37,073	1,169,629	2,234,962
		2015	8,893,502	6,460,176	2,433,326	33,337	905,353	1,953,802
Pembuatan bateri dan akumulator <i>Manufacture of batteries and accumulators</i>	272	2021	5,992,545	4,602,108	1,390,437	5,504	219,969	2,527,569
		2017	5,545,060	4,658,703	886,357	6,512	224,450	1,771,089
		2015	3,237,921	2,571,969	665,952	4,639	159,104	1,699,686
Pembuatan pendawaian dan peranti pendawaian <i>Manufacture of wiring and wiring devices</i>	273	2021	11,260,391	8,647,668	2,612,723	24,194	871,984	1,661,550
		2017	12,886,976	10,819,982	2,066,994	23,232	740,438	1,745,065
		2015	10,753,182	8,856,800	1,896,382	20,720	729,393	1,769,227
Pembuatan kelengkapan pencahayaan elektrik <i>Manufacture of electric lighting equipment</i>	274	2021	1,276,731	980,494	296,237	3,897	133,960	246,257
		2017	797,601	557,283	240,318	4,317	136,191	227,538
		2015	867,135	626,449	240,686	4,085	109,114	223,968
Pembuatan perkakasan domestik <i>Manufacture of domestic appliances</i>	275	2021	11,502,810	8,833,839	2,668,971	14,830	476,873	1,082,895
		2017	7,440,656	5,582,735	1,857,920	17,056	515,928	1,387,182
		2015	7,274,744	5,495,642	1,779,101	15,081	530,355	3,096,631
Pembuatan kelengkapan elektrik lain <i>Manufacture of other electrical equipment</i>	279	2021	6,898,826	5,298,107	1,600,719	11,082	351,114	1,137,965
		2017	4,524,277	3,015,035	1,509,242	9,798	306,951	1,108,084
		2015	4,365,336	3,102,652	1,262,684	8,354	223,585	1,040,381
Pembuatan jentera kegunaan umum <i>Manufacture of general-purpose machinery</i>	281	2021	23,926,367	17,673,525	6,252,842	57,071	2,422,375	4,072,985
		2017	19,556,082	14,189,072	5,367,010	55,349	1,954,382	3,738,942
		2015	17,269,986	12,481,068	4,788,917	44,016	1,429,936	3,323,984
Pembuatan jentera kegunaan khas <i>Manufacture of special-purpose machinery</i>	282	2021	13,091,041	9,669,869	3,421,172	49,391	1,864,722	4,163,108
		2017	10,815,257	7,652,361	3,162,896	47,833	1,716,929	3,873,619
		2015	11,004,489	7,715,742	3,288,747	41,970	1,431,617	3,290,660

Jadual 1.8 - Statistik utama subsektor Peralatan pengangkutan, pembuatan lain dan pembaikan mengikut kumpulan, 2015, 2017 dan 2021
Table 1.8 - Principal statistics of Transport equipment, other manufacturing and repair sub-sector by group, 2015, 2017 and 2021

Subsektor Sub-sector	Kod kumpulan Group	Tahun Year	Nilai output kasar Value of gross output	Nilai input perantara Value of intermediate input	Nilai ditambah Value added	Jumlah pekerja Total number of persons engaged	Gaji & upah dibayar Salaries & wages paid	Nilai harta tetap Value of fixed assets
Jumlah Total		2021 2017 2015	98,825,059 100,495,497 91,954,797	71,808,968 74,685,437 69,821,772	27,016,090 25,810,060 22,133,025	219,044 214,127 207,959	8,149,373 7,494,229 6,789,129	25,350,314 22,729,932 21,719,254
Pembuatan kenderaan bermotor <i>Manufacture of motor vehicles</i>	291	2021 2017 2015	33,018,097 34,910,467 31,809,974	24,348,669 27,164,605 25,562,674	8,669,428 7,745,862 6,247,299	33,334 30,655 28,585	1,427,204 1,254,057 1,372,292	7,488,411 6,724,779 5,735,150
Pembuatan kerangka (coachwork) untuk kenderaan bermotor; pembuatan treler dan semi treler <i>Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers</i>	292	2021 2017 2015	2,529,465 1,444,690 1,306,834	1,857,231 1,083,781 954,795	672,234 360,909 352,039	3,001 4,333 4,654	158,055 150,324 128,347	370,023 371,666 417,899
Pembuatan alat ganti dan aksesori untuk kenderaan bermotor <i>Manufacture of parts and accessories for motor vehicles</i>	293	2021 2017 2015	25,062,338 23,247,887 21,338,984	18,401,737 16,759,469 15,994,535	6,660,602 6,488,419 5,344,449	45,671 46,435 49,677	1,928,008 1,764,242 1,694,480	4,745,497 4,474,000 4,507,061
Pembinaan kapal dan bot <i>Building of ships and boats</i>	301	2021 2017 2015	7,570,826 8,177,875 7,827,106	5,807,419 6,469,005 6,135,211	1,763,406 1,708,870 1,691,895	12,986 12,343 13,178	460,903 432,133 338,331	4,372,226 3,942,064 3,793,714
Pembuatan lokomotif keretapi dan rolling stock; Pembuatan kapal angkasa dan udara dan jentera berkaitan <i>Manufacture of railway locomotives and rolling stock; Manufacture of air and spacecraft and related machinery</i>	302 303	2021 2017 2015	4,692,627 4,446,107 4,259,464	3,657,879 3,164,462 3,075,051	1,034,748 1,281,645 1,184,413	11,214 9,788 11,805	409,605 403,653 411,506	1,956,728 1,509,480 1,289,133
Pembuatan kenderaan tempur ketenteraan; Pembuatan kelengkapan pengangkutan t.t.t.l. <i>Manufacture of military fighting vehicles; Manufacture of transport equipment n.e.c.</i>	304 309	2021 2017 2015	6,131,041 8,342,598 7,195,135	4,779,115 6,393,562 5,588,656	1,351,925 1,949,036 1,606,479	10,896 12,516 18,345	360,331 409,966 619,994	1,374,151 1,148,883 1,241,938
Pembuatan barang kemas, bijouterie dan artikel berkaitan <i>Manufacture of jewellery, bijouterie and related articles</i>	321	2021 2017 2015	3,285,081 4,020,142 3,819,431	2,369,659 3,196,147 3,006,963	915,422 823,995 812,468	5,911 6,060 5,894	195,785 197,686 192,150	414,859 330,884 424,142

Jadual 1.8 - Statistik utama subsektor Peralatan pengangkutan, pembuatan lain dan pembaikan mengikut kumpulan, 2015, 2017 dan 2021 (samb.)
Table 1.8 - Principal statistics of Transport equipment, other manufacturing and repair sub-sector by group, 2015, 2017 and 2021 (cont'd)

Subsektor	Kod kumpulan	Tahun	Nilai output kasar	Nilai input perantaraan	Nilai ditambah	Jumlah pekerja	Gaji & upah dibayar	Nilai harta tetap
Sub-sector	Group	Year	Value of gross output	Value of intermedate input	Value added	Total number of persons engaged	Salaries & wages paid	Value of fixed assets
			(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Pembuatan instrumen muzik	322	2021	3,953	2,852	1,102	64	1,069	228
<i>Manufacture of musical instruments</i>		2017	3,638	2,895	742	67	1,073	233
		2015	3,345	2,723	622	37	616	212
Pembuatan barangan sukan	323	2021	197,696	142,458	55,239	1,837	76,439	65,198
<i>Manufacture of sports goods</i>		2017	189,971	115,033	74,938	1,673	47,363	82,848
		2015	191,029	119,882	71,147	1,714	36,958	73,178
Pembuatan permainan dan mainan	324	2021	417,992	301,514	116,478	4,293	135,112	184,077
<i>Manufacture of games and toys</i>		2017	692,570	412,061	280,509	5,469	143,277	190,103
		2015	665,702	399,663	266,039	6,283	131,608	195,230
Pembuatan bekalan dan instrumen pergigian dan perubatan	325	2021	1,772,146	1,078,319	693,827	7,458	317,686	442,882
<i>Manufacture of medical and dental instruments and supplies</i>		2017	1,337,271	824,956	512,315	6,702	203,657	352,565
		2015	1,315,369	816,472	498,897	6,550	162,384	482,855
Pembuatan lain t.t.t.l.	329	2021	3,442,714	2,113,347	1,329,367	24,226	764,885	1,965,393
<i>Other manufacturing n.e.c.</i>		2017	3,429,272	2,169,576	1,259,695	22,149	617,927	1,440,323
		2015	3,459,074	2,306,828	1,152,246	17,435	445,232	1,447,502
Pembaikan pemasangan produk logam, jentera dan kelengkapan	331	2021	9,482,648	6,221,230	3,261,417	51,549	1,683,128	1,621,294
<i>Repair of fabricated metal products, machinery and equipment</i>		2017	8,934,201	6,021,194	2,913,007	50,460	1,678,013	1,919,899
		2015	7,707,315	5,091,758	2,615,558	38,975	1,133,852	1,784,550
Pemasangan jentera perindustrian dan kelengkapan	332	2021	1,218,435	727,540	490,895	6,604	231,165	349,348
<i>Installation of industrial machinery and equipment</i>		2017	1,318,810	908,692	410,118	5,477	190,860	242,205
		2015	1,056,036	766,561	289,475	4,827	121,379	326,689

Jadual 2 - Statistik utama sektor Pembuatan mengikut negeri, 2021
Table 2 - Principal statistics of Manufacturing sector by state, 2021

Negeri	Nilai output kasar	Nilai input perantara	Nilai ditambah	Jumlah pekerja	Gaji & upah 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 & wages paid</i>	<i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total	1,609,319,953	1,254,200,408	355,119,544	2,303,494	89,509,883	375,767,246
Johor	256,664,456	206,187,312	50,477,144	452,311	15,664,463	66,146,985
Kedah	82,821,595	66,385,028	16,436,567	119,745	4,358,437	19,447,625
Kelantan	5,114,821	4,046,814	1,068,008	21,563	447,253	1,426,522
Melaka	95,073,914	80,742,329	14,331,585	91,571	4,089,395	24,927,760
Negeri Sembilan	100,500,122	85,137,550	15,362,572	83,920	3,662,592	17,197,260
Pahang	59,263,657	48,706,654	10,557,003	49,856	1,953,726	17,968,150
Pulau Pinang	238,111,882	188,166,967	49,944,915	308,981	15,270,583	42,977,893
Perak	71,816,318	55,743,825	16,072,493	148,006	4,793,263	19,519,506
Perlis	3,530,322	2,677,965	852,357	6,442	182,825	868,441
Selangor	432,682,447	331,154,989	101,527,459	720,600	28,453,898	79,624,463
Terengganu	42,993,440	30,418,856	12,574,584	24,729	1,470,027	23,812,448
Sabah	40,556,117	33,420,549	7,135,567	70,222	1,624,617	10,675,558
Sarawak	152,057,343	101,928,373	50,128,970	106,286	3,657,502	40,375,848
W.P. Kuala Lumpur	25,122,780	17,737,836	7,384,944	96,180	3,717,862	6,395,559
W.P. Labuan	3,008,442	1,743,900	1,264,543	3,023	162,434	4,402,808
W.P. Putrajaya	2,296	1,462	834	59	1,006	419

Jadual 2.1 - Statistik utama subsektor Produk makanan, minuman dan produk tembakau mengikut negeri, 2021
Table 2.1 - Principal statistics of Food products, beverages and tobacco products sub-sector by state, 2021

Negeri <i>State</i>	Nilai output kasar <i>Value of gross output</i>	Nilai input perantara <i>Value of intermediate input</i>	Nilai ditambah <i>Value added</i>	Jumlah pekerja <i>Total number of persons engaged</i>	Gaji & upah dibayar <i>Salaries & wages paid</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total	269,102,163	224,153,771	44,948,392	300,258	10,064,518	53,849,941
Johor	58,375,206	49,889,840	8,485,366	59,943	2,086,188	13,484,091
Kedah	6,213,787	5,175,775	1,038,012	10,172	297,192	1,277,333
Kelantan	1,128,089	928,515	199,574	4,391	73,731	195,521
Melaka	4,326,899	3,608,346	718,553	10,625	309,431	1,053,931
Negeri Sembilan	8,975,553	6,123,108	2,852,445	9,271	421,426	2,388,335
Pahang	12,508,957	10,878,387	1,630,570	10,424	296,740	2,673,612
Pulau Pinang	14,457,177	11,534,694	2,922,484	21,862	667,524	2,793,283
Perak	17,698,493	14,638,473	3,060,020	22,037	668,417	3,523,019
Perlis	1,241,569	962,261	279,308	1,766	47,486	435,869
Selangor	75,017,733	62,288,181	12,729,552	78,084	3,088,081	13,177,656
Terengganu	1,337,125	1,108,106	229,019	3,326	59,860	277,747
Sabah	33,500,968	28,294,453	5,206,516	28,273	680,079	6,592,046
Sarawak	27,084,958	23,475,363	3,609,595	19,717	585,917	4,556,509
W.P. Kuala Lumpur						
W.P. Labuan	7,235,648	5,248,270	1,987,378	20,367	782,447	1,420,991
W.P. Putrajaya						

Jadual 2.2 - Statistik utama subsektor Produk petroleum, kimia, getah dan plastik mengikut negeri, 2021
Table 2.2 - Principal statistics of Petroleum, chemical, rubber and plastic products sub-sector by state, 2021

Negeri <i>State</i>	Nilai output kasar <i>Value of gross output</i>	Nilai input perantara <i>Value of intermediate input</i>	Nilai ditambah <i>Value added</i>	Jumlah pekerja <i>Total number of persons engaged</i>	Gaji & upah dibayar <i>Salaries & wages paid</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total	508,890,329	387,134,724	121,755,605	441,962	19,486,935	133,460,430
Johor	66,676,001	54,138,139	12,537,863	93,282	3,284,961	21,508,168
Kedah	11,532,237	8,834,026	2,698,212	26,391	966,501	3,871,975
Kelantan	1,305,497	1,003,306	302,190	3,980	91,274	464,701
Melaka	46,972,051	42,796,545	4,175,506	14,800	1,024,486	12,594,084
Negeri Sembilan	59,718,053	54,605,998	5,112,055	18,764	973,419	4,216,674
Pahang	32,939,550	27,151,358	5,788,193	8,914	677,012	10,879,405
Pulau Pinang	23,004,160	18,768,413	4,235,748	35,154	1,745,820	4,889,634
Perak	23,542,269	17,117,975	6,424,294	43,553	1,260,704	7,901,990
Perlis	558,921	375,677	183,244	2,772	78,327	114,023
Selangor	101,895,493	75,404,917	26,490,576	161,818	6,805,747	17,530,083
Terengganu	40,251,075	28,343,263	11,907,812	7,592	1,116,536	23,164,039
Sabah	1,268,391	892,136	376,255	4,905	125,609	464,783
Sarawak	94,384,194	54,559,262	39,824,932	6,080	629,246	19,295,046
W.P. Kuala Lumpur						
W.P. Labuan	4,842,436	3,143,710	1,698,726	13,957	707,293	6,565,825
W.P. Putrajaya						

Jadual 2.3 - Statistik utama subsektor Produk elektrik, elektronik dan optikal mengikut negeri, 2021
Table 2.3- Principal statistics of Electrical, electronic and optical products sub-sector by state, 2021

Negeri <i>State</i>	Nilai output kasar <i>Value of gross output</i>	Nilai input perantara <i>Value of intermediate input</i>	Nilai ditambah <i>Value added</i>	Jumlah pekerja <i>Total number of persons engaged</i>	Gaji & upah dibayar <i>Salaries & wages paid</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total	471,945,521	375,360,485	96,585,037	573,675	27,636,674	73,761,114
Johor	65,166,279	52,894,722	12,271,556	94,351	4,310,047	7,396,639
Kedah	54,041,407	44,723,854	9,317,553	38,092	1,963,288	11,073,671
Kelantan	1,370,224	1,152,269	217,955	2,320	85,471	426,954
Melaka	20,393,240	16,707,929	3,685,311	31,403	1,633,358	6,431,360
Negeri Sembilan	13,531,952	11,213,906	2,318,046	16,670	981,341	3,906,521
Pahang	868,325	680,666	187,659	3,374	129,920	195,123
Pulau Pinang	164,905,026	130,369,803	34,535,223	157,827	9,426,744	26,531,923
Perak	14,119,432	11,732,840	2,386,592	27,798	1,257,683	2,361,834
Perlis	52,277	41,195	11,083	494	8,169	20,625
Selangor	129,683,146	99,971,486	29,711,660	179,078	6,912,086	13,283,134
Terengganu	30,720	23,550	7,170	240	6,136	32,375
Sabah	58,859	43,676	15,183	800	15,007	19,168
Sarawak	5,943,998	4,509,573	1,434,425	10,380	479,977	1,501,960
W.P. Kuala Lumpur						
W.P. Labuan	1,780,636	1,295,016	485,621	10,848	427,446	579,827
W.P. Putrajaya						

Jadual 2.4 - Statistik utama subsektor Pembuatan lain mengikut negeri, 2021
Table 2.4 - Principal statistics of other Manufacturing sub-sector by state, 2021

Negeri State	Nilai output kasar Value of gross output	Nilai input perantara Value of intermediate input	Nilai ditambah Value added	Jumlah pekerja Total number of persons engaged	Gaji & upah dibayar Salaries & wages paid	Nilai harta tetap Value of fixed assets
	(RM'000)	(RM'000)	(RM'000)		(RM'000)	(RM'000)
Jumlah Total	359,381,940	267,551,429	91,830,510	987,599	32,321,756	114,695,761
Johor	66,446,970	49,264,611	17,182,358	204,735	5,983,266	23,758,088
Kedah	11,034,163	7,651,373	3,382,790	45,090	1,131,455	3,224,646
Kelantan	1,311,012	962,723	348,289	10,872	196,777	339,346
Melaka	23,381,724	17,629,509	5,752,215	34,743	1,122,120	4,848,386
Negeri Sembilan	18,274,564	13,194,538	5,080,026	39,215	1,286,406	6,685,730
Pahang	12,946,825	9,996,244	2,950,582	27,144	850,053	4,220,010
Pulau Pinang	35,745,519	27,494,058	8,251,461	94,138	3,430,495	8,763,054
Perak	16,456,124	12,254,538	4,201,587	54,618	1,606,460	5,732,663
Perlis	1,677,555	1,298,833	378,722	1,410	48,843	297,924
Selangor	126,086,075	93,490,405	32,595,670	301,620	11,647,984	35,633,590
Terengganu	1,374,520	943,937	430,583	13,571	287,495	338,287
Sabah	5,727,898	4,190,284	1,537,613	36,244	803,922	3,599,560
Sarawak	24,644,193	19,384,175	5,260,019	70,109	1,962,362	15,022,334
W.P. Kuala Lumpur						
W.P. Labuan	14,274,798	9,796,202	4,478,596	54,090	1,964,116	2,232,143
W.P. Putrajaya						

Jadual 3 - Bilangan pekerja dan gaji & upah dibayar sektor Pembuatan mengikut kategori pekerja, 2021
Table 3 - Number of persons engaged and salaries & wages paid of Manufacturing 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 & wages paid</i> (RM'000)
	Jumlah <i>Total</i>	Lelaki <i>Male</i>	Perempuan <i>Female</i>	
Jumlah <i>Total</i>	2,303,494	1,548,569	754,925	89,509,883
Pemilik yang bekerja, rakan niaga yang aktif dan pekerja keluarga tanpa gaji <i>Working proprietors, active business partners and unpaid family workers</i>	42,007	26,706	15,301	n.a.
Pekerja bergaji (sepenuh masa) <i>Paid employees (full-time)</i>	2,244,860	1,512,315	732,545	89,126,590
Pengurus, profesional dan penyelidik <i>Managers, professionals and researchers</i>	215,420	150,117	65,303	28,124,002
Juruteknik dan profesional bersekutu <i>Technicians and associate professionals</i>	200,240	166,939	33,301	11,497,967
Perkeranian dan pekerjaan yang berkaitan <i>Clerical and related occupations</i>	265,602	115,808	149,794	8,579,116
Operator mesin dan loji dan pemasangan <i>Plant and machine operators and assemblers</i>	1,403,517	964,956	438,561	37,623,499
Pekerja asas <i>Elementary occupations</i>	160,081	114,495	45,586	3,302,006
Pekerja bergaji (sambilan) <i>Paid employees (part-time)</i>	16,627	9,548	7,079	383,293

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

Kategori kemahiran <i>Category of skills</i>	Bilangan pekerja <i>Number of persons engaged</i>			Gaji & upah dibayar <i>Salaries & wages paid</i>
	Jumlah <i>Total</i>	Lelaki <i>Male</i>	Perempuan <i>Female</i>	
Jumlah <i>Total</i>	2,244,860	1,512,315	732,545	89,126,590
Mahir <i>Skilled</i>	415,660	317,056	98,604	39,621,970
Separuh mahir <i>Semi-skilled</i>	1,669,119	1,080,764	588,355	46,202,614
Berkemahiran rendah <i>Low-skilled</i>	160,081	114,495	45,586	3,302,006

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

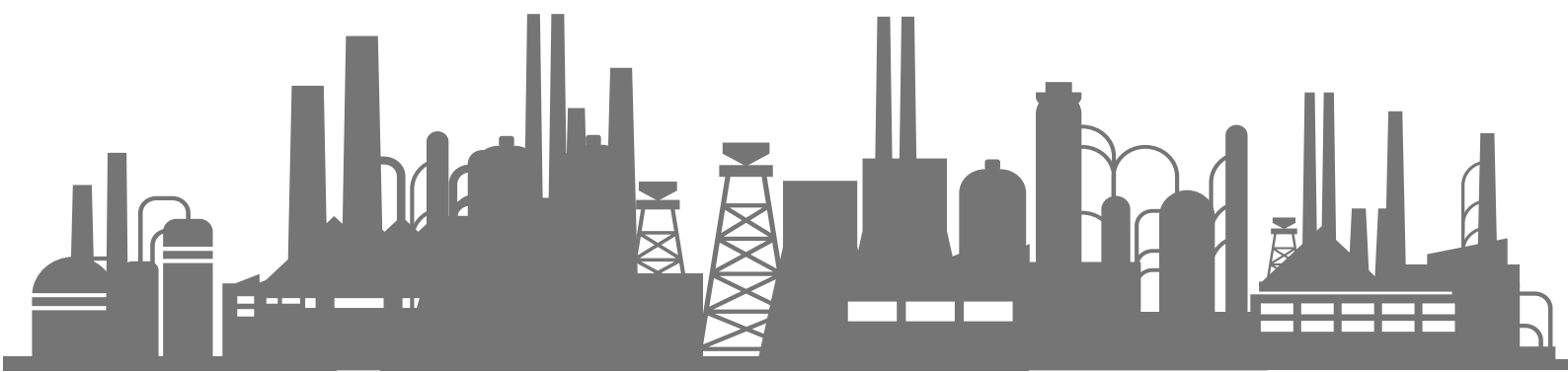
Subsektor <i>Sub-sector</i>	Perbelanjaan modal <i>Capital expenditure</i>	Pelupusan <i>Disposal</i>	Susut nilai <i>Depreciation</i>	Nilai harta tetap <i>Value of fixed assets</i>
	(RM'000)	(RM'000)	(RM'000)	(RM'000)
Jumlah <i>Total</i>	92,442,142	21,458,751	38,962,543	375,767,246
Produk makanan <i>Food products</i>	6,463,908	488,557	4,259,447	50,283,614
Minuman dan produk tembakau <i>Beverages and tobacco products</i>	461,060	46,655	350,924	3,566,327
Produk tekstil, pakaian, kulit dan kasut <i>Textiles, wearing apparel, leather and footwear products</i>	1,131,999	76,559	777,819	5,621,866
Produk kayu, perabot, keluaran kertas dan percetakan <i>Wood products, furniture, paper products and printing</i>	3,160,021	294,248	2,495,536	25,962,539
Produk petroleum, kimia, getah dan plastik <i>Petroleum, chemical, rubber and plastic products</i>	27,214,613	4,685,392	10,917,554	133,460,430
Produk mineral bukan logam, logam asas dan produk logam yang direka <i>Non-metallic mineral products, basic metal and fabricated metal products</i>	9,509,546	2,136,687	6,229,305	57,761,042
Produk elektrik, elektronik dan optikal <i>Electrical, electronic and optical products</i>	39,796,780	12,948,782	11,043,691	73,761,114
Peralatan pengangkutan, pembuatan lain dan pembaikan <i>Transport equipment, other manufacturing and repair</i>	4,704,214	781,872	2,888,266	25,350,314

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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 Pembuatan sebagai aktiviti utamanya. Secara keseluruhan, sektor Pembuatan merangkumi sebanyak 71 industri di peringkat 3-digit mengikut Piawai Klasifikasi Industri Malaysia (MSIC) 2008 Ver. 1.0. Senarai lengkap industri yang diliputi ditunjukkan di Lampiran (**muka surat 63**).

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 Pembuatan yang digunakan dalam survei ini adalah selaras dengan MSIC 2008 Ver. 1.0.
- 4.2 Pembuatan ditakrifkan sebagai:
Perubahan fizikal atau kimia ke atas bahan atau komponen menjadi produk baru sama ada kerja itu dilakukan oleh jentera yang dijalankan oleh kuasa atau yang dijalankan dengan tangan, sama ada dijalankan dalam kilang atau di rumah pekerja, dan sama ada barang keluaran dijual secara borong atau runcit.

Subsektor Pembuatan terdiri daripada 24 Bahagian iaitu:

- 4.2.1. Pembuatan produk makanan;
- 4.2.2. Pembuatan minuman;
- 4.2.3. Pembuatan produk tembakau;
- 4.2.4. Pembuatan tekstil;
- 4.2.5. Pembuatan pakaian;
- 4.2.6. Pembuatan produk kulit dan barangan berkaitan;
- 4.2.7. Pembuatan kayu dan produk kayu dan gabus, kecuali perabot; pembuatan bagi artikel jerami dan bahan-bahan anyaman;
- 4.2.8. Pembuatan kertas dan produk kertas;
- 4.2.9. Percetakan dan penerbitan semula media rakaman;
- 4.2.10. Pembuatan kok dan produk petroleum bertapis;
- 4.2.11. Pembuatan kimia dan produk kimia;
- 4.2.12. Pembuatan produk farmaseutikal asas, kimia perubatan dan botani;
- 4.2.13. Pembuatan produk getah dan plastik;
- 4.2.14. Pembuatan produk galian bukan logam lain;
- 4.2.15. Pembuatan logam asas;
- 4.2.16. Pembuatan produk logam, kecuali mesin dan kelengkapan;
- 4.2.17. Pembuatan komputer, produk elektronik dan optikal;
- 4.2.18. Pembuatan kelengkapan elektrik;
- 4.2.19. Pembuatan jentera dan peralatan t.t.t.l;
- 4.2.20. Pembuatan kenderaan bermotor, treler dan semi treler;
- 4.2.21. Pembuatan kelengkapan pengangkutan lain;
- 4.2.22. Pembuatan perabot;
- 4.2.23. Pembuatan lain; dan
- 4.2.24. Membaiki dan pemasangan jentera dan kelengkapan

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 enam (6) 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 MSIC 3-digit 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 dan yang mempunyai jumlah hasil yang signifikan dalam industri liputan manakala bagi substrata kedua hingga keempat berdasarkan kategori perusahaan mikro, 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;

$$n_{hi} = \text{Saiz sampel bagi substrata } h \text{ dalam strata } i$$

$$N_h = \text{Saiz populasi bagi substrata } h$$

$$S_h = \text{Sisihan piawai bagi substrata } h$$

$$n_i = \text{Saiz sampel bagi strata } i$$

$$h = \text{Substrata}$$

$$i = \text{Strata}$$

Saiz sampel optimum bagi survei ini adalah 12,397 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;

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

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

Wajaran tiada respon pada substrata h adalah seperti berikut :

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

di mana;

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

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

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

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

di mana;

$$W_h = \text{Wajaran reka bentuk pensampelan pada substrata } h$$

$$NRW_h = \text{Wajaran tiada respon pada substrata } h$$

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 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 pembuatan

- + Nilai barang yang dijual dalam keadaan yang sama seperti dibeli
- Kos barang yang dijual dalam keadaan yang sama seperti dibeli
- + Perbelanjaan modal ke atas binaan sendiri
- + Pendapatan daripada perkhidmatan perindustrian yang diberi kepada orang lain
- + Pendapatan daripada kerja perindustrian lain (misalnya, pembinaan, kuari, dll.)
- + Penerimaan bayaran daripada skrap, tenaga elektrik, produk sisa, dll. yang dijual kepada orang lain
- + Penerimaan komisen dan brokeraj
- + Semua nilai output lain (seperti penerimaan perkhidmatan bukan perindustrian, misalnya bayaran pengurusan, sewa harta, dll.)
- + Stok akhir barang siap (pembuatan sendiri)
- Stok awal barang siap (pembuatan sendiri)
- + Stok akhir barang dalam proses
- Stok awal barang dalam proses
- + Perbelanjaan penyelidikan dan pembangunan (dalaman)

13. Nilai Input Perantaraan

Nilai input perantaraan ditakrifkan seperti berikut:

Nilai bahan mentah dan bekalan yang digunakan

- + Kos kerja perindustrian yang dibuat oleh orang lain
- + Kos bahan dan bekas pembungkus yang digunakan
- + Tenaga elektrik dan air yang dibeli
- + Nilai bahan pembakar, pelincir dan gas yang digunakan
- + Kos bahan yang digunakan bagi pembaikan dan penyelenggaraan harta tetap (termasuk pembayaran kepada pihak lain ke atas kerja ini)
- + Pembayaran terhadap perkhidmatan bukan perindustrian (termasuk bayaran bagi pengangkutan keluar barang, perjalanan, pengurusan, perundangan, teknologi maklumat, pengiklanan, bank, pos, telekomunikasi, dll.)
- + Semua kos input lain (termasuk kos latihan dan nilai pakaian percuma yang disediakan kepada pekerja)

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 tanpa 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. Kebiasaannya 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 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 dikompaun

20. Simbol dan Singkatan

Simbol dan singkatan berikut digunakan dalam penerbitan ini:

&	:	dan
%	:	peratus
}	:	digabungkan
dll.	:	dan lain-lain
e.g.	:	sebagai contoh
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 all registered establishments engaged in Manufacturing as main activity. Overall coverage of the survey for Manufacturing sector consists of 71 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 63).

2. Statistical Frame

The statistical frame of this survey is 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 works 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 activity 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 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 Manufacturing used in this survey follows the MSIC 2008 Ver. 1.0.*

4.2 *Manufacturing is defined as:*

The physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand, whether it is done in a factory or in the worker's home, and whether the products are sold at wholesale or retail.

The Manufacturing sub-sector consists of 24 Divisions namely:

- 4.2.1. Manufacture of food products;
- 4.2.2. Manufacture of beverages;
- 4.2.3. Manufacture of tobacco products;
- 4.2.4. Manufacture of textiles;
- 4.2.5. Manufacture of wearing apparel;
- 4.2.6. Manufacture of leather and related products;
- 4.2.7. Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials;
- 4.2.8. Manufacture of paper and paper products;
- 4.2.9. Printing and reproduction of recorded media;
- 4.2.10. Manufacture of coke and refined petroleum products;
- 4.2.11. Manufacture of chemicals and chemical products;
- 4.2.12. Manufacture of basic pharmaceuticals, medicinal chemical and botanical products;
- 4.2.13. Manufacture of rubber and plastics products;
- 4.2.14. Manufacture of other non-metallic mineral products;
- 4.2.15. Manufacture of basic metals;
- 4.2.16. Manufacture of fabricated metal products, except machinery and equipment;
- 4.2.17. Manufacture of computer, electronics and optical products
- 4.2.18. Manufacture of electrical equipment;
- 4.2.19. Manufacture of machinery and equipment n.e.c;
- 4.2.20. Manufacture of motor vehicles, trailers and semi- trailers;
- 4.2.21. Manufacture of other transport equipment;
- 4.2.22. Manufacture of furniture;
- 4.2.23. Other manufacturing; and
- 4.2.24. Repair and installation of machinery and equipment.

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 sector 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 = Standard deviation 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:

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

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

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

where;

$$n_{hi} = \text{Sample size for substratum } h \text{ of stratum } i$$

$$N_h = \text{Population size for substratum } h$$

$$S_h = \text{Standard deviation for substratum } h$$

$$n_i = \text{Sample size for substratum } i$$

$$h = \text{Substratum}$$

$$i = \text{Stratum}$$

The optimum sample size for this survey is 12,397 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;

$$N_h = \text{Total population of substratum } h; \text{ and}$$

$$n_h = \text{Total sample of substratum } h$$

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 response 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 manufacturing products

- + *Value of goods sold in the same condition as purchased*
- *Cost of goods sold in the same condition as purchased*
- + *Capital expenditure on own construction*
- + *Income from industrial services rendered to others*
- + *Income from other industrial work done (e.g. construction, quarry, etc.)*
- + *Receipt from scrap, electricity, waste product, etc. sold to others*
- + *Receipt from commission and brokerage earned*
- + *All other output (such as receipt from non-industrial services, e.g. management fees received, income from rental of property, etc.)*
- + *Closing stocks of finished goods (own manufactured)*
- *Opening stocks of finished goods (own manufactured)*
- + *Closing stocks of goods-in-process*
- *Opening stocks of goods-in-process*
- + *Research and development expenditure (In-house)*

13. Value of Intermediate Input

The value of intermediate input is defined as follow:

Value of raw materials and supplies consumed

- + *Cost of industrial work done by others*
- + *Cost of packing materials and containers consumed*
- + *Electricity and water purchased*
- + *Value of fuel, lubricants and gas consumed*
- + *Cost of materials used for repairs and maintenance of assets (including payments to others for this work)*
- + *Payments for non-industrial services (including payments for carriage outwards of goods, traveling, management fees, information technology, advertising, bank charges, post, telecommunication, etc.)*
- + *All other input costs (including training and value of free wearing apparel provided for workers)*

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 Full-time employees

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 Part-time employees

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 & related trade workers; and Plant & machine operators & assemblers; and

16.3 Low-skilled

Elementary occupations

17. 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:

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

where r ,

$$r = \left[e^{\frac{1}{t} \ln \left(\frac{Y_t}{Y_0} \right)} - 1 \right] \times 100$$

where,

Y_{t1} = Value at current year

Y_{to} = Value at previous year

t = Number of years, $t_t - t_o$

r = Annual growth rate

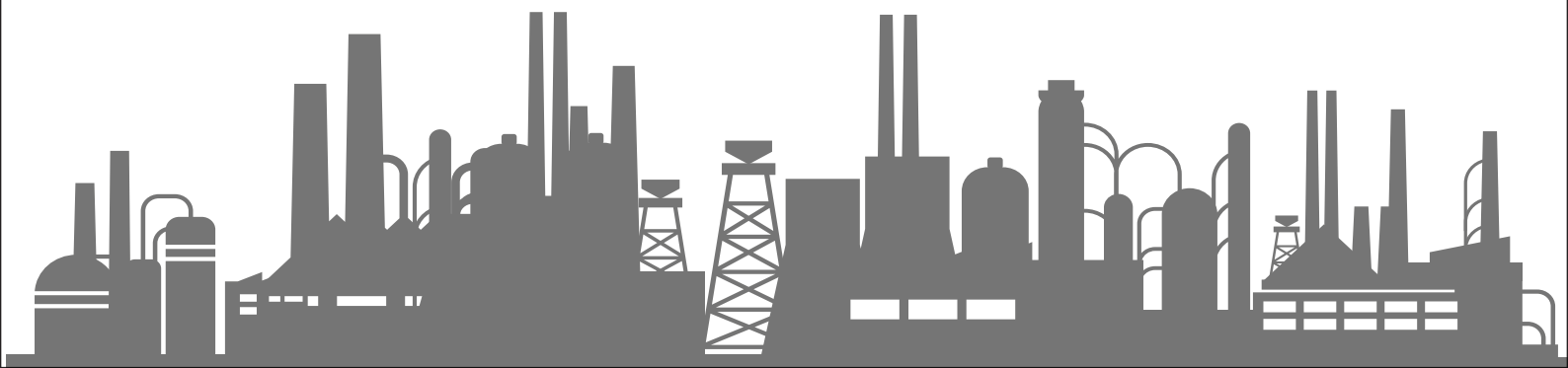
20. Symbols and Abbreviations

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

&	:	and
%	:	per cent
}	:	combine
etc.	:	et cetera
e.g.	:	for example
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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Kumpulan Group	Keterangan Description
101	Pemrosesan dan pengawetan daging <i>Processing and preserving of meat</i>
102	Pemrosesan dan pengawetan ikan, krustasea dan moluska <i>Processing and preserving of fish, crustaceans and molluscs</i>
103	Pemrosesan dan pengawetan buah-buahan dan sayur-sayuran <i>Processing and preserving of fruit and vegetables</i>
104	Pembuatan minyak dan lemak daripada sayuran dan haiwan <i>Manufacture of vegetable and animal oils and fats</i>
105	Pembuatan produk tenusu <i>Manufacture of dairy products</i>
106	Pembuatan produk bijian, kanji dan produk berkanji <i>Manufacture of grain mill products, starches and starch products</i>
107	Pembuatan produk makanan lain <i>Manufacture of other food products</i>
108	Pembuatan makanan haiwan tersedia <i>Manufacture of prepared animal feeds</i>
110	Pembuatan minuman ringan <i>Manufacture of beverages</i>
120	Pembuatan produk tembakau <i>Manufacture of tobacco products</i>
131	Pemintalan, penenunan dan penyiapan tekstil <i>Spinning, weaving and finishing of textiles</i>
139	Pembuatan tekstil lain <i>Manufacture of other textiles</i>
141	Pembuatan pakaian, kecuali pakaian berbulu <i>Manufacture of wearing apparel, except fur apparel</i>
142	Pembuatan artikel daripada kulit bulu <i>Manufacture of articles of fur</i>
143	Pembuatan pakaian yang dikait dan dikrusye <i>Manufacture of knitted and crocheted apparel</i>
151	Penyamakan dan pembersihan kulit, pembuatan begasi, beg tangan, pelana dan abah-abah pembersihan dan pewarnaan bulu <i>Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness; dressing and dyeing of fur</i>

Kumpulan Group	Keterangan <i>Description</i>
152	Pembuatan kasut <i>Manufacture of footwear</i>
161	Pengilangan dan pengetaman kayu <i>Sawmilling and planning of wood</i>
162	Pembuatan produk daripada kayu, gabus, jerami dan bahan jalinan lain <i>Manufacture of products of wood, cork, straw and plaiting materials</i>
170	Pembuatan kertas dan produk kertas <i>Manufacture of paper and paper products</i>
181	Percetakan dan aktiviti perkhidmatan berkaitan percetakan <i>Printing and service activities related to printing</i>
182	Penerbitan semula media rakaman <i>Reproduction of recorded media</i>
191	Pembuatan produk ketuhar kok <i>Manufacture of coke oven products</i>
192	Pembuatan produk petroleum bertapis <i>Manufacture of refined petroleum products</i>
201	Pembuatan kimia asas, baja dan sebatian nitrogen, plastik dan getah sintetik dalambentuk primer <i>Manufacture of basic chemicals, fertilizer and nitrogen compounds, plastic and synthetic rubber in primary forms</i>
202	Pembuatan produk kimia lain <i>Manufacture of other chemical products</i>
203	Pembuatan serat buatan manusia <i>Manufacture of man-made fibres</i>
210	Pembuatan produk farmaseutikal, kimia perubatan dan botani <i>Manufacture of pharmaceuticals, medicinal chemical and botanical products</i>
221	Pembuatan produk getah <i>Manufacture of rubber products</i>
222	Pembuatan produk plastik <i>Manufacture of plastics products</i>
231	Pembuatan kaca dan produk kaca <i>Manufacture of glass and glass products</i>
239	Pembuatan pengeluaran galian bukan logam t.t.t.l. <i>Manufacture of non-metallic mineral products n.e.c.</i>

Kumpulan Group	Keterangan Description
241	Pembuatan besi dan keluli asas <i>Manufacture of basic iron and steel</i>
242	Pembuatan logam asas berharga dan logam bukan ferus lain <i>Manufacture of basic precious and other non-ferrous metals</i>
243	Penuangan logam <i>Casting of metals</i>
251	Pembuatan produk struktur logam, tangki, takungan dan penjana wap <i>Manufacture of structural metal products, tanks, reservoirs and steam generators</i>
252	Pembuatan senjata dan peluru <i>Manufacture of weapons and ammunition</i>
259	Pembuatan produk lain yang direka daripada logam; aktiviti perkhidmatan kerja logam <i>Manufacture of other fabricated metal products; metal working service activities</i>
261	Pembuatan komponen dan papan elektronik <i>Manufacture of electronic components and boards</i>
262	Pembuatan komputer dan kelengkapan peranti <i>Manufacture of computers and peripheral equipment</i>
263	Pembuatan peralatan komunikasi <i>Manufacture of communication equipment</i>
264	Pembuatan peralatan elektronik pengguna <i>Manufacture of consumer electronics</i>
265	Pembuatan kelengkapan mengukur, menguji, memandu arah dan kawalan; jam tangan dan jam <i>Manufacture of measuring, testing, navigating and control equipment; watches and clocks</i>
266	Pembuatan peralatan penyinaran, perubatan elektro dan elektroterapeutik <i>Manufacture of irradiation, electromedical and electrotherapeutic equipment</i>
267	Pembuatan instrumen optikal dan kelengkapan fotografi <i>Manufacture of optical instruments and photographic equipment</i>
268	Pembuatan media magnetik dan optikal <i>Manufacture of magnetic and optical media</i>
271	Pembuatan motor elektrik, penjana, transformer dan perkakasan pengagihan dan pengawalan elektrik <i>Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus</i>
272	Pembuatan bateri dan akumulator <i>Manufacture of batteries and accumulators</i>

Kumpulan Group	Keterangan <i>Description</i>
273	Pembuatan pendawaian dan peranti pendawaian <i>Manufacture of wiring and wiring devices</i>
274	Pembuatan kelengkapan pencahayaan elektrik <i>Manufacture of electric lighting equipment</i>
275	Pembuatan perkakasan domestik <i>Manufacture of domestic appliances</i>
279	Pembuatan kelengkapan elektrik lain <i>Manufacture of other electrical equipment</i>
281	Pembuatan jentera kegunaan umum <i>Manufacture of general-purpose machinery</i>
282	Pembuatan jentera kegunaan khas <i>Manufacture of special-purpose machinery</i>
291	Pembuatan kenderaan bermotor <i>Manufacture of motor vehicles</i>
292	Pembuatan kerangka (coachwork) untuk kenderaan bermotor; pembuatan treler dan semi treler <i>Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers</i>
293	Pembuatan alat ganti dan aksesori untuk kenderaan bermotor <i>Manufacture of parts and accessories for motor vehicles</i>
301	Pembinaan kapal dan bot <i>Building of ships and boats</i>
302	Pembuatan lokomotif keretapi dan rolling stock <i>Manufacture of railway locomotives and rolling stock</i>
303	Pembuatan kapal angkasa dan udara dan jentera berkaitan <i>Manufacture of air and spacecraft and related machinery</i>
304	Pembuatan kenderaan tempur ketenteraan <i>Manufacture of military fighting vehicles</i>
309	Pembuatan kelengkapan pengangkutan t.t.t.l. <i>Manufacture of transport equipment n.e.c.</i>
310	Pembuatan perabot <i>Manufacture of furniture</i>
321	Pembuatan barang kemas, bijouterie dan artikel berkaitan <i>Manufacture of jewellery, bijouterie and related articles</i>

Kumpulan Group	Keterangan <i>Description</i>
322	Pembuatan instrumen muzik <i>Manufacture of musical instruments</i>
323	Pembuatan barangan sukan <i>Manufacture of sports goods</i>
324	Pembuatan permainan dan mainan <i>Manufacture of games and toys</i>
325	Pembuatan bekalan dan instrumen pergigian dan perubatan <i>Manufacture of medical and dental instruments and supplies</i>
329	Pembuatan lain t.t.t.l. <i>Other manufacturing n.e.c.</i>
331	Pembaikan pemasangan produk logam, jentera dan kelengkapan <i>Repair of fabricated metal products, machinery and equipment</i>
332	Pemasangan jentera perindustrian dan kelengkapan <i>Installation of industrial machinery and equipment</i>

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