



KEMENTERIAN EKONOMI
JABATAN PERANGKAAN MALAYSIA

B23 **BANCI EKONOMI** *ECONOMIC CENSUS* **2023**



**PENGUNAAN ICT DAN E-DAGANG
OLEH PERTUBUHAN**

USAGE OF ICT AND E-COMMERCE BY ESTABLISHMENT

JABATAN PERANGKAAN MALAYSIA
DEPARTMENT OF STATISTICS MALAYSIA



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2023

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USAGE OF ICT AND E-COMMERCE BY ESTABLISHMENT

Pemakluman

Jabatan Perangkaan Malaysia (DOSM) telah melancarkan OpenDOSM NextGen sebagai medium yang menyediakan katalog data dan visualisasi bagi memudahkan pengguna menganalisis pelbagai data dan boleh diakses melalui portal <https://open.dosm.gov.my>.

Kerajaan Malaysia telah mengisytiharkan Hari Statistik Negara (MyStats Day) pada 20 Oktober. Tema sambutan MyStats Day adalah "Statistik Nadi Kehidupan". DOSM menyambut ulang tahun ke-75 Jubli Intan pada tahun 2024.

Announcement

The Department of Statistics Malaysia (DOSM) has launched OpenDOSM NextGen as a medium that provides catalogue data and visualisations to facilitate users' analysis and can be accessed through <https://open.dosm.gov.my>.

The Government of Malaysia has declared National Statistics Day (MyStats Day) on October 20th. MyStats Day theme is "Statistics is the Essence of Life". DOSM commemorates its 75th Diamond Jubilee in 2024.

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KATA PENGANTAR

Penerbitan ini memaparkan statistik utama Penggunaan ICT dan E-Dagang oleh Pertubuhan daripada Banci Ekonomi 2023 bagi tahun rujukan 2022 mengikut sektor ekonomi dan negeri. Penggunaan ICT dan E-Dagang oleh Pertubuhan meliputi semua industri dalam sektor ekonomi di Malaysia yang dikelaskan mengikut Piawaian Klasifikasi Industri Malaysia (MSIC) 2008 Ver. 1.0, selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, 2008*. Statistik yang diterbitkan dalam penerbitan ini adalah berdasarkan konsep dan garis panduan daripada *The OECD Model Survey on ICT Usage by Businesses (2nd Revision)*, 2015 yang diterbitkan oleh *Organisation for Economic Co-operation and Development (OECD)*. Banci sebelum ini dijalankan pada tahun 2016 bagi tahun rujukan 2015.

Penerbitan ini mengandungi empat bahagian utama. Bahagian pertama memaparkan sorotan statistik utama bagi keseluruhan statistik Penggunaan ICT dan E-Dagang oleh Pertubuhan diikuti bahagian kedua yang menerangkan ringkasan penemuan. Sementara itu, bahagian ketiga mengandungi jadual statistik terperinci dan bahagian seterusnya adalah berkaitan penerangan aspek teknikal seperti skop dan liputan, konsep dan definisi serta penjelasan berkaitan pembolehubah utama. Statistik Perusahaan Mikro, Kecil dan Sederhana (PMKS) turut dimuatkan dalam penerbitan ini. Statistik ini boleh digunakan oleh agensi kerajaan, ahli ekonomi, ahli akademik, pihak swasta serta individu bagi tujuan membuat perancangan dan penggubalan dasar, analisis ekonomi, unjuran dan dapat membantu merancang pembangunan pertubuhan untuk ICT dan e-dagang.

Jabatan Perangkaan Malaysia (DOSM) merakamkan setinggi-tinggi penghargaan atas kerjasama yang diberikan oleh responden dan juga semua pihak yang telah menyumbang secara langsung dan tidak langsung dalam menjayakan penerbitan ini. Setiap maklum balas dan cadangan untuk penambahbaikan laporan ini pada masa akan datang amat dihargai.

DATO' SRI DR. MOHD UZIR MAHIDIN

Ketua Perangkawan Malaysia

November 2024

PREFACE

This publication presents principal statistics on the Usage of ICT and E-Commerce by Establishment, which is the result of Economic Census 2023 for the reference year 2022 by economic sector and state. The Usage of ICT and E-Commerce by Establishment encompasses all economic sectors in Malaysia classified under the Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0, in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, 2008. The statistics published in this publication are based on concepts and guidelines from The OECD Model Survey on ICT Usage by Businesses (2nd Revision), 2015, published by the Organisation for Economic Co-operation and Development (OECD). The previous census was conducted in 2016 for the reference year of 2015.

This publication consists of four main parts. The first part displays the main highlight of statistics for the overall Usage of ICT and E-Commerce by Establishment, followed by the second part, which contains summaries of findings. Meanwhile, the third part provides detailed statistical tables, while the following part covers technical aspects, including scope and coverage, concepts and definitions, and explanations of key variables. Statistics on Micro, Small and Medium Enterprises (MSMEs) are also included in this publication. These statistics can be used by government agencies, economists, academics, the private sector, and individuals for planning and policy formulation, economic analysis, forecasting, and can assist in business development planning, particularly in the areas of ICT and e-commerce.

The Department of Statistics Malaysia (DOSM) gratefully acknowledges the co-operation of the respondents as well as all parties who have contributed directly and indirectly to make this publication a success. Every feedback and suggestion towards improving future reports is highly appreciated.

DATO' SRI DR. MOHD UZIR MAHIDIN

Chief Statistician Malaysia

November 2024

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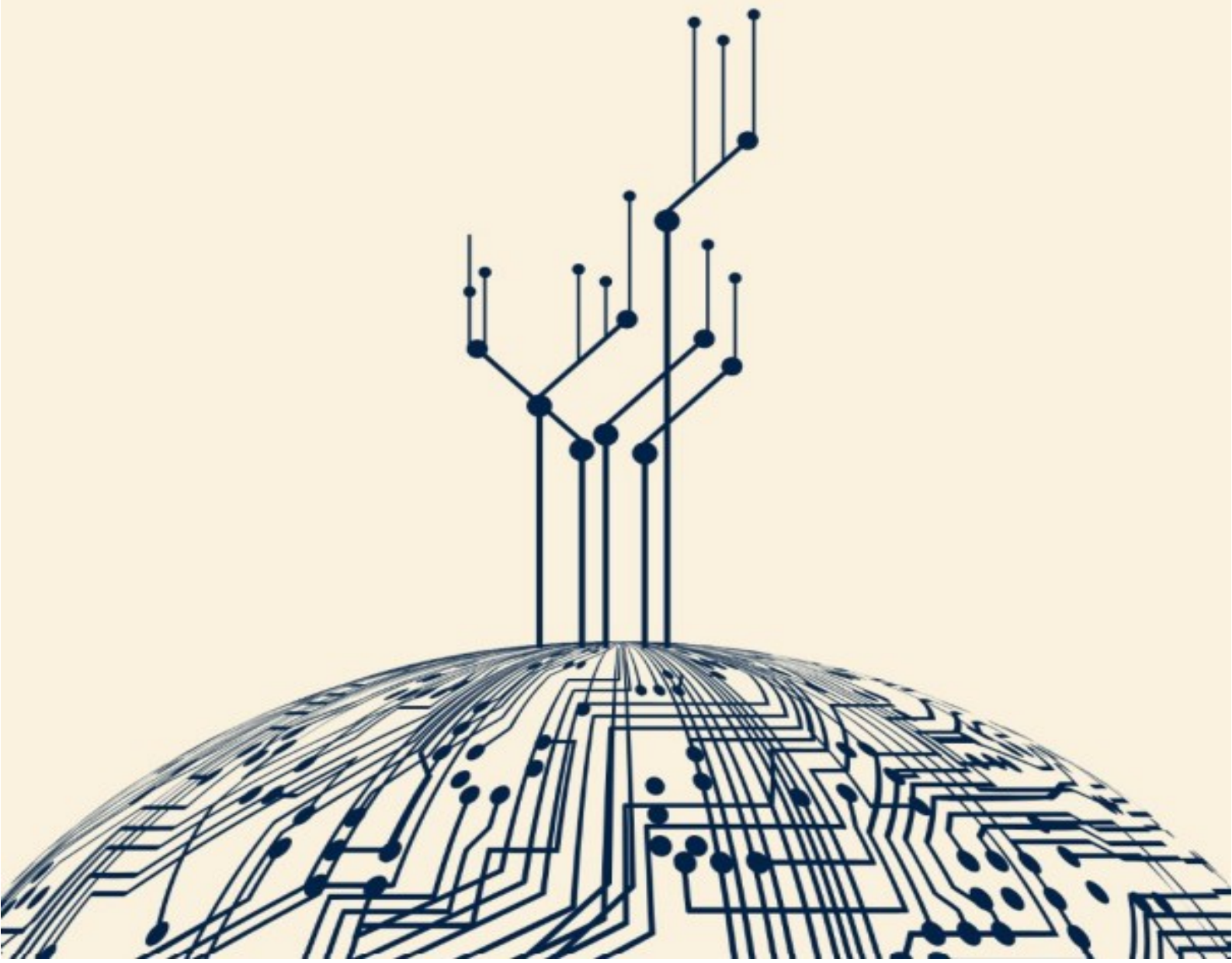
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Main Statistics

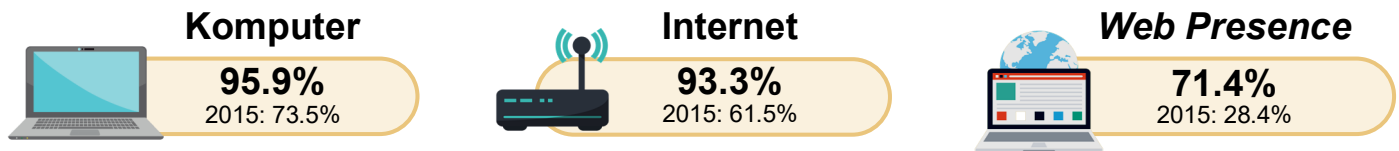


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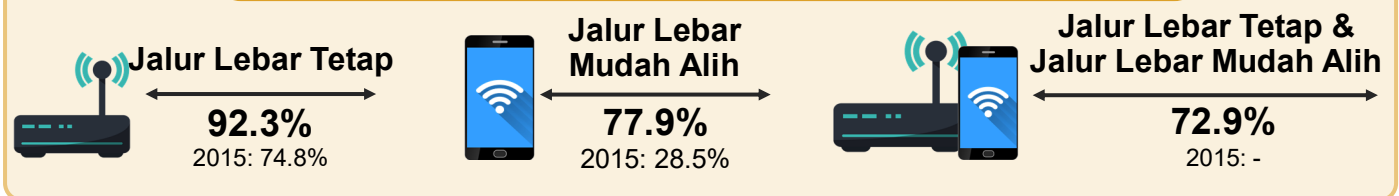
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PENEMUAN UTAMA PENGUNAAN ICT DAN E-DAGANG OLEH PERTUBUHAN 2022

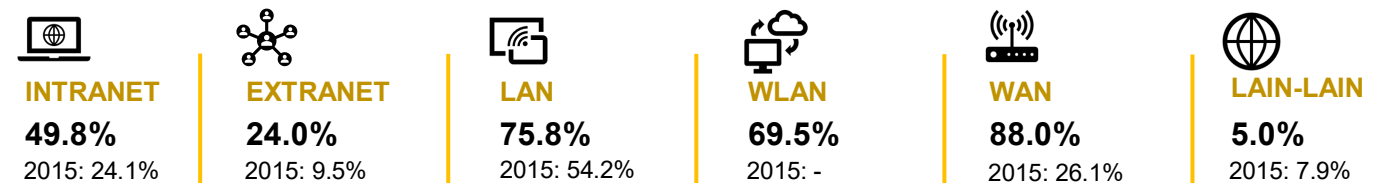
1. PENGUNAAN ICT



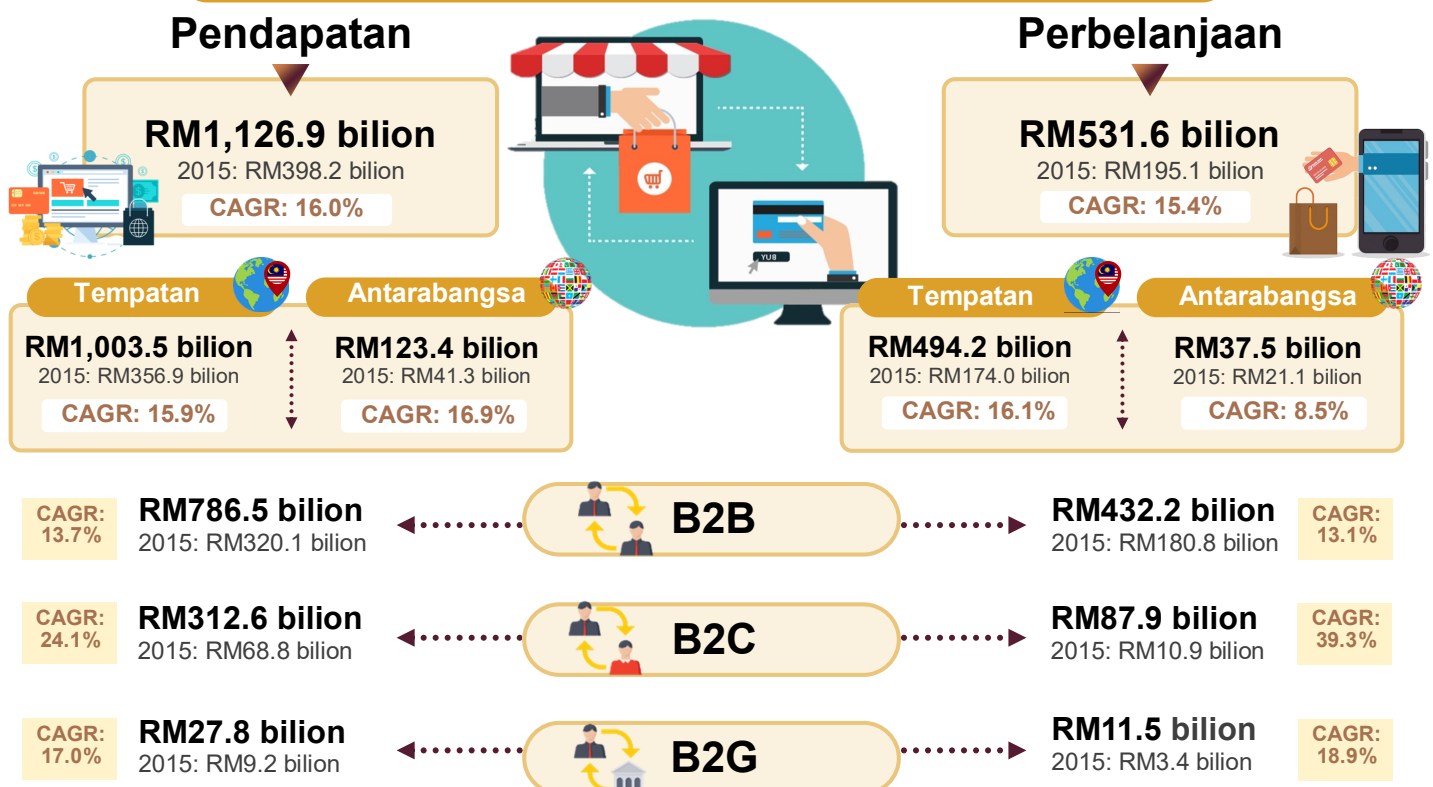
2. JENIS CAPAIAN INTERNET



3. INFRASTRUKTUR RANGKAIAN KOMPUTER



4. PENDAPATAN DAN PERBELANJAAN E-DAGANG



Nota.

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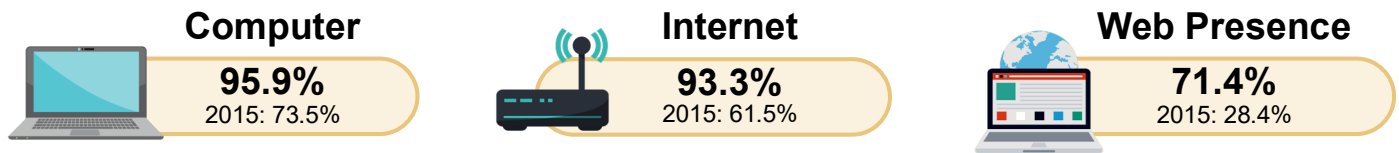
CAGR - kadar pertumbuhan tahunan dikompaun

Sumber: Banci Ekonomi 2023 Penggunaan ICT dan E-Dagang oleh Pertubuhan
Jabatan Perangkaan Malaysia

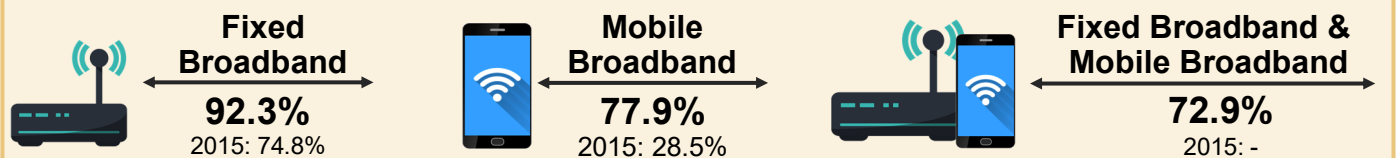
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USAGE OF ICT AND E-COMMERCE BY ESTABLISHMENT 2022

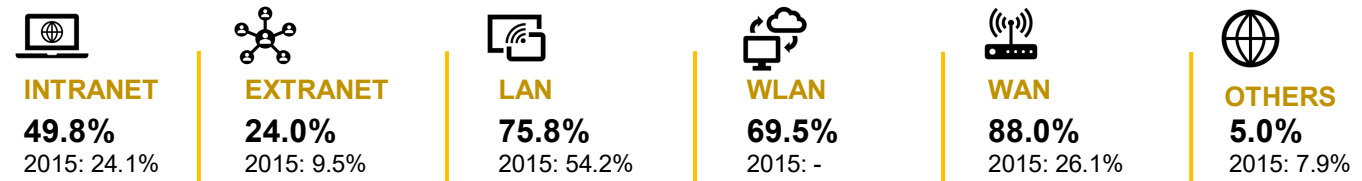
1. USAGE OF ICT



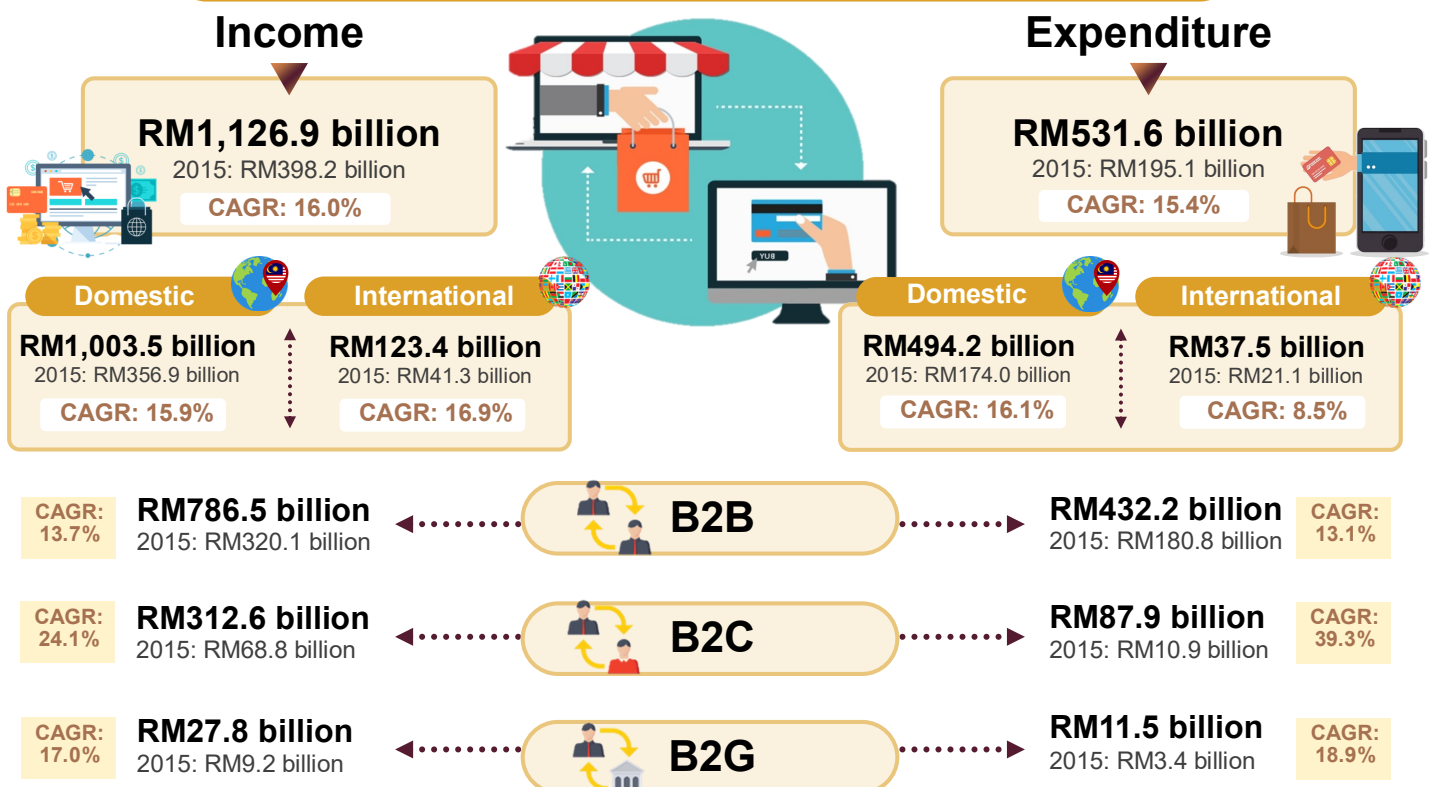
2. TYPES OF INTERNET ACCESS



3. COMPUTER NETWORK INFRASTRUCTURE



4. INCOME AND EXPENDITURE OF E-COMMERCE

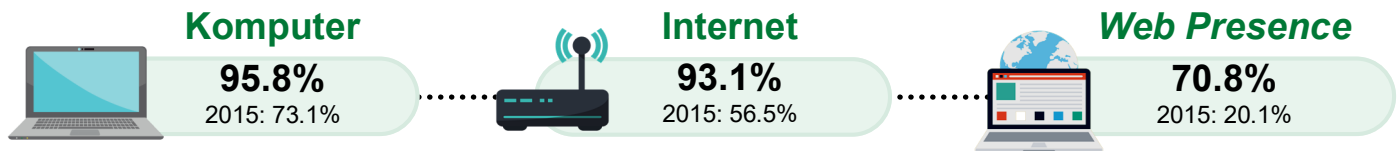




PENGUNAAN ICT DAN E-DAGANG OLEH PERUSAHAAN MIKRO, KECIL DAN SEDERHANA (PMKS) 2022



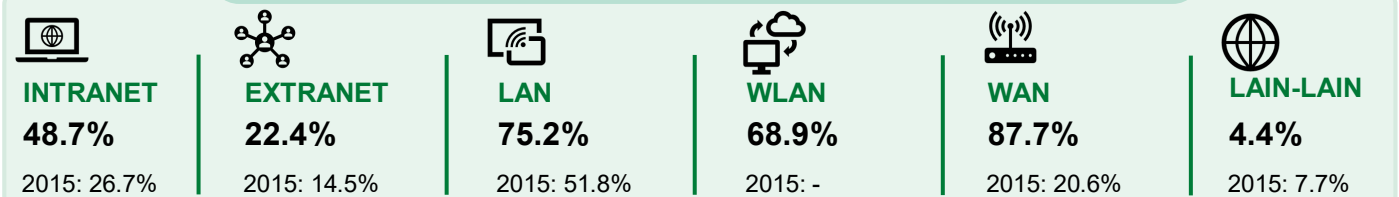
1. PENGUNAAN ICT



2. JENIS CAPAIAN INTERNET



3. INFRASTRUKTUR RANGKAIAN KOMPUTER



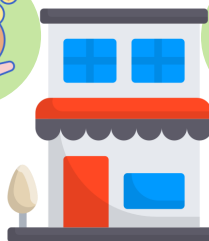
4. PENDAPATAN DAN PERBELANJAAN E-DAGANG

Pendapatan

RM275.3 billion

2015: RM90.2 billion

CAGR: 17.3%



Perbelanjaan

RM110.8 billion

2015: RM33.9 billion

CAGR: 18.5%

Tempatan

RM243.5 billion

2015: RM84.9 billion

CAGR: 16.2%

Antarabangsa

RM31.8 billion

2015: RM5.3 billion

CAGR: 29.3%

Tempatan

RM102.2 billion

2015: RM31.8 billion

CAGR: 18.2%

Antarabangsa

RM8.6 billion

2015: RM2.1 billion

CAGR: 22.3%



B2B

RM135.6 billion

2015: RM68.9 billion

CAGR: 10.2%



B2C

RM127.9 billion

2015: RM17.0 billion

CAGR: 33.4%



B2G

RM11.8 billion

2015: RM4.2 billion

CAGR: 15.9%



B2B

RM80.5 billion

2015: RM31.5 billion

CAGR: 14.3%



B2C

RM28.1 billion

2015: RM1.8 billion

CAGR: 48.2%



B2G

RM2.2 billion

2015: RM0.5 billion

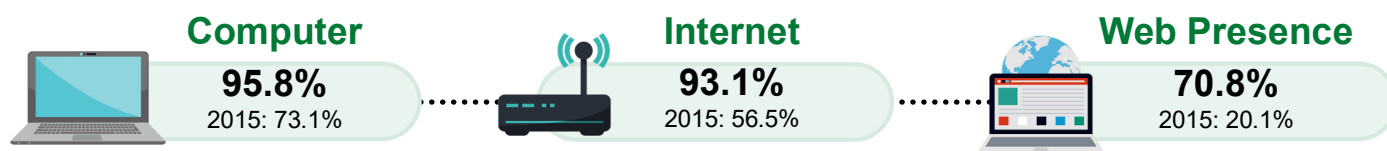
CAGR: 22.6%



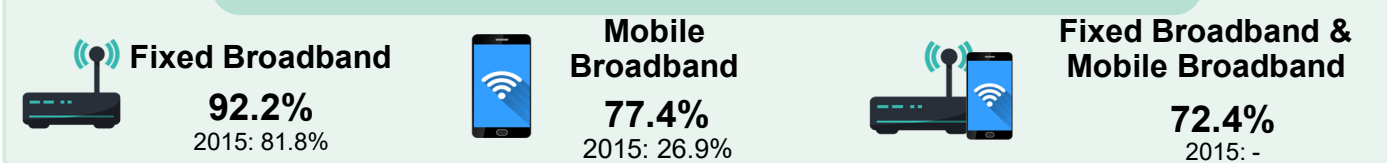
USAGE OF ICT AND E-COMMERCE BY MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs) 2022



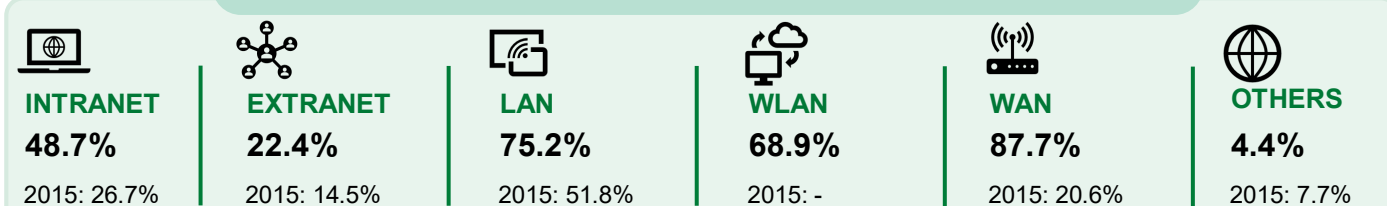
1. USAGE OF ICT



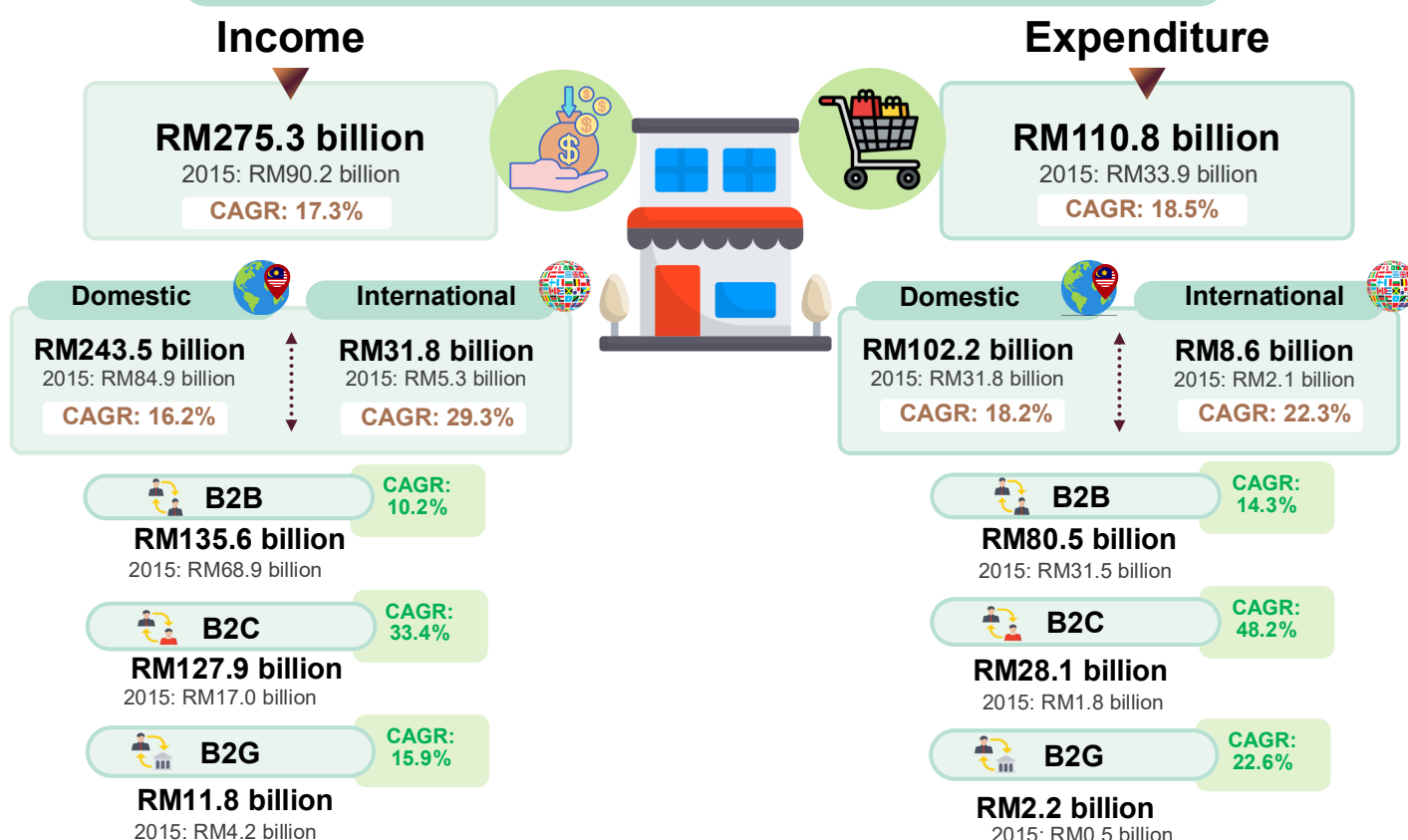
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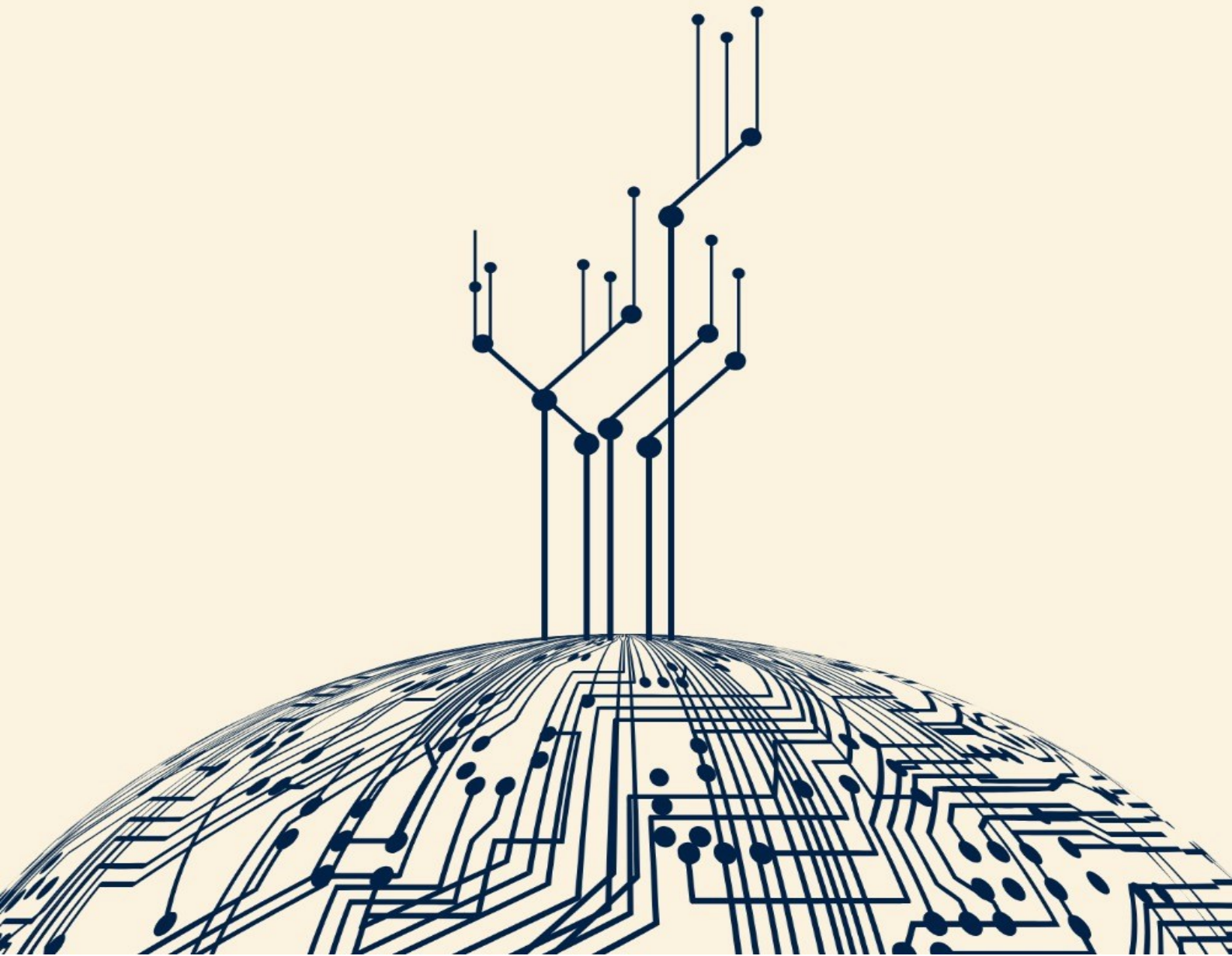
4. INCOME AND EXPENDITURE OF E-COMMERCE



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2

Ringkasan Penemuan
Summary of Findings



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RINGKASAN PENEMUAN

PENGUNAAN ICT DAN E-DAGANG OLEH PERTUBUHAN

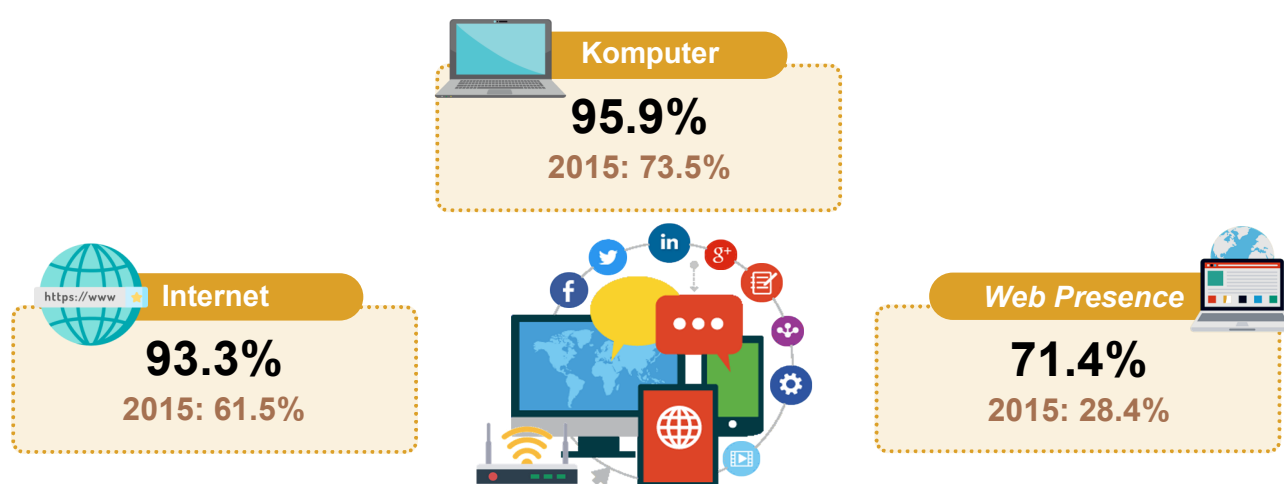
1. PENGENALAN

Penerbitan Penggunaan ICT dan E-Dagang (ICTEC) 2023 membentangkan statistik Penggunaan Teknologi Maklumat dan Komunikasi (ICT) dan E-Dagang di Malaysia yang diperoleh daripada Banci Ekonomi 2023 bagi tahun rujukan 2022. ICTEC 2023 merangkumi lima sektor utama iaitu Pertanian, Perlombongan & pengkuarian, Pembuatan, Pembinaan dan Perkhidmatan.

2. PENGGUNAAN ICT

Penemuan banci menunjukkan sejumlah 1,091,867 pertubuhan beroperasi pada tahun 2022 dengan 95.9 peratus pertubuhan menggunakan komputer (termasuk komputer peribadi, komputer riba dan *tablet*) berbanding 73.5 peratus bagi tahun 2015. Penggunaan internet (menggunakan internet yang boleh diakses melalui komputer dan peranti lain seperti telefon mudah alih lain) dalam pertubuhan meningkat 93.3 peratus (2015: 61.5%). Manakala, pertubuhan yang mempunyai *web presence* pula merekodkan 71.4 peratus (2015: 28.4%) seperti di **Rajah 1**.

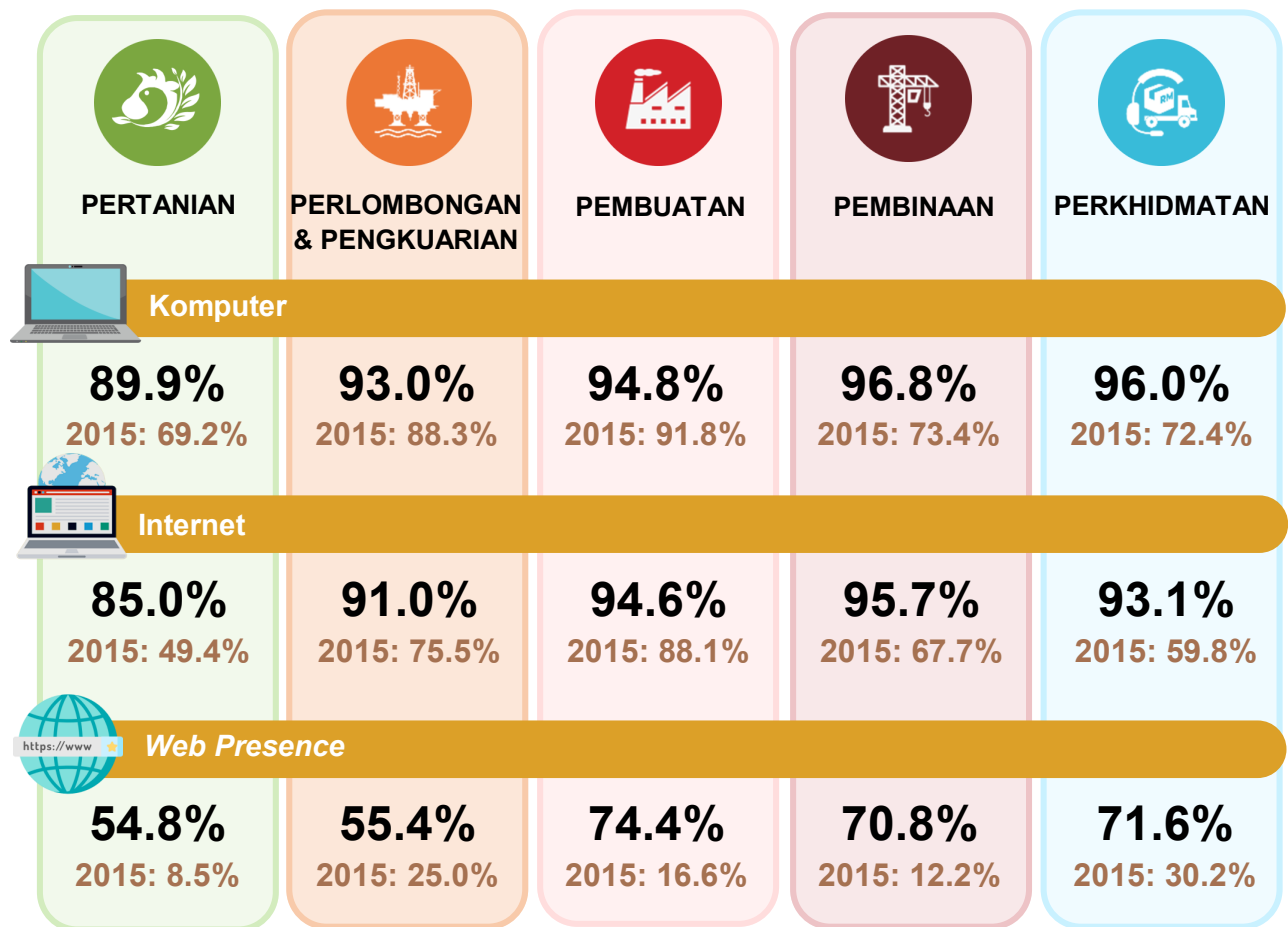
**Rajah 1: Peratus Penggunaan Komputer, Internet dan *Web Presence*,
2015 dan 2022**



2.1 PENGGUNAAN ICT MENGIKUT SEKTOR

Penggunaan komputer, internet dan *web presence* mengikut sektor seperti di **Rajah 2**. Sektor Pembinaan merekodkan peratus tertinggi dalam penggunaan komputer dan internet iaitu masing-masing 96.8 peratus (2015: 73.4%) dan 95.7 peratus (2015: 67.7%), sektor Pembuatan juga merekodkan peratus tertinggi dalam penggunaan *web presence*, 74.4 peratus (2015: 16.6%).

Rajah 2: Peratus Penggunaan Komputer, Internet dan Web Presence mengikut Sektor, 2015 dan 2022



2.2 PENGGUNAAN ICT MENGIKUT NEGERI

W.P. Kuala Lumpur mencatatkan peratus penggunaan komputer, internet dan *web presence* oleh pertubuhan paling tinggi iaitu masing-masing 99.8 peratus, 99.6 peratus dan 91.0 peratus seperti di **Rajah 3**.

Rajah 3: Peratus Penggunaan Komputer, Internet dan *Web Presence* mengikut Negeri, 2022

	 Komputer	 Internet	 Web Presence
 Johor	97.9%	97.6%	79.7%
 Kedah	90.7%	81.8%	55.7%
 Kelantan	93.2%	79.3%	40.5%
 Melaka	97.0%	93.1%	67.7%
 Negeri Sembilan	93.8%	92.9%	60.8%
 Pahang	94.0%	92.6%	58.6%
 Pulau Pinang	99.0%	98.7%	78.9%
 Perak	95.5%	84.9%	58.7%
 Perlis	93.8%	78.4%	56.6%
 Selangor	99.2%	98.9%	85.2%
 Terengganu	92.1%	91.3%	62.1%
 Sabah	88.3%	84.8%	45.6%
 Sarawak	85.6%	82.3%	47.8%
 W.P. Kuala Lumpur	99.8%	99.6%	91.0%
 W.P. Labuan	95.3%	93.3%	64.3%
 W.P. Putrajaya	99.2%	99.2%	88.9%
Supra	100.0%	100.0%	100.0%
 MALAYSIA	95.9%	93.3%	71.4%

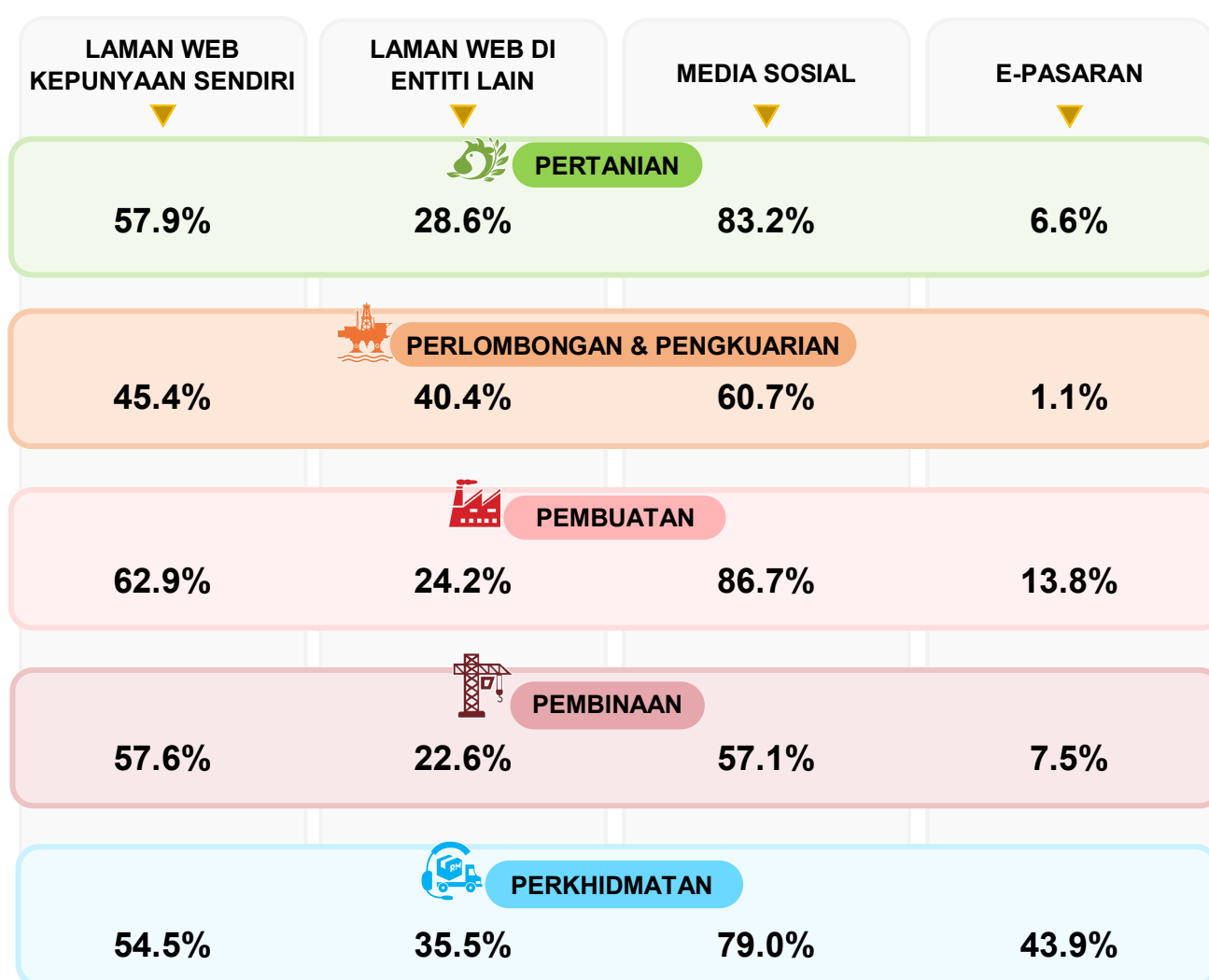
Nota.

Supra - Merangkumi aktiviti pengeluaran yang melangkaui pusat kepentingan ekonomi utama bagi mana-mana negeri

3. JENIS PEMILIKAN *WEB PRESENCE* MENGIKUT SEKTOR

Rajah 4 menunjukkan jenis *web presence* yang dimiliki oleh pertubuhan mengikut sektor. Sektor Pembuatan merekodkan peratus tertinggi dalam dua jenis penggunaan *web presence* iaitu penggunaan media sosial (86.7%) dan laman web kepunyaan sendiri (62.9%). Sementara itu, sektor Perlombongan & pengkuarian mencatatkan peratus tertinggi dalam penggunaan laman web di entiti lain (40.4%) dan sektor Perkhidmatan pula melalui penggunaan e-pasaran (43.9%).

Rajah 4: Jenis Pemilikan *Web Presence* mengikut Sektor, 2022

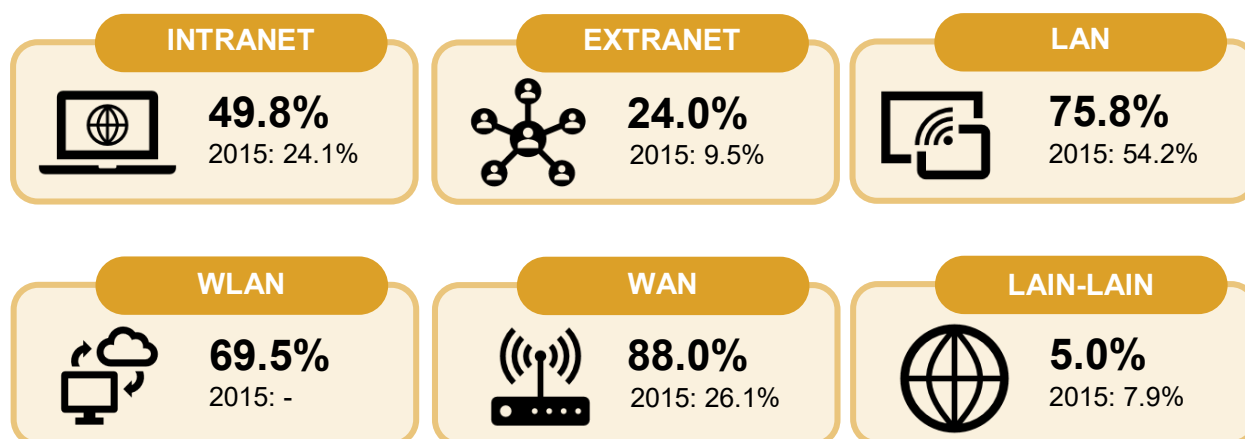


4. INFRASTRUKTUR RANGKAIAN KOMPUTER

Pada tahun 2022, penggunaan teknologi rangkaian menunjukkan peningkatan yang ketara berbanding tahun 2015, dengan Rangkaian Kawasan Luas (WAN) mendahului pada kadar 88.0 peratus, meningkat daripada 26.1 peratus. Rangkaian Kawasan Tempatan (LAN) mencapai 75.8 peratus, manakala Rangkaian Kawasan Tempatan Tanpa Wayar (WLAN) mencatatkan 69.5 peratus. Penggunaan intranet berada pada kadar 49.8 peratus dan extranet pada 24.0 peratus, menunjukkan integrasi yang stabil dalam pertubuhan. Kategori lain-lain menurun kepada 5.0 peratus, menunjukkan peralihan ke arah penyelesaian rangkaian yang lebih mantap, menekankan pergantungan yang semakin meningkat terhadap hubungan digital terkini untuk kecekapan operasi.

Perkembangan ini mencerminkan peningkatan penggunaan sistem rangkaian yang kukuh untuk mempertingkatkan komunikasi dan keupayaan operasi. Data ini turut menunjukkan peralihan berterusan daripada kategori rangkaian yang kurang ditakrifkan kepada sistem yang lebih dipercayai dan bersepadu, melambangkan peningkatan kemajuan dalam infrastruktur digital merentasi pelbagai industri seperti di **Rajah 5**.

Rajah 5: Jenis Penggunaan Infrastruktur Rangkaian Komputer, 2015 dan 2022



Nota.

"-" merujuk kepada data tidak tersedia

4.1 INFRASTRUKTUR RANGKAIAN KOMPUTER MENGIKUT SEKTOR

Penggunaan intranet, extranet dan LAN didominasi oleh sektor Pembuatan iaitu masing-masing 70.0 peratus, 52.5 peratus dan 89.0 peratus. Manakala, bagi WLAN (70.7%) dan WAN (91.0%) direkodkan oleh sektor Perkhidmatan dan lain-lain infrastruktur (23.4%) direkodkan oleh sektor Perlombongan & pengkuarian seperti di **Rajah 6**.

Rajah 6: Jenis Penggunaan Infrastruktur Rangkaian Komputer mengikut Sektor, 2015 dan 2022

 INTRANET	 EXTRANET	 LAN	 WLAN	 WAN	 LAIN-LAIN
 PERTANIAN					
58.6% 2015: 23.2%	16.7% 2015: 4.5%	84.2% 2015: 54.2%	54.9% 2015: -	53.0% 2015: 26.4%	10.4% 2015: 10.8%
 PERLOMBONGAN & PENGKUARIAN					
53.2% 2015: 28.9%	21.4% 2015: 7.7%	84.5% 2015: 57.8%	64.4% 2015: -	53.1% 2015: 35.5%	23.4% 2015: 7.5%
 PEMBUATAN					
70.0% 2015: 46.1%	52.5% 2015: 36.0%	89.0% 2015: 61.8%	69.0% 2015: -	52.5% 2015: 22.6%	12.8% 2015: 8.8%
 PEMBINAAN					
40.5% 2015: 16.8%	13.2% 2015: 2.6%	62.4% 2015: 50.8%	57.2% 2015: -	81.4% 2015: 34.1%	5.8% 2015: 11.8%
 PERKHIDMATAN					
49.2% 2015: 22.5%	23.2% 2015: 7.6%	75.9% 2015: 53.7%	70.7% 2015: -	91.0% 2015: 26.0%	4.4% 2015: 7.5%

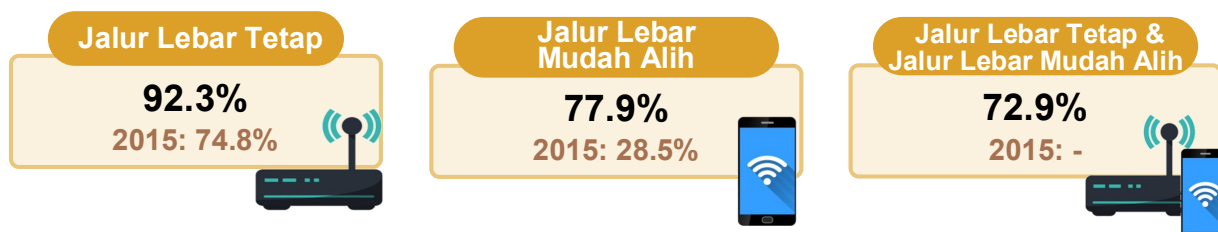
Nota.

“-” merujuk kepada data tidak tersedia

5. JENIS CAPAIAN INTERNET

Sebanyak 92.3 peratus (2015: 74.8%) pertubuhan menggunakan jalur lebar tetap bagi capaian internet diikuti oleh jalur lebar mudah alih dan penggunaan kedua-dua jalur lebar tetap dan jalur lebar mudah alih masing-masing sebanyak 77.9 peratus (2015: 28.5%) dan 72.9 peratus seperti di **Rajah 7**.

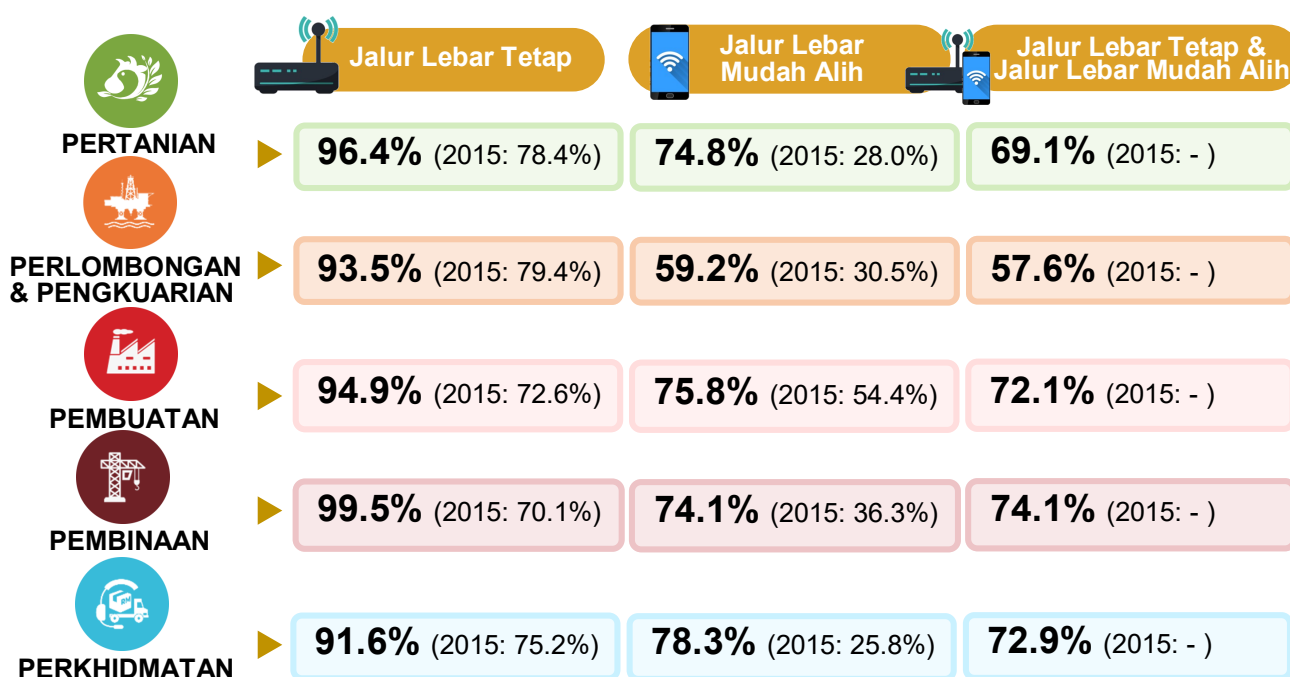
Rajah 7: Jenis Capaian Internet, 2015 dan 2022



5.1 JENIS CAPAIAN INTERNET MENGIKUT SEKTOR

Pertubuhan dalam sektor Pembinaan merekodkan capaian internet tertinggi bagi penggunaan jalur lebar tetap iaitu 99.5 peratus pada 2022 (2015: 70.1%), diikuti oleh sektor Pertanian, 96.4 peratus (2015: 78.4%) dan sektor Pembuatan, 94.9 peratus (2015: 72.6%). Sektor Perkhidmatan merekodkan penggunaan jalur lebar mudah alih tertinggi dengan 78.3 peratus (2015: 25.8%), diikuti oleh sektor Pembuatan, 75.8 peratus (2015: 54.4%) dan sektor Pertanian 74.8 peratus (2015: 28.0%). Manakala, sektor Pembinaan mencatatkan peratus tertinggi bagi penggunaan kedua-dua jalur lebar iaitu 74.1 peratus seperti di **Rajah 8**.

Rajah 8: Jenis Capaian Internet mengikut Sektor, 2015 dan 2022



Nota.

“-” merujuk kepada data tidak tersedia

6. TUJUAN PENGGUNAAN INTERNET

Rajah 9 menunjukkan peratus tujuan penggunaan internet oleh pertubuhan. Tujuan penggunaan internet untuk menghantar atau menerima e-mel merekodkan peratus tertinggi iaitu 95.7 peratus (2015: 70.6%). Ini diikuti oleh perbankan melalui internet, 90.2 peratus (2015: 41.3%) dan penggunaan internet untuk mendapatkan maklumat berkenaan barangan atau perkhidmatan, 81.6 peratus (2015: 38.9%).

Rajah 9: Tujuan Penggunaan Internet oleh Pertubuhan, 2015 dan 2022



7. PENGGUNAAN TEKNOLOGI DIGITAL

Penggunaan teknologi digital bagi internet mudah alih dan teknologi merekodkan peratus tertinggi dengan 72.4 peratus. Ini diikuti oleh media sosial, 70.2 peratus dan pengkomputeran awan, 58.5 peratus seperti di **Rajah 10**.

Rajah 10: Penggunaan Teknologi Digital, 2022

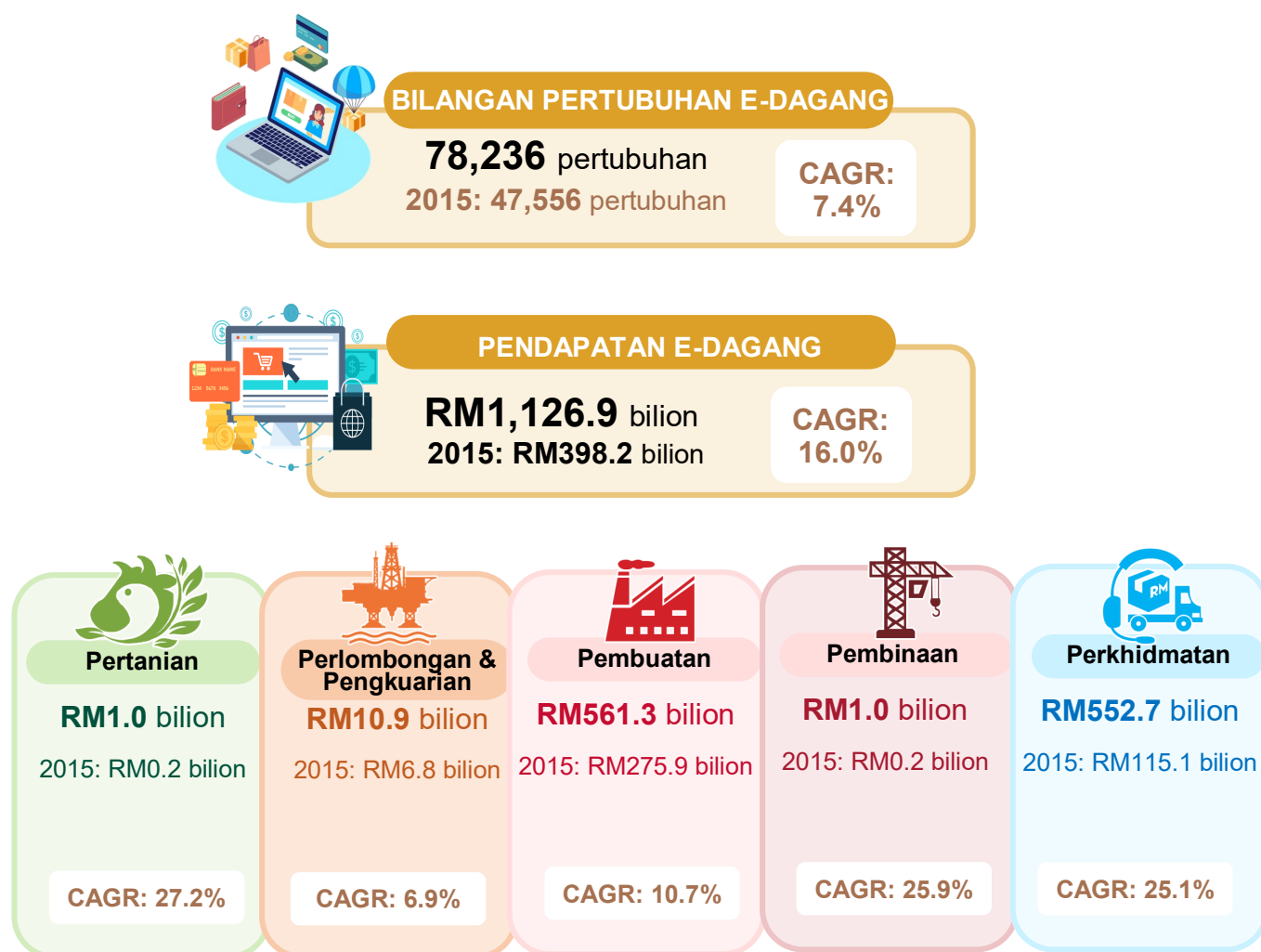


8. PENDAPATAN E-DAGANG

8.1 PENDAPATAN E-DAGANG MENGIKUT SEKTOR

Sebanyak 78,236 pertubuhan yang terlibat dalam transaksi e-dagang telah direkodkan, daripada keseluruhan 1,091,867 pertubuhan pada tahun 2022 (2015: 47,556 pertubuhan). Pendapatan melalui transaksi e-dagang di Malaysia mencapai nilai RM1,126.9 bilion pada tahun 2022 berbanding RM398.2 bilion pada tahun 2015 dengan kadar pertumbuhan tahunan 16.0 peratus. Sektor Pembuatan merupakan penyumbang utama dengan RM561.3 bilion dengan kadar pertumbuhan tahunan 10.7 peratus. Ini diikuti oleh sektor Perkhidmatan dengan RM552.7 bilion (CAGR: 25.1%) dan sektor Perlombongan & pengkuarian dengan RM10.9 bilion (CAGR: 6.9%) seperti di **Rajah 11**.

Rajah 11: Pendapatan E-Dagang, 2015 dan 2022



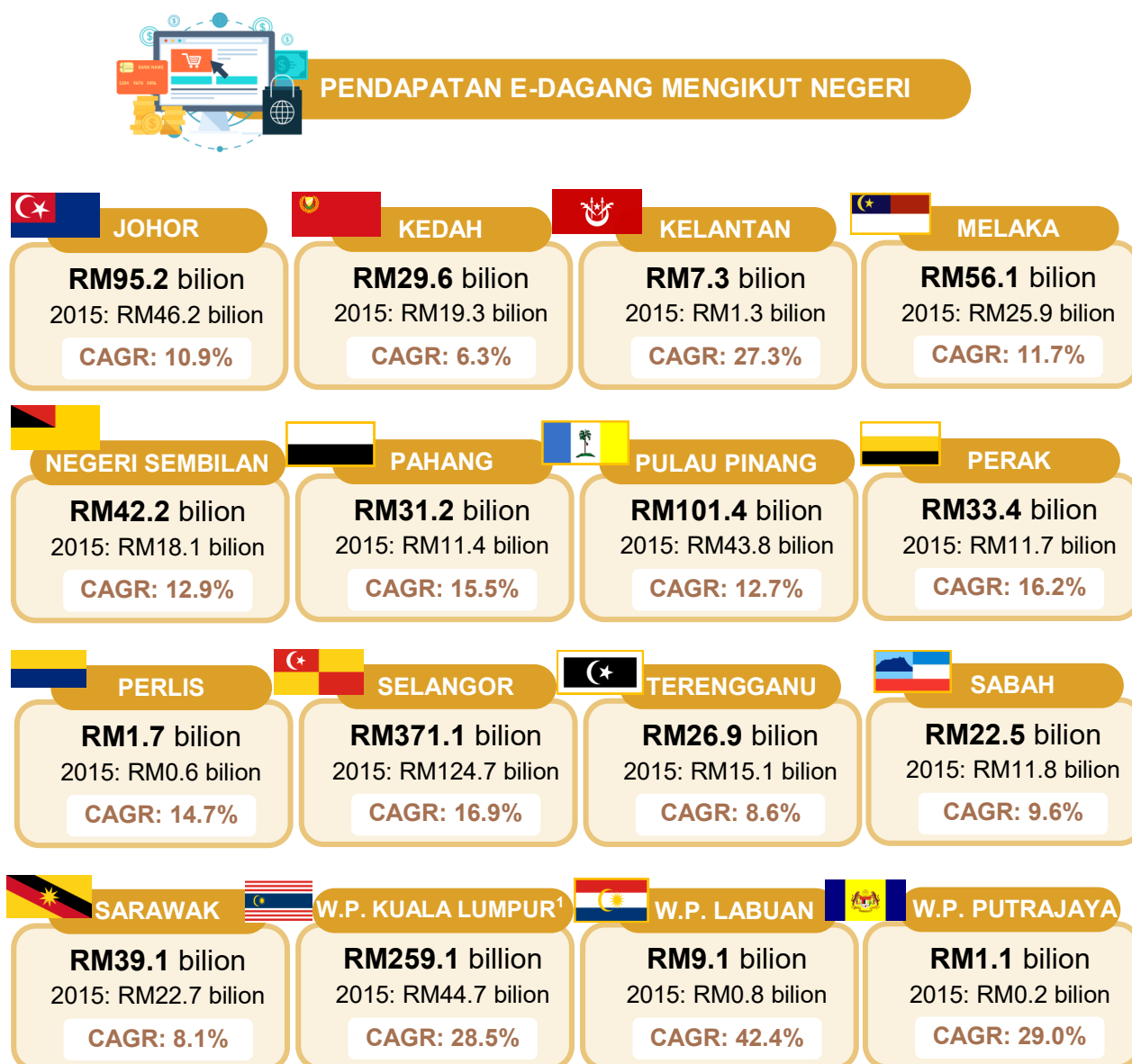
Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

8.2 PENDAPATAN E-DAGANG MENGIKUT NEGERI

Rajah 12 memaparkan pendapatan e-dagang mengikut negeri. Selangor mencatatkan pendapatan tertinggi daripada transaksi e-dagang berjumlah RM371.1 bilion dengan kadar pertumbuhan tahunan sebanyak 16.9 peratus. W. P. Kuala Lumpur berada di kedudukan kedua dengan RM259.1 bilion (CAGR: 28.5%) manakala Pulau Pinang mencatatkan RM101.4 bilion (CAGR: 12.7%) sebagai kedudukan yang ketiga tertinggi.

Rajah 12: Pendapatan E-Dagang mengikut Negeri, 2015 dan 2022



Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

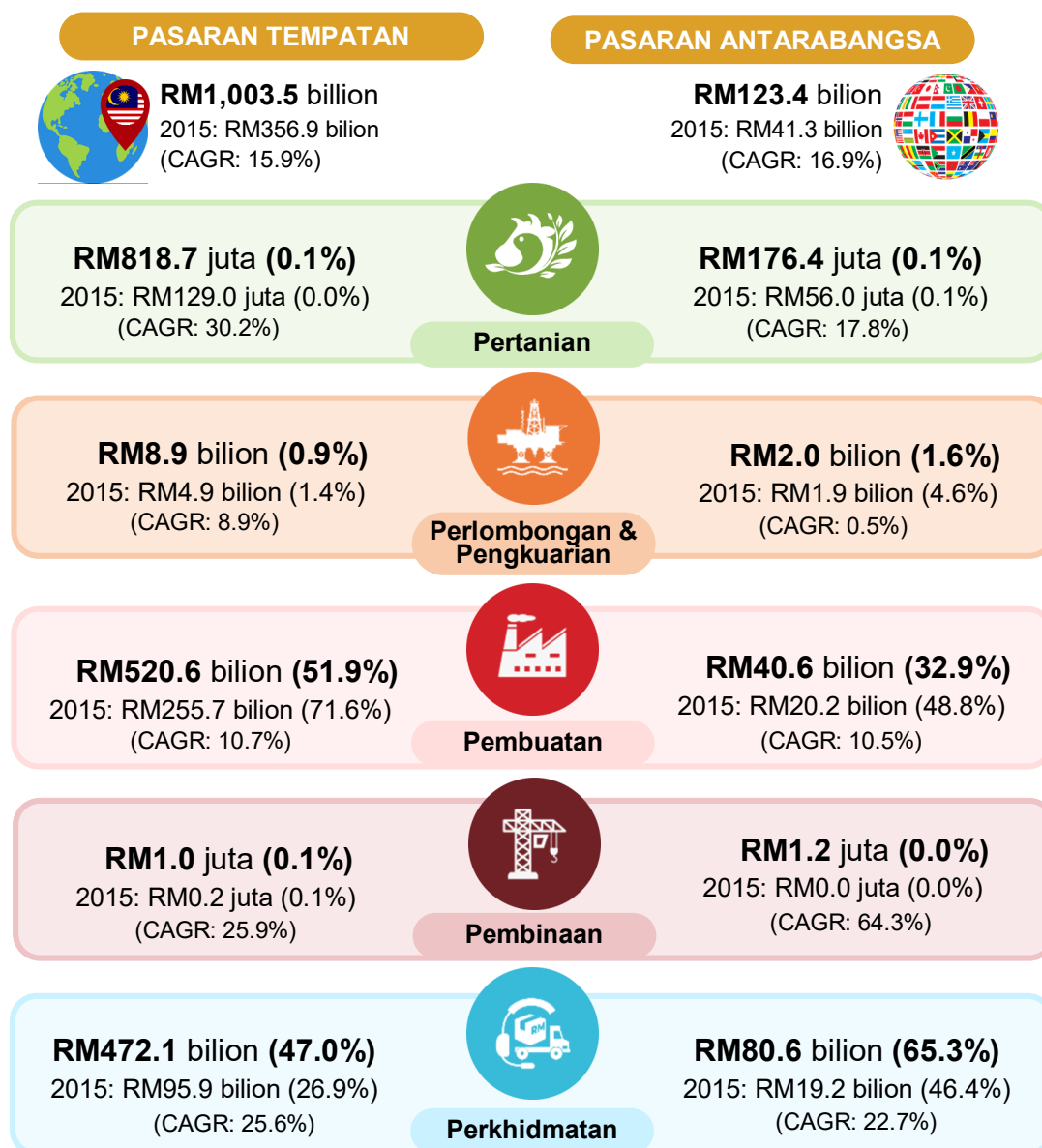
¹Termasuk SUPRA

Supra - Merangkumi aktiviti pengeluaran yang melangkaui pusat kepentingan ekonomi utama bagi mana-mana negeri

8.3 PENDAPATAN E-DAGANG MENGIKUT JENIS PASARAN

Pendapatan e-dagang di Malaysia sebahagian besarnya didorong oleh pasaran tempatan berjumlah RM1,003.5 bilion manakala pasaran antarabangsa menyumbangkan RM123.4 bilion pada 2022. Bagi pasaran tempatan, sektor Pembuatan merupakan penyumbang utama dengan nilai RM520.6 bilion. Sebaliknya, pasaran antarabangsa didominasi oleh sektor Perkhidmatan dengan pendapatan sebanyak RM80.6 bilion seperti yang digambarkan dalam **Rajah 13**.

Rajah 13: Pendapatan E-Dagang mengikut Jenis Pasaran, 2015 dan 2022



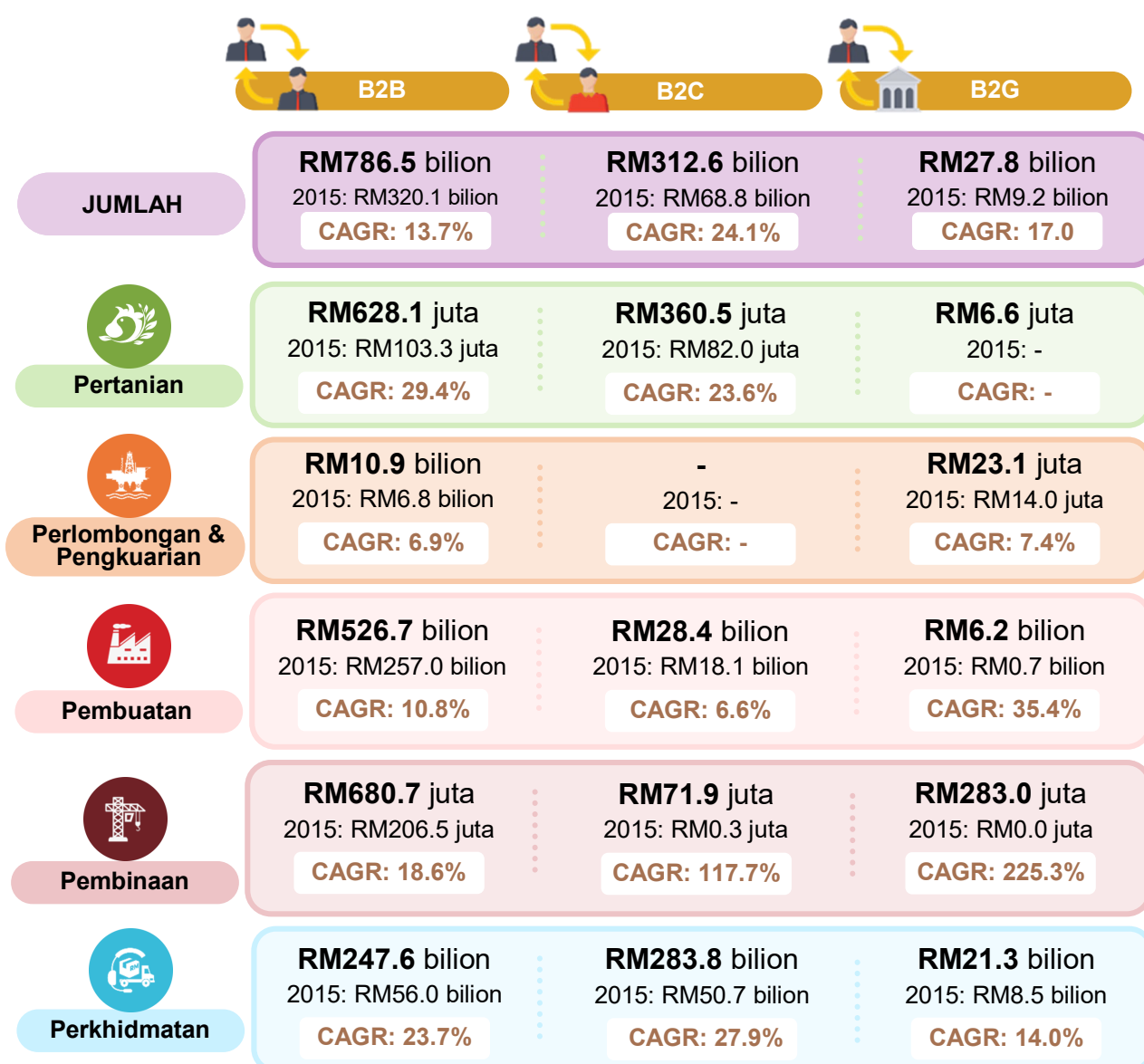
Nota.

CAGR - Kadar perubahan tahunan dikompaun
 "0" merujuk kepada nilai kurang daripada RM500,000

8.4 PENDAPATAN E-DAGANG MENGIKUT JENIS PELANGGAN

Pendapatan e-dagang mengikut jenis pelanggan adalah tertinggi daripada *Business to Business* (B2B) yang berjumlah RM786.5 bilion dengan kadar pertumbuhan tahunan 13.7 peratus. Seterusnya, *Business to Consumer* (B2C) mencatatkan RM312.6 bilion (CAGR: 24.1%) dan *Business to Government* (B2G) menyumbang RM27.8 bilion (CAGR: 17.0%). Sektor Pembuatan merupakan penyumbang utama pendapatan B2B dengan nilai RM526.7 bilion, manakala sektor Perkhidmatan mendominasi B2C dan B2G dengan sumbangan masing-masing RM283.8 bilion dan RM21.3 bilion, seperti yang ditunjukkan di dalam **Rajah 14**.

Rajah 14: Pendapatan E-Dagang mengikut Jenis Pelanggan, 2015 dan 2022



Nota.

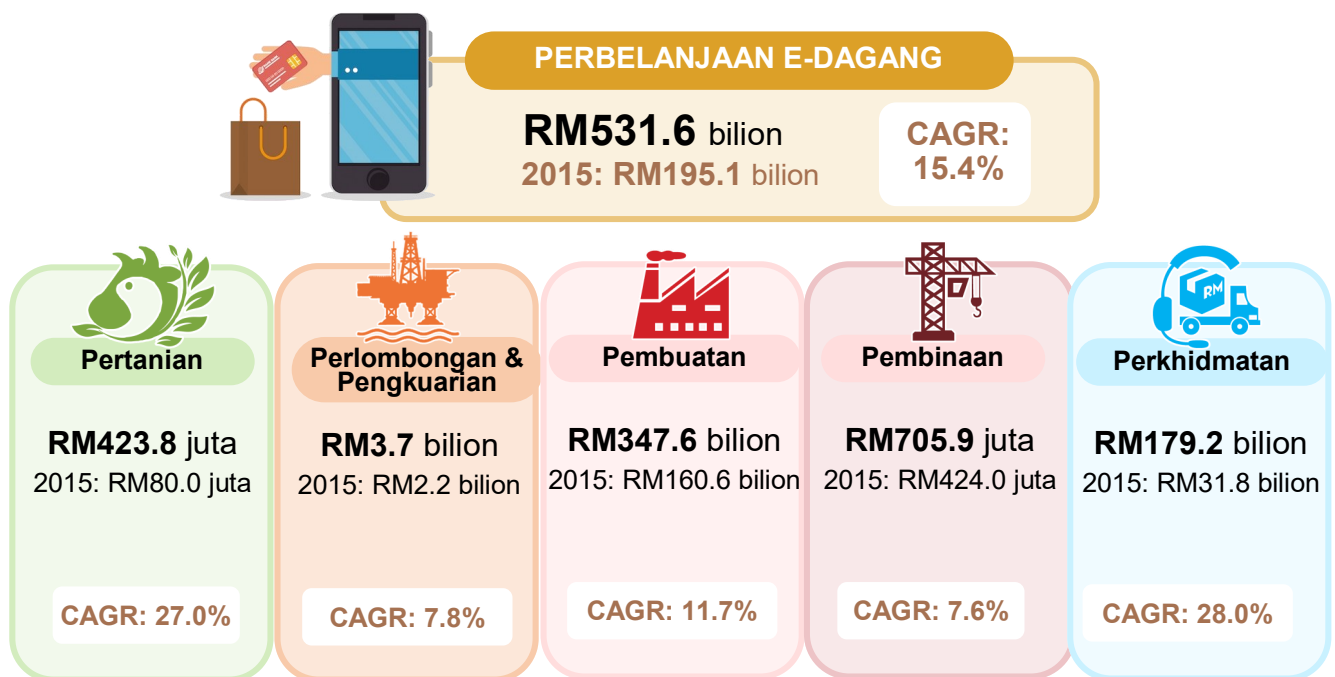
CAGR - Kadar perubahan tahunan dikompaun
 "0" merujuk kepada nilai kurang daripada RM500,000
 "-" merujuk kepada data tidak tersedia

9. PERBELANJAAN E-DAGANG

9.1 PERBELANJAAN E-DAGANG MENGIKUT SEKTOR

Perbelanjaan yang direkodkan daripada transaksi e-dagang pada tahun 2022 adalah sebanyak RM531.6 bilion, meningkat daripada RM195.1 bilion pada tahun 2015 dengan kadar pertumbuhan tahunan sebanyak 15.4 peratus. Sektor Pembuatan merupakan penyumbang utama dengan nilai RM347.6 bilion dan kadar pertumbuhan tahunan 11.7 peratus. Ini diikuti oleh sektor Perkhidmatan dengan nilai RM179.2 bilion (CAGR: 28.0%), dan sektor Perlombongan & pengkuarian dengan nilai RM3.7 bilion (CAGR: 7.8%) seperti di **Rajah 15**.

Rajah 15: Perbelanjaan E-Dagang, 2015 dan 2022



Nota.

CAGR - Kadar perubahan tahunan dikompaun

9.2 PERBELANJAAN E-DAGANG MENGIKUT NEGERI

Rajah 16 menunjukkan Selangor masih merekodkan perbelanjaan tertinggi bagi transaksi e-dagang yang berjumlah RM147.5 bilion dengan kadar pertumbuhan tahunan sebanyak 14.8 peratus. W.P. Kuala Lumpur berada di tempat kedua dengan RM80.8 bilion (CAGR: 29.2%), diikuti oleh Pulau Pinang dengan perbelanjaan e-dagang sebanyak RM68.1 bilion (CAGR: 19.0%).

Rajah 16: Perbelanjaan E-Dagang mengikut Negeri, 2015 dan 2022



Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

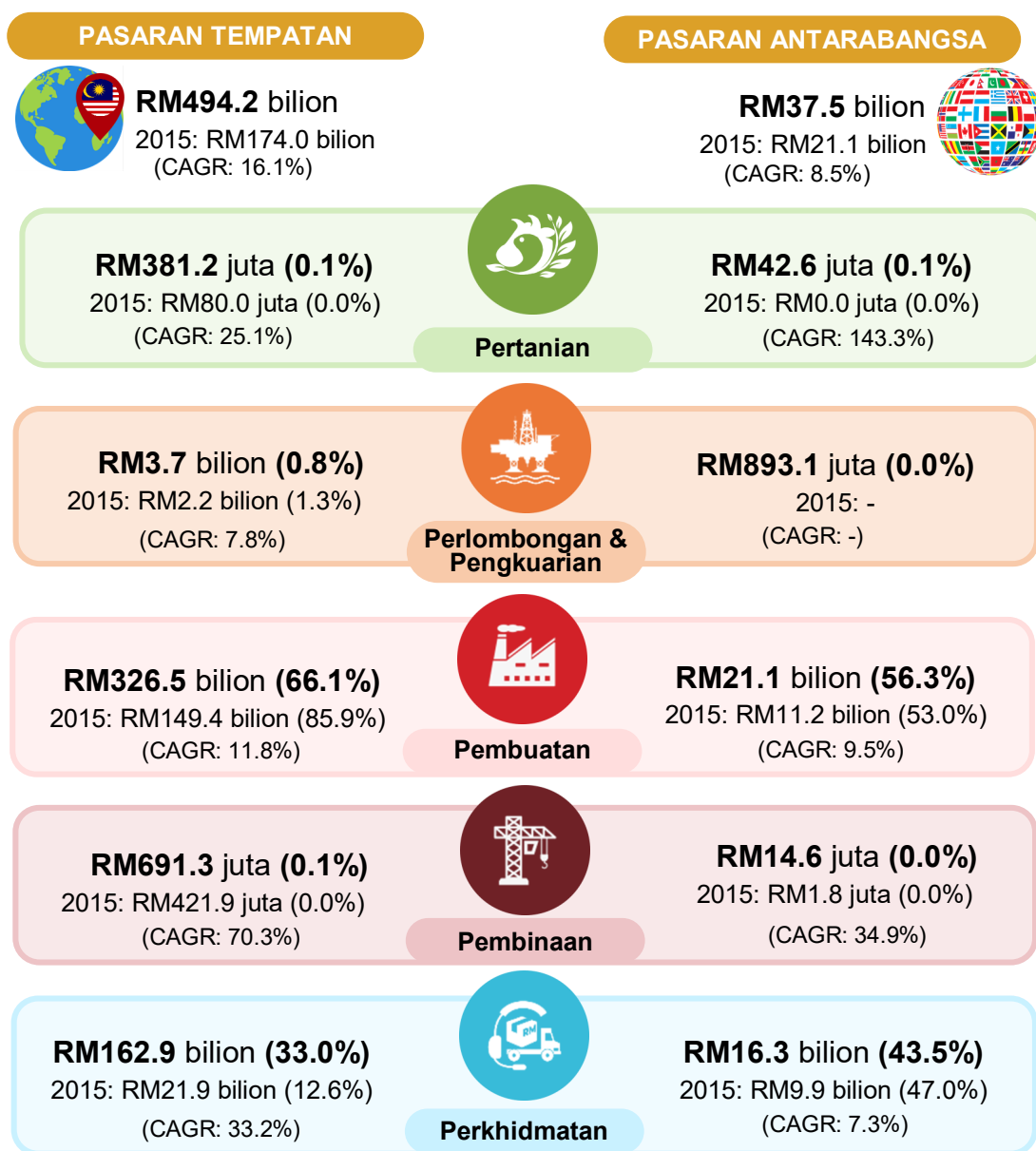
¹ Termasuk SUPRA

Supra - Merangkumi aktiviti pengeluaran yang melangkaui pusat kepentingan ekonomi utama bagi mana-mana negeri

9.3 PERBELANJAAN E-DAGANG MENGIKUT JENIS PASARAN

Perbelanjaan e-dagang di Malaysia didominasi oleh pasaran tempatan dengan jumlah RM494.2 bilion, manakala pasaran antarabangsa mencatatkan RM37.5 bilion. Sektor Pembuatan adalah penyumbang utama perbelanjaan e-dagang di kedua-dua jenis pasaran dengan nilai sebanyak RM326.5 bilion untuk pasaran tempatan dan RM21.1 bilion untuk pasaran antarabangsa, seperti yang dinyatakan dalam **Rajah 17**.

Rajah 17: Perbelanjaan E-Dagang mengikut Jenis Pasaran, 2015 dan 2022



Nota.

CAGR - Kadar perubahan tahunan dikompaun (%) - Peratus sumbangan

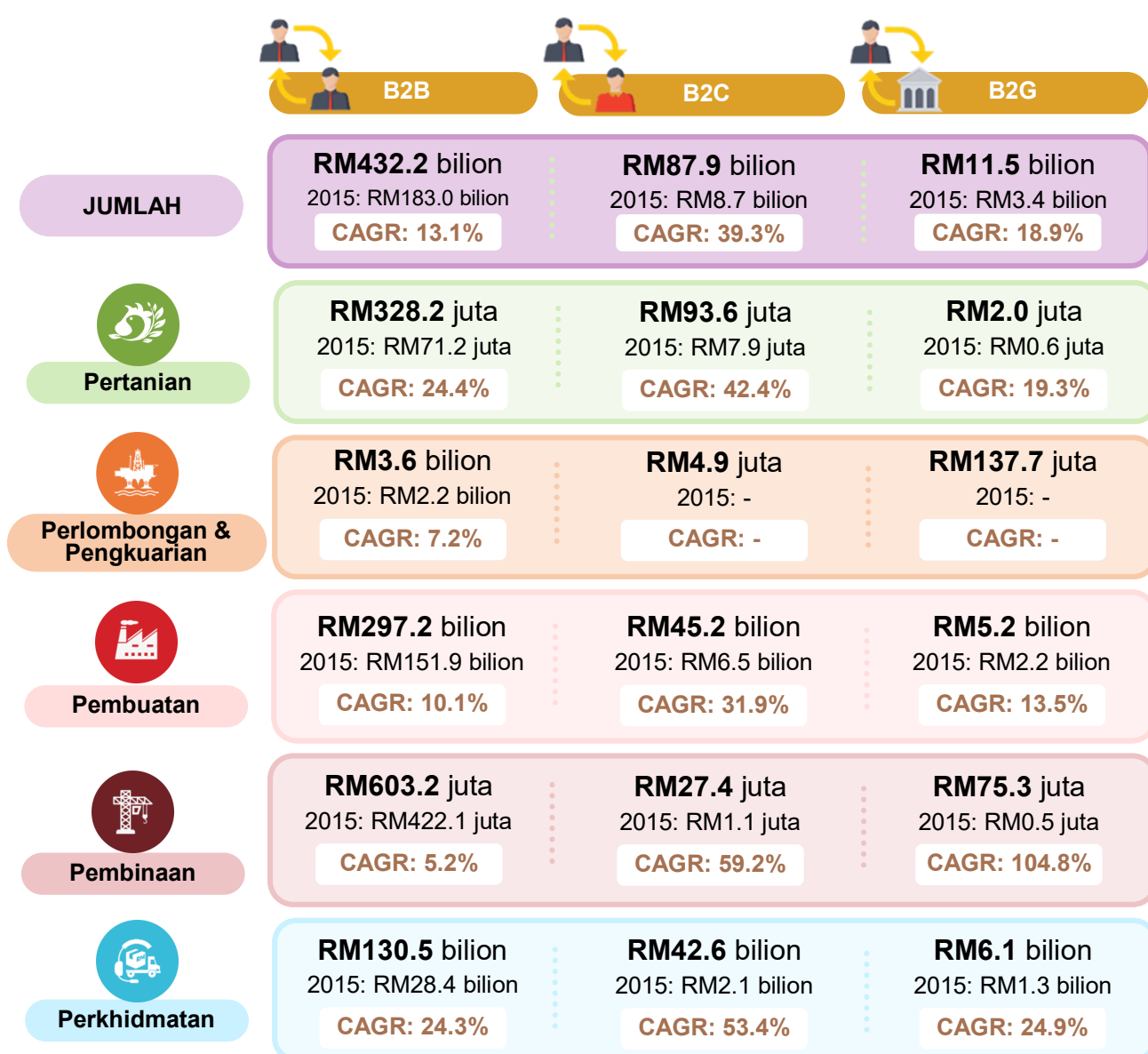
"0" merujuk kepada nilai kurang daripada RM500,000

"-" merujuk kepada data tidak tersedia

9.4 PERBELANJAAN E-DAGANG MENGIKUT JENIS PELANGGAN

Perbelanjaan daripada transaksi e-dagang mengikut jenis pelanggan menunjukkan bahawa B2B mencatatkan RM432.2 bilion dengan kadar pertumbuhan tahunan sebanyak 13.1 peratus. Seterusnya, B2C merekodkan RM87.9 bilion (CAGR: 39.3%) dan B2G menyumbang RM11.5 bilion (CAGR: 18.9%). Penyumbang utama bagi perbelanjaan e-dagang ialah sektor Pembuatan dengan RM297.2 bilion bagi B2B. Sementara itu, sektor Perkhidmatan mendominasi B2C dan B2G iaitu masing-masing RM42.6 bilion (CAGR: 53.4%) dan RM6.1 bilion (CAGR: 24.9%), seperti di **Rajah 18**.

Rajah 18: Perbelanjaan E-Dagang mengikut Jenis Pelanggan, 2015 dan 2022



Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

"0" merujuk kepada nilai kurang daripada RM500,000

"-" merujuk kepada data tidak tersedia

PENGUNAAN ICT DAN E-DAGANG OLEH PERUSAHAAN MIKRO, KECIL DAN SEDERHANA (PMKS)

1. PENGENALAN

Bahagian ini membentangkan statistik PMKS bagi penggunaan ICT dan e-dagang. Definisi PMKS yang digunakan adalah berdasarkan definisi baru yang berkuatkuasa pada 1 Januari, 2014 seperti **Jadual 1**.

Jadual 1: Definisi PMKS

Sektor	Saiz PMKS	Hasil Tahunan	Bilangan Pekerja Sepenuh Masa
Pembuatan	Mikro	Kurang daripada RM300,000	Kurang daripada 5 pekerja
	Kecil	Antara RM300,000 hingga kurang daripada RM15 juta	Dari 5 hingga kurang daripada 75 pekerja
	Sederhana	RM15 juta hingga tidak melebihi RM50 juta	Dari 75 hingga tidak melebihi 200 pekerja
Pertanian, Perlombongan dan Pengkuarian, Pembinaan dan Perkhidmatan	Mikro	Kurang daripada RM300,000	Kurang daripada 5 pekerja
	Kecil	Antara RM300,000 hingga kurang daripada RM30 juta	Dari 5 hingga kurang daripada 30 pekerja
	Sederhana	Antara RM3 juta hingga tidak melebihi RM20 juta	Dari 30 hingga tidak melebihi 75 pekerja

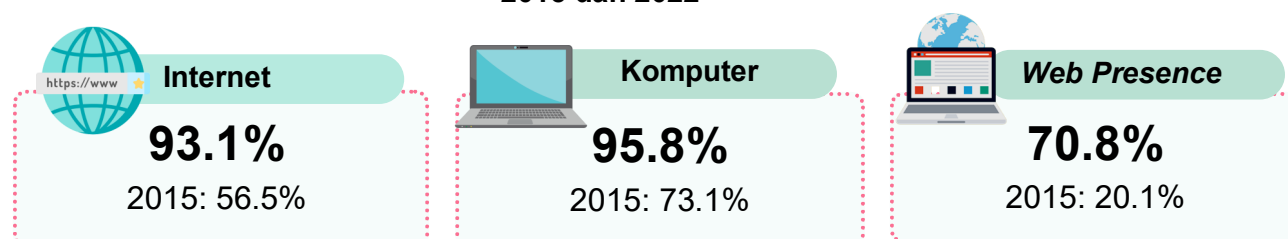
Nota.

Sumber: Garis Panduan bagi Definisi Baharu PKS, SME Corp. Malaysia, Oktober 2013

2. PENGUNAAN ICT DAN E-DAGANG

Hasil bancian menunjukkan terdapat sejumlah 1,069,831 PMKS yang beroperasi pada tahun 2022. Sebanyak 95.8 peratus daripada pertubuhan ini menggunakan komputer (termasuk komputer peribadi, komputer riba dan *tablet*), berbanding 73.1 peratus pada tahun 2015. Penggunaan internet (menggunakan internet yang boleh diakses melalui komputer dan peranti lain seperti telefon mudah alih lain) dalam PMKS juga meningkat kepada 93.1 peratus (2015: 56.5%). Selain itu, 70.8 peratus daripada pertubuhan ini mempunyai *web presence*, berbanding 20.1 peratus pada tahun 2015, seperti dalam **Rajah 19**.

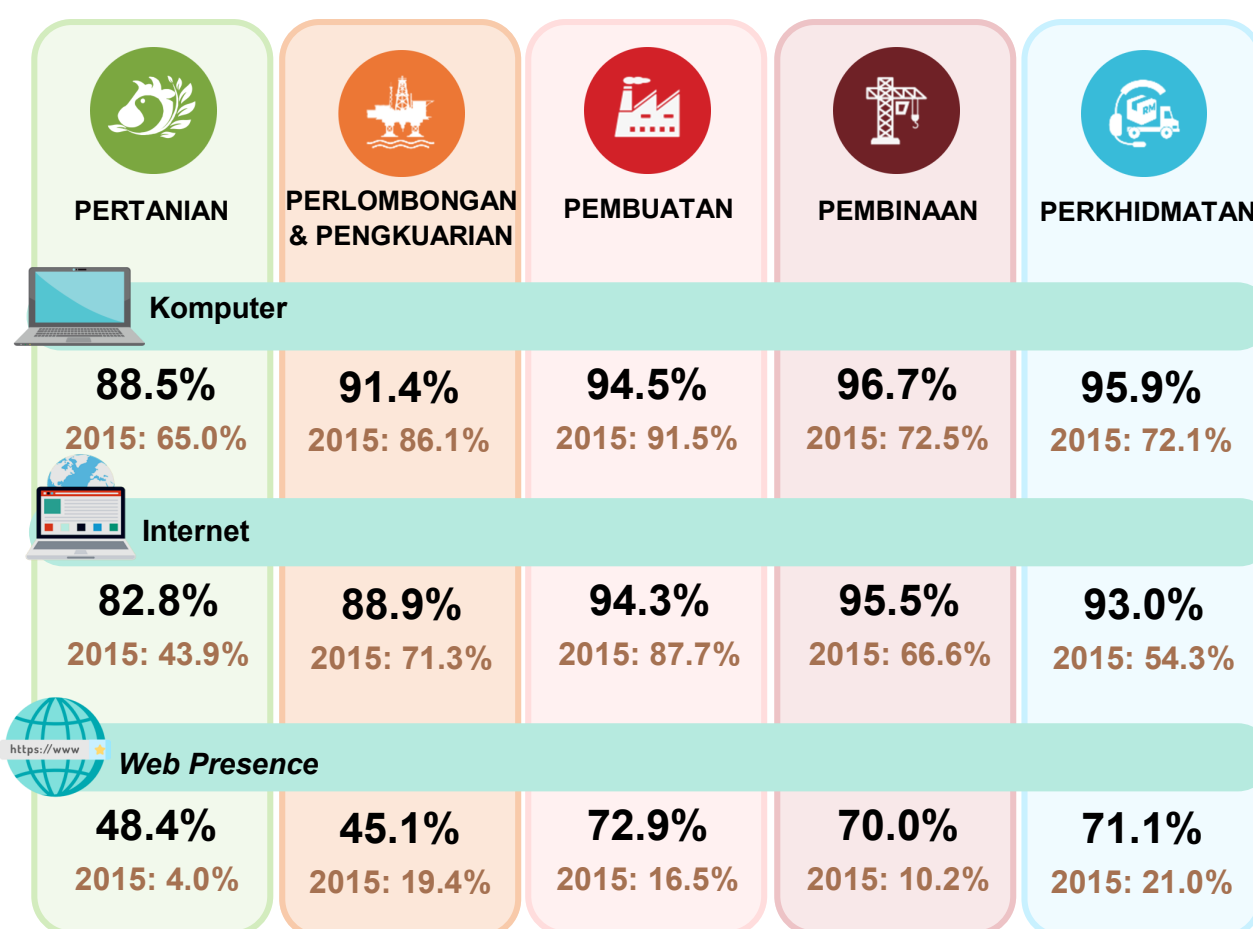
Rajah 19: Peratus Penggunaan Komputer, Internet dan Web Presence - PMKS, 2015 dan 2022



2.1 PENGGUNAAN ICT MENGIKUT SEKTOR

Rajah 20 menunjukkan penggunaan komputer, internet dan *web presence* mengikut sektor bagi PMKS. Sektor Pembinaan mencatatkan peratus tertinggi dalam penggunaan komputer dan internet, masing-masing pada 96.7 peratus (2015: 72.5%) dan 95.5 peratus (2015: 66.6%). Walau bagaimanapun, bagi *web presence*, sektor Pembuatan merekodkan penggunaan tertinggi, 72.9 peratus (2015: 16.5%).

Rajah 20: Peratus Penggunaan Komputer, Internet dan Web Presence mengikut Sektor - PMKS, 2015 dan 2022



2.2 PENGGUNAAN ICT MENGIKUT NEGERI

W.P. Kuala Lumpur mencatatkan peratus tertinggi dalam penggunaan komputer, internet dan *web presence* oleh PMKS, iaitu masing-masing sebanyak 99.7 peratus, 99.6 peratus dan 90.8 peratus. Seterusnya diikuti oleh W.P. Putrajaya yang merekodkan peratusan kedua tertinggi bagi penggunaan komputer dan internet iaitu sebanyak 99.2 peratus seperti di **Rajah 21**.

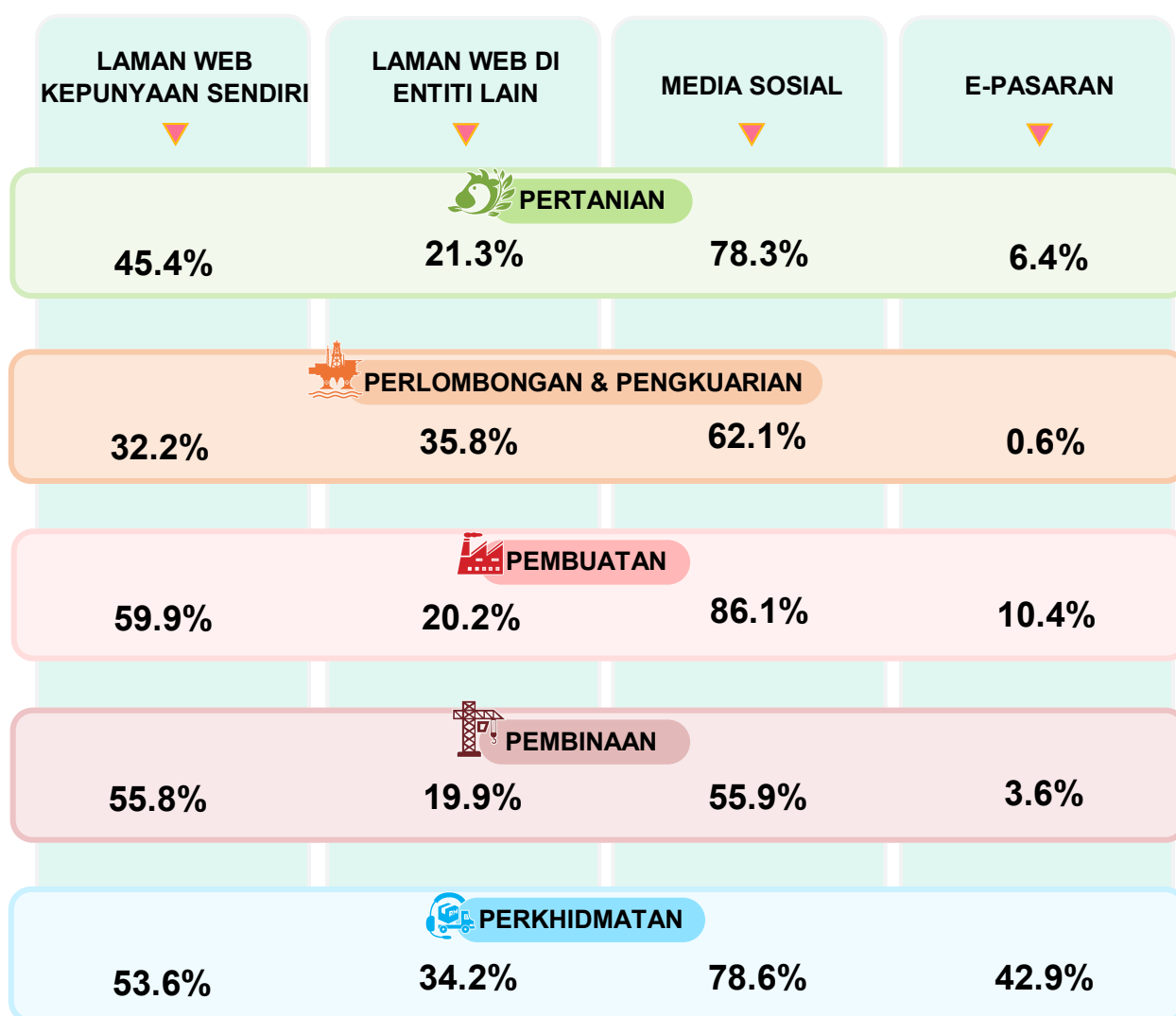
Rajah 21: Peratus Penggunaan Komputer, Internet dan Web Presence mengikut Negeri - PMKS, 2022

	 Komputer	 Internet	 Web Presence
 Johor	97.9%	97.6%	79.2%
 Kedah	90.5%	81.5%	55.0%
 Kelantan	93.1%	79.0%	39.7%
 Melaka	96.9%	93.0%	67.2%
 Negeri Sembilan	93.7%	92.8%	60.1%
 Pahang	93.8%	92.4%	57.6%
 Pulau Pinang	99.0%	98.7%	78.4%
 Perak	95.4%	84.6%	58.1%
 Perlis	93.7%	78.1%	56.2%
 Selangor	99.2%	98.9%	84.9%
 Terengganu	92.0%	91.2%	61.5%
 Sabah	88.1%	84.5%	44.3%
 Sarawak	85.3%	81.9%	46.5%
 W.P. Kuala Lumpur	99.7%	99.6%	90.8%
 W.P. Labuan	95.2%	93.2%	63.5%
 W.P. Putrajaya	99.2%	99.2%	88.4%
 MALAYSIA	95.8%	93.1%	70.8%

2.3 JENIS PEMILIKAN *WEB PRESENCE* MENGIKUT SEKTOR

Rajah 22 menunjukkan jenis *web presence* yang digunakan oleh PMKS mengikut sektor. Sektor Pembuatan mencatatkan peratusan tertinggi untuk dua jenis penggunaan *web presence*: penggunaan media sosial (86.1%) dan laman web kepunyaan sendiri (59.9%). Sektor Perlombongan & pengkuarian merekodkan peratusan tertinggi dalam penggunaan laman web di entiti lain (35.8%), manakala sektor Perkhidmatan pula merupakan penyumbang utama bagi penggunaan e-pasaran (42.9%).

Rajah 22: Jenis Pemilikan *Web Presence* mengikut Sektor - PMKS, 2022

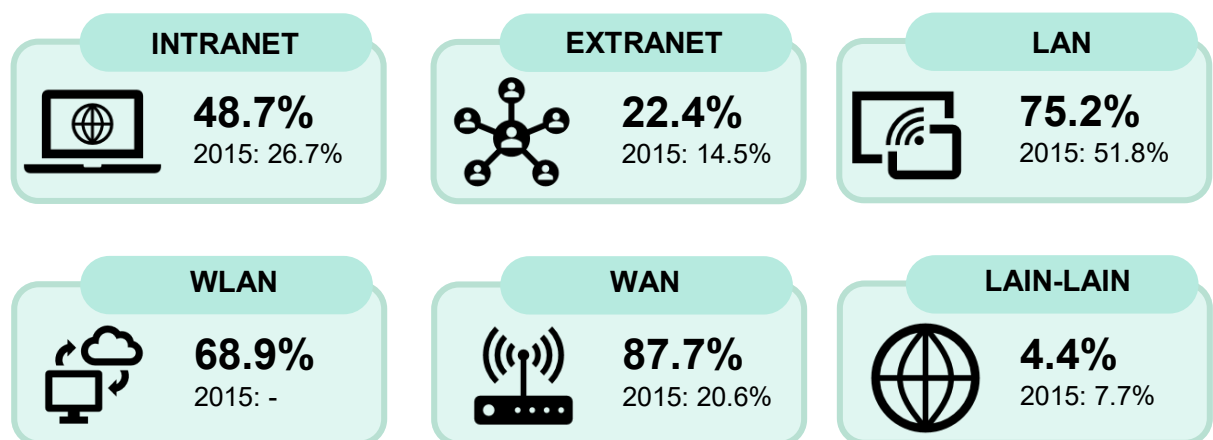


3. INFRASTRUKTUR RANGKAIAN KOMPUTER

Pada tahun 2022, penggunaan internet berdasarkan jenis infrastruktur rangkaian komputer oleh PMKS mencatatkan pertumbuhan yang signifikan berbanding tahun 2015. Rangkaian Kawasan Luas (WAN) mendahului dengan penggunaan sebanyak 87.7 peratus, meningkat dengan ketara daripada 20.6 peratus pada tahun 2015. Rangkaian Kawasan Setempat (LAN) mencapai 75.2 peratus, meningkat daripada 51.8 peratus pada tahun 2015, manakala Rangkaian Kawasan Setempat Tanpa Wayar (WLAN) mencatatkan penggunaan sebanyak 68.9 peratus seperti yang ditunjukkan pada **Rajah 23**.

Perkembangan ini mencerminkan penggunaan berterusan teknologi rangkaian canggih, menunjukkan kepentingan yang semakin meningkat bagi jenis infrastruktur rangkaian komputer yang boleh dipercayai dalam operasi perniagaan. Trend ini menunjukkan peralihan ke arah penyelesaian rangkaian yang lebih kukuh, dengan PMKS semakin mengadaptasi infrastruktur digital untuk menyokong komunikasi dan keberkesanan operasi.

Rajah 23: Infrastruktur Rangkaian Komputer - PMKS, 2015 dan 2022



Nota.

"-" merujuk kepada data tidak tersedia

3.1 INFRASTRUKTUR RANGKAIAN KOMPUTER MENGIKUT SEKTOR

Penggunaan intranet, extranet dan LAN dalam kalangan PMKS didominasi oleh sektor Pembuatan dengan masing-masing 68.5 peratus, 49.6 peratus dan 88.3 peratus. Sektor Perkhidmatan merekodkan penggunaan tertinggi untuk WLAN (70.2%) dan WAN (90.9%). Manakala, penggunaan tertinggi bagi lain-lain infrastruktur direkodkan sebanyak 18.5 peratus oleh sektor Perlombongan & pengkuarian seperti di **Rajah 24**.

Rajah 24: Infrastruktur Rangkaian Komputer mengikut Sektor - PMKS, 2015 dan 2022

 INTRANET	 EXTRANET	 LAN	 WLAN	 WAN	 LAIN-LAIN
 PERTANIAN					
54.7% 2015: 21.2%	2.3% 2015: 3.3%	81.5% 2015: 52.4%	47.1% 2015: -	44.9% 2015: 26.1%	12.0% 2015: 11.4%
 PERLOMBONGAN & PENGKUARIAN					
42.2% 2015: 26.6%	17.9% 2015: 5.5%	81.9% 2015: 54.3%	55.4% 2015: -	41.2% 2015: 31.1%	18.5% 2015: 9.1%
 PEMBUATAN					
68.5% 2015: 44.7%	49.6% 2015: 35.4%	88.3% 2015: 61.1%	68.7% 2015: -	49.6% 2015: 21.4%	7.4% 2015: 9.1%
 PEMBINAAN					
38.7% 2015: 16.5%	10.5% 2015: 2.5%	61.2% 2015: 50.2%	55.9% 2015: -	80.8% 2015: 34.1%	5.9% 2015: 12.0%
 PERKHIDMATAN					
48.4% 2015: 25.7%	22.0% 2015: 13.4%	75.5% 2015: 51.0%	70.2% 2015: -	90.9% 2015: 19.7%	4.0% 2015: 7.2%

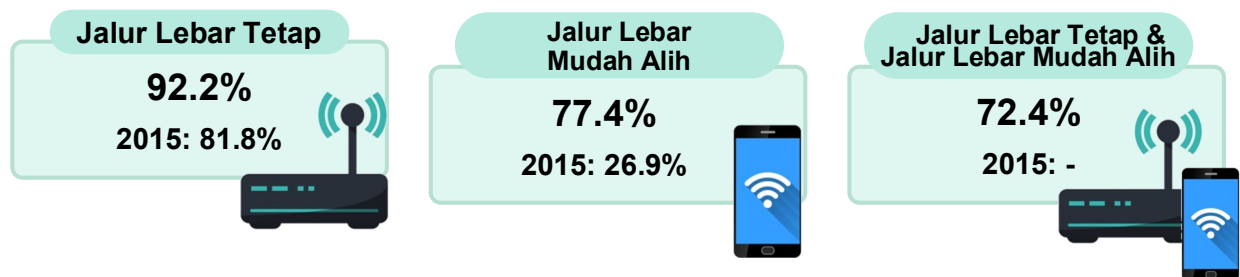
Nota.

"-" merujuk kepada data tidak tersedia

4. JENIS CAPAIAN INTERNET

Sebanyak 92.2 peratus (2015: 81.8%) PMKS menggunakan jalur lebar tetap bagi capaian internet diikuti oleh jalur lebar mudah alih, 77.4 peratus (2015: 26.9%) dan penggunaan kedua-dua jalur lebar tetap dan jalur lebar mudah alih sebanyak 72.4 peratus seperti di **Rajah 25**.

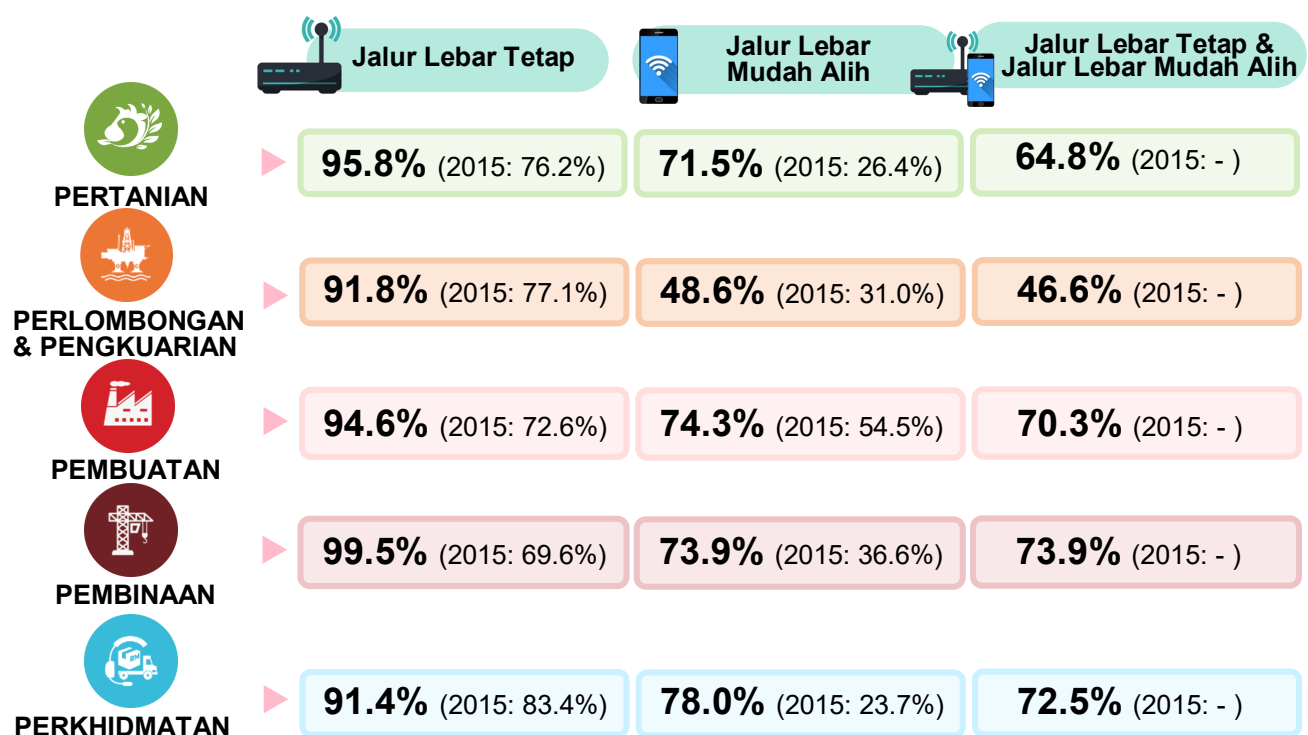
Rajah 25: Jenis Capaian Internet - PMKS, 2015 dan 2022



4.1 JENIS CAPAIAN INTERNET MENGIKUT SEKTOR

PMKS dalam sektor Pembinaan mencatatkan peratusan tertinggi penggunaan jalur lebar tetap dengan 99.5 peratus pada tahun 2022 (2015: 69.6%), diikuti oleh sektor Pertanian, sebanyak 95.8 peratus (2015: 76.2%) dan sektor Pembuatan 94.6 peratus (2015: 72.6%). Sektor Perkhidmatan merekodkan penggunaan tertinggi dalam jalur lebar mudah alih, iaitu dengan 78.0 peratus (2015: 23.7%), diikuti oleh sektor Pembuatan, 74.3 peratus (2015: 54.5%) dan sektor Pembinaan 73.9 peratus (2015: 36.6%). Selain itu, sektor Pembinaan turut mencatatkan peratus tertinggi dalam penggunaan kedua-dua jalur lebar iaitu dengan 73.9 peratus, seperti di **Rajah 26**.

Rajah 26: Jenis Capaian Internet mengikut Sektor - PMKS, 2015 dan 2022



Nota.

“-” merujuk kepada data tidak tersedia

5. TUJUAN PENGGUNAAN INTERNET

Rajah 27 menunjukkan peratus penggunaan internet oleh PMKS mengikut tujuan. Tujuan penggunaan internet untuk menghantar atau menerima e-mel mencatatkan peratus tertinggi iaitu 95.7 peratus (2015: 71.2%). Ini diikuti oleh penggunaan untuk perbankan melalui internet dengan 90.0 peratus (2015: 41.2%) dan mendapatkan maklumat berkaitan barang atau perkhidmatan, 81.2 peratus (2015: 38.5%).

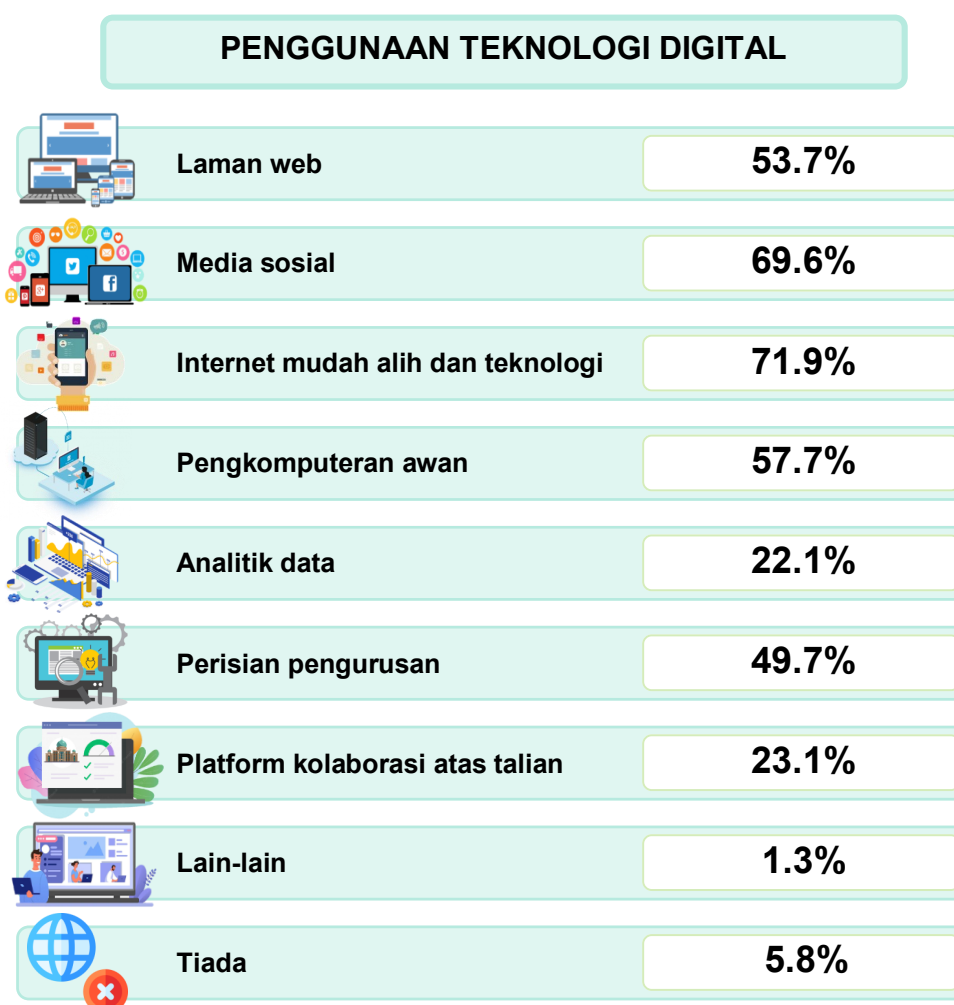
Rajah 27: Tujuan Penggunaan Internet - PMKS, 2015 dan 2022



6. PENGGUNAAN TEKNOLOGI DIGITAL

Penggunaan teknologi digital oleh PMKS menunjukkan peratusan tertinggi dicatatkan oleh internet mudah alih dan teknologi, iaitu dengan 71.9 peratus. Ini diikuti oleh media sosial, 69.6 peratus dan pengkomputeran awan sebanyak 57.7 peratus seperti di **Rajah 28**.

Rajah 28: Penggunaan Teknologi Digital - PMKS, 2022



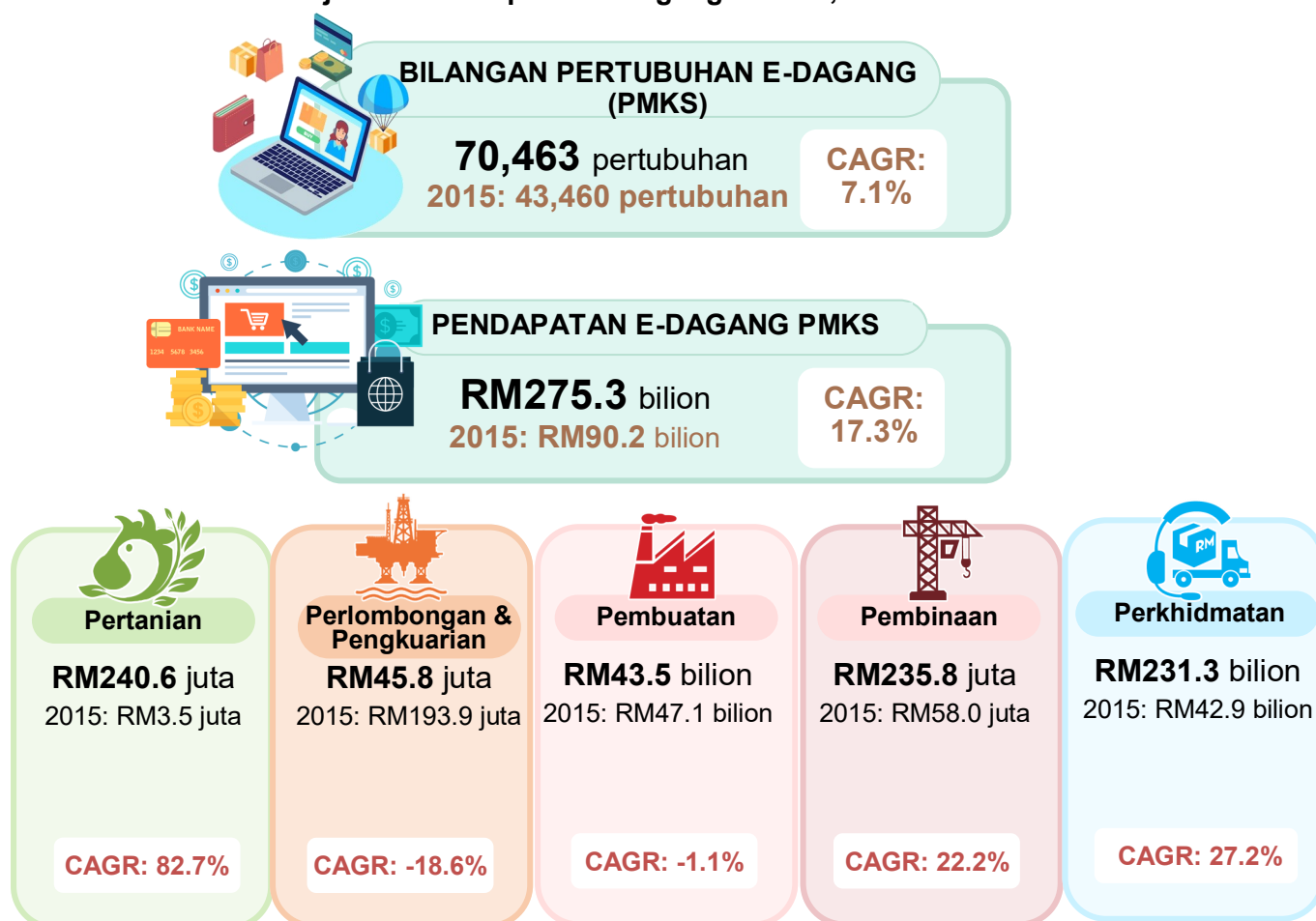
7. PENDAPATAN E-DAGANG

7.1 PENDAPATAN E-DAGANG MENGIKUT SEKTOR

Sebanyak 70,463 pertubuhan PMKS yang terlibat dalam transaksi e-dagang telah direkodkan, berbanding 43,460 pertubuhan pada tahun 2015. Pendapatan melalui transaksi e-dagang oleh PMKS di Malaysia mencapai RM275.3 bilion pada tahun 2022, menunjukkan peningkatan berbanding RM90.2 bilion pada tahun 2015. Kadar pertumbuhan tahunan pada tahun 2022 adalah 17.3 peratus.

Sektor Perkhidmatan menjadi penyumbang utama dengan RM231.3 bilion berbanding RM42.9 bilion (CAGR: 27.2%) pada tahun 2015, diikuti oleh sektor Pembuatan dengan RM43.5 bilion (CAGR: -1.1%) dan sektor Pertanian dengan RM240.6 juta (CAGR: 82.7%) seperti di **Rajah 29**.

Rajah 29: Pendapatan E-Dagang - PMKS, 2015 dan 2022



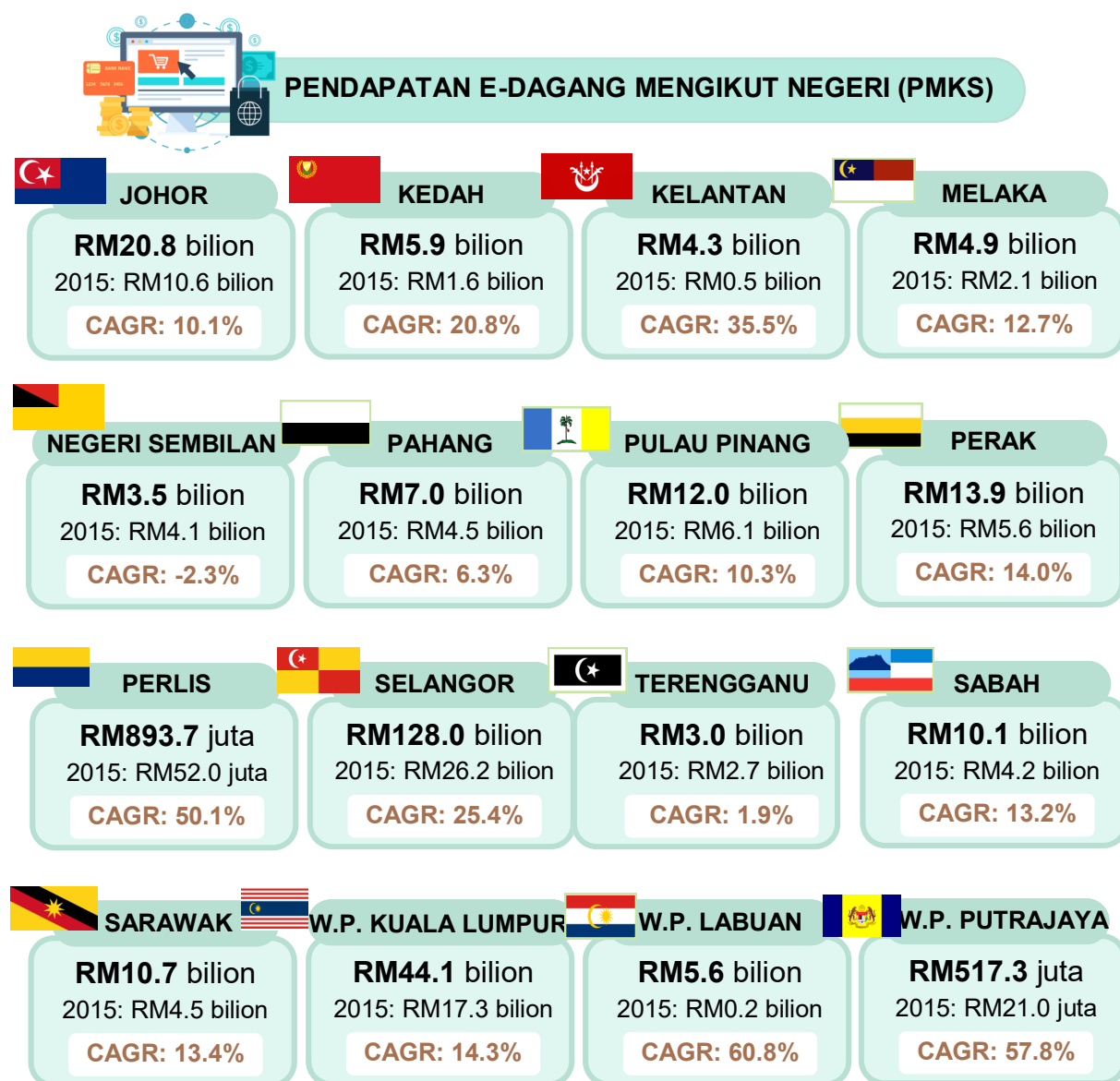
Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

7.2 PENDAPATAN E-DAGANG MENGIKUT NEGERI

Rajah 30 menunjukkan pendapatan e-dagang yang dijana oleh PMKS mengikut negeri. Selangor merekodkan transaksi pendapatan tertinggi dengan jumlah RM128.0 bilion dan kadar pertumbuhan tahunan sebanyak 25.4 peratus. W.P. Kuala Lumpur berada di kedudukan kedua dengan pendapatan RM44.1 bilion (CAGR: 14.3%), sementara Pulau Pinang mencatatkan RM12.0 bilion (CAGR: 10.3%) sebagai negeri ketiga tertinggi dalam pendapatan e-dagang.

Rajah 30: Pendapatan E-Dagang mengikut Negeri - PMKS, 2015 dan 2022



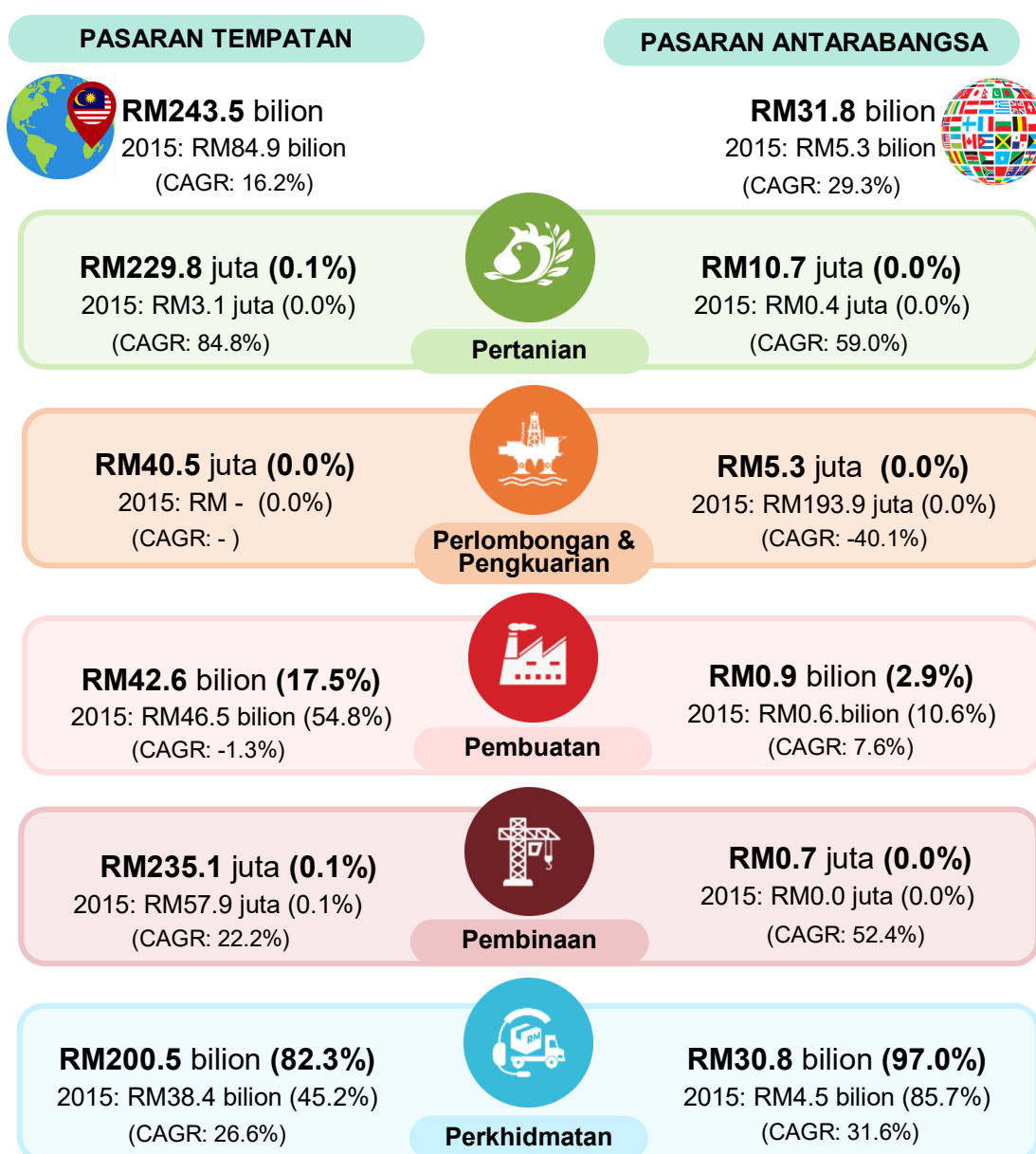
Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

7.3 PENDAPATAN E-DAGANG MENGIKUT JENIS PASARAN

Pendapatan e-dagang oleh PMKS di Malaysia dipacu oleh pasaran tempatan yang berjumlah RM243.5 bilion. Sementara itu, pasaran antarabangsa menyumbang RM31.8 bilion. Bagi pasaran tempatan, sektor Perkhidmatan adalah penyumbang terbesar utama dengan pendapatan berjumlah RM200.5 bilion. Sektor Perkhidmatan juga mencatatkan sumbangan terbesar bagi pasaran antarabangsa, dengan pendapatan sebanyak RM30.8 bilion, seperti dalam **Rajah 31**.

Rajah 31: Pendapatan E-Dagang mengikut Jenis Pasaran - PMKS, 2015 dan 2022



Nota.

CAGR - Kadar perubahan tahunan dikompaun (%) - Peratus sumbangan

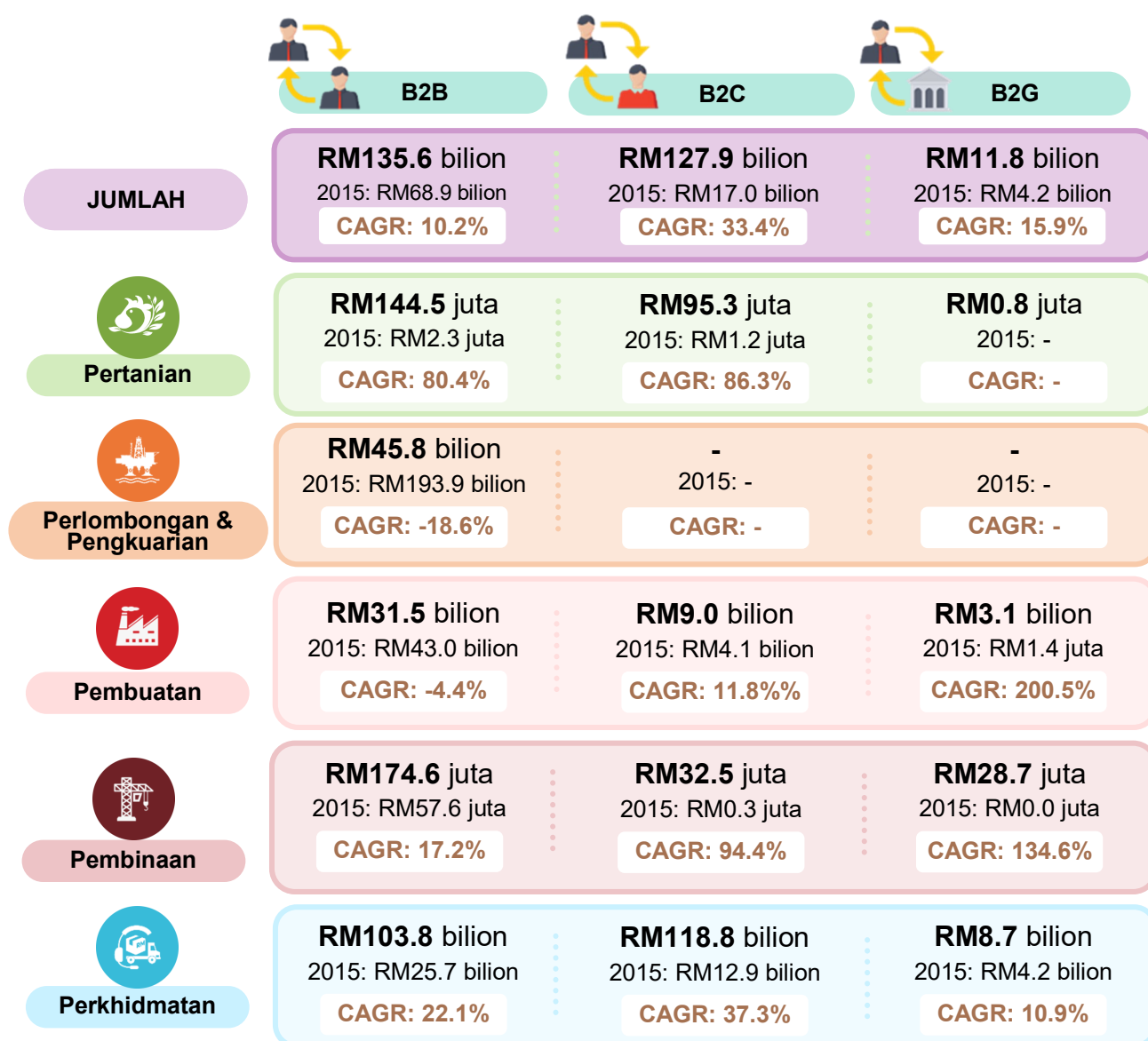
"0" merujuk kepada nilai kurang daripada RM500,000

"-" merujuk kepada data tidak tersedia

7.4 PENDAPATAN E-DAGANG MENGIKUT JENIS PELANGGAN

Pendapatan e-dagang oleh PMKS yang tertinggi mengikut jenis pelanggan adalah daripada *Business to Business* (B2B), yang berjumlah RM135.6 bilion dengan kadar pertumbuhan tahunan sebanyak 10.2 peratus. Ini diikuti oleh *Business to Consumer* (B2C) yang mencatatkan RM127.9 bilion (33.4%), dan *Business to Government* (B2G) menyumbang RM11.8 bilion dengan peningkatan sebanyak 15.9 peratus. Sektor Perkhidmatan merupakan penyumbang utama pendapatan B2B, B2C dan B2G dengan masing-masing sebanyak RM103.8 bilion, RM118.8 bilion dan RM8.7 bilion, seperti yang ditunjukkan di dalam **Rajah 32**.

Rajah 32: Pendapatan E-Dagang mengikut Jenis Pelanggan - PMKS, 2015 dan 2022



Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

"0" merujuk kepada nilai kurang daripada RM500,000

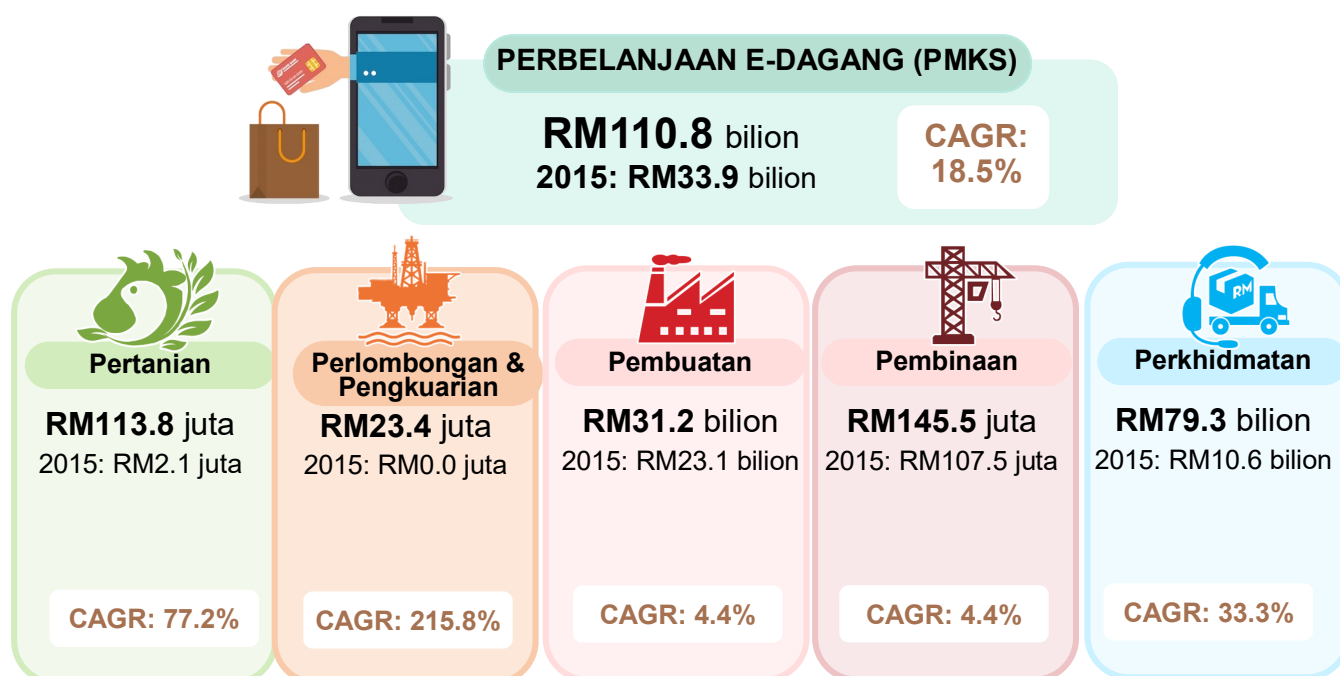
"-" merujuk kepada data tidak tersedia

8. PERBELANJAAN E-DAGANG

8.1 PERBELANJAAN E-DAGANG MENGIKUT SEKTOR

Pada tahun 2022, perbelanjaan e-dagang oleh PMKS mencecah RM110.8 bilion, meningkat daripada RM33.9 bilion pada tahun 2015 dengan kadar pertumbuhan tahunan sebanyak 18.5 peratus. Sektor Perkhidmatan merupakan penyumbang utama mencatatkan RM79.3 bilion dan kadar pertumbuhan tahunan sebanyak 33.3 peratus. Ini diikuti oleh sektor Pembuatan mengikut dengan RM31.2 bilion (CAGR: 4.4%), manakala sektor Pembinaan merekodkan RM145.5 juta dengan kadar pertumbuhan sebanyak 4.4 peratus seperti di **Rajah 33**.

Rajah 33: Perbelanjaan E-Dagang - PMKS, 2015 dan 2022



Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

"0" merujuk kepada nilai kurang daripada RM500,000

8.2 PERBELANJAAN E-DAGANG MENGIKUT NEGERI

Berdasarkan **Rajah 34**, Selangor masih memegang rekod perbelanjaan e-dagang tertinggi oleh PMKS, dengan jumlah RM41.5 bilion dan kadar pertumbuhan tahunan sebanyak 25.4 peratus. W.P. Kuala Lumpur berada di tempat kedua dengan perbelanjaan RM18.8 bilion (CAGR: 23.2%), diikuti oleh Pulau Pinang yang mencatatkan perbelanjaan e-dagang sebanyak RM6.0 bilion (CAGR: 12.9%).

Rajah 34: Perbelanjaan E-Dagang mengikut Negeri - PMKS, 2015 dan 2022



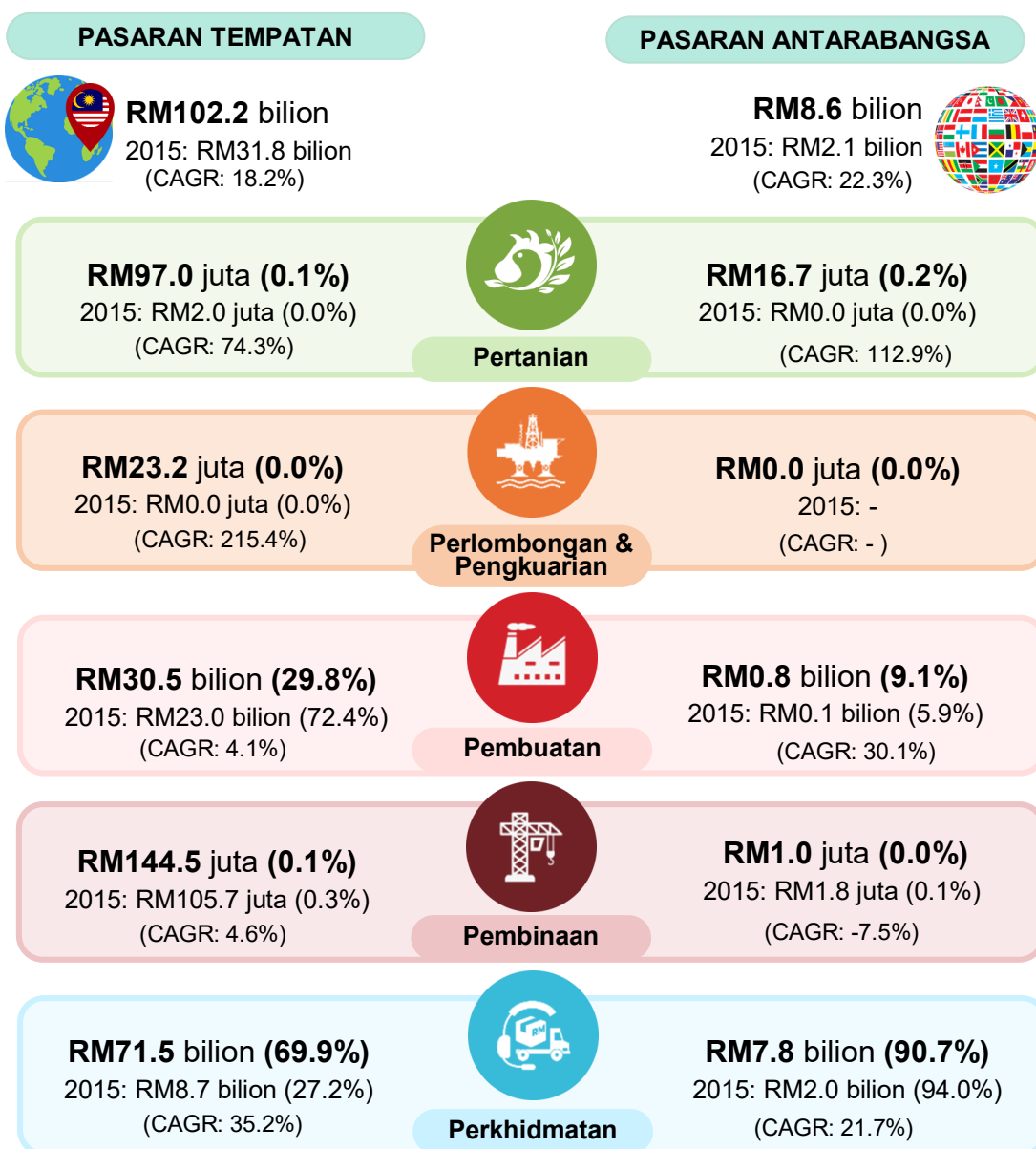
Nota.

CAGR - Kadar pertumbuhan tahunan dikompaun

8.3 PERBELANJAAN E-DAGANG MENGIKUT JENIS PASARAN

Perbelanjaan daripada e-dagang oleh PMKS di Malaysia didominasi oleh pasaran tempatan, yang mencatatkan jumlah RM102.2 bilion. Sementara itu, pasaran antarabangsa menyumbang sebanyak RM8.6 bilion. Sektor Perkhidmatan merupakan penyumbang utama perbelanjaan e-dagang bagi kedua-dua jenis pasaran, dengan RM71.5 bilion untuk pasaran tempatan dan RM7.8 bilion untuk pasaran antarabangsa, seperti di **Rajah 35**.

Rajah 35: Perbelanjaan E-Dagang mengikut Jenis Pasaran - PMKS, 2015 dan 2022



Nota.

CAGR - Kadar perubahan tahunan dikompaun

(%) - Peratus sumbangan

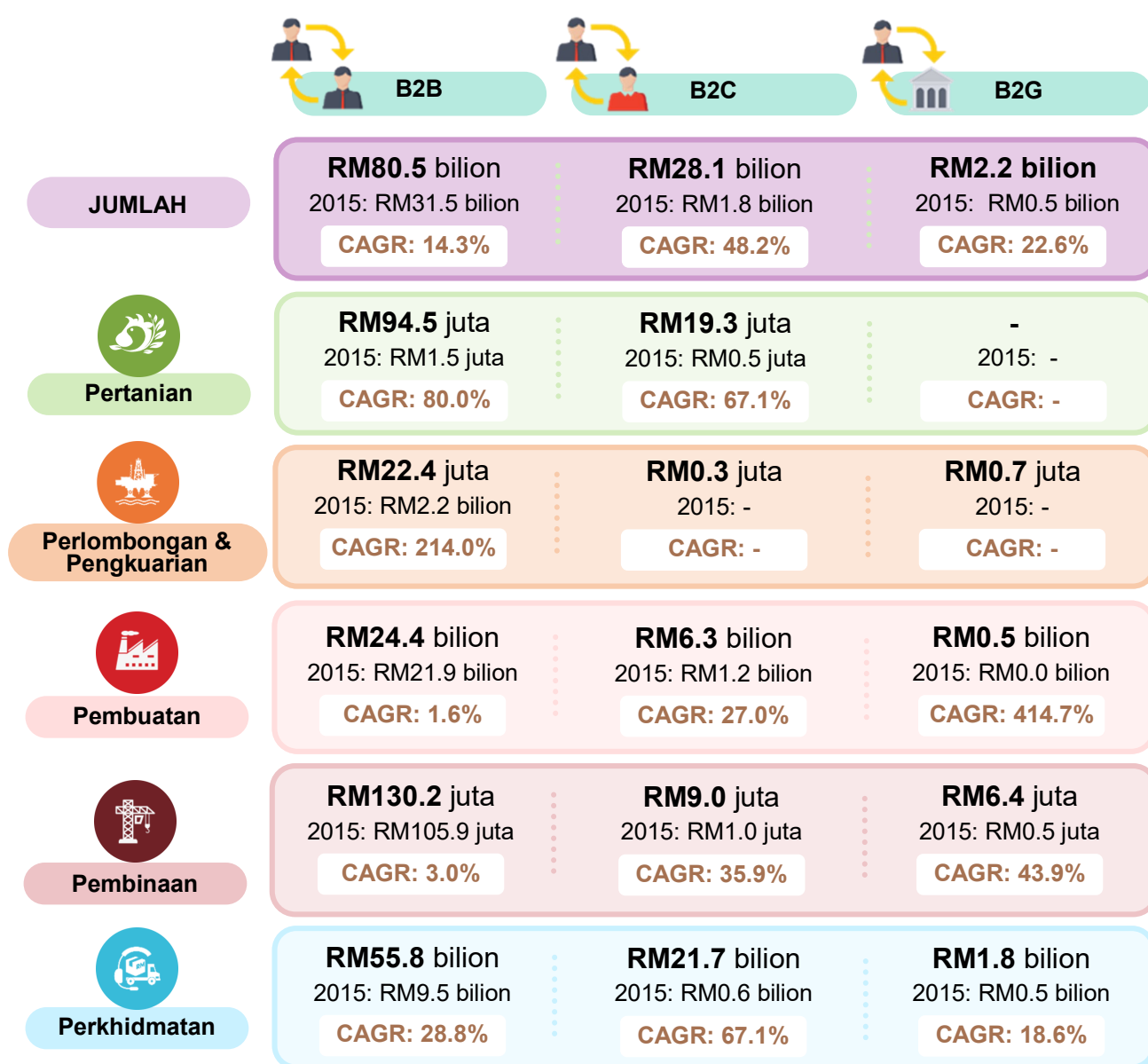
"0" merujuk kepada nilai kurang daripada RM500,000

"-" merujuk kepada data tidak tersedia

8.4 PERBELANJAAN E-DAGANG MENGIKUT JENIS PELANGGAN

Perbelanjaan daripada transaksi e-dagang oleh PMKS mengikut jenis pelanggan menunjukkan bahawa B2B mencatatkan RM80.5 bilion dengan kadar pertumbuhan tahunan sebanyak 14.3 peratus. Ini diikuti, B2C yang merekodkan RM28.1 bilion (CAGR: 48.2%) dan B2G menyumbang RM2.2 bilion (CAGR: 22.6%). Sektor Perkhidmatan adalah penyumbang utama bagi perbelanjaan e-dagang dalam ketiga-tiga jenis pelanggan dengan RM55.8 bilion bagi B2B, RM21.7 bilion bagi B2C dan RM1.8 bilion bagi B2G, seperti di **Rajah 36**.

Rajah 36: Perbelanjaan E-Dagang mengikut Jenis Pelanggan - PMKS, 2015 dan 2022



Nota.

CAGR - Kadar perubahan tahunan dikompaun

"0" merujuk kepada nilai kurang daripada RM500,000

"-" merujuk kepada data tidak tersedia

SUMMARY OF FINDINGS

USAGE OF ICT AND E-COMMERCE BY ESTABLISHMENT

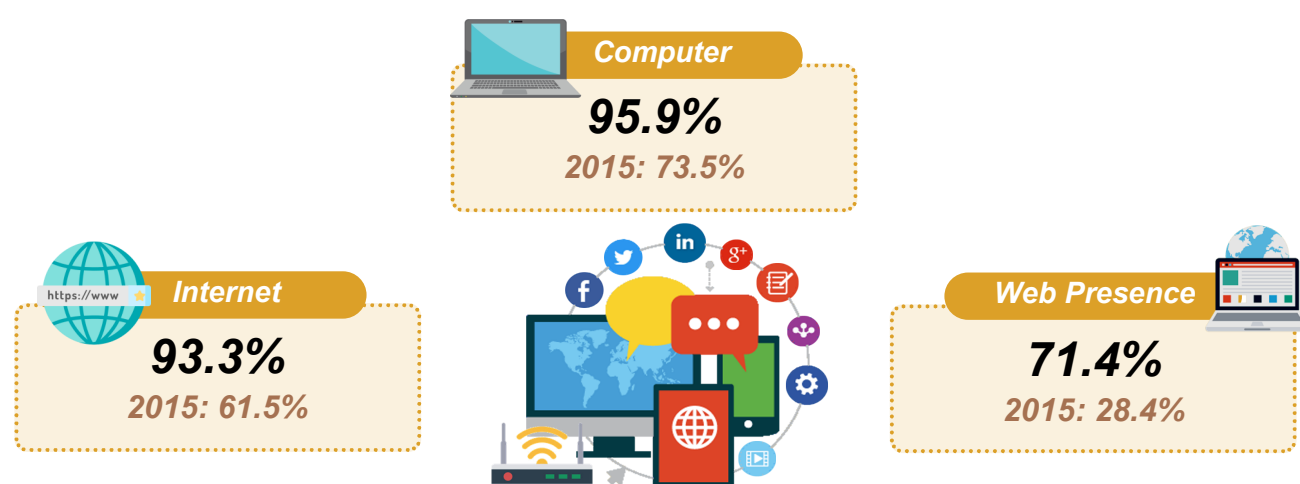
1. INTRODUCTION

This usage of ICT and E-Commerce (ICTEC) 2023 publication presents the statistics of Usage of Information & Communication Technology (ICT) and E-Commerce in Malaysia that were compiled based on the Economic Census 2023 for the reference year of 2022. ICTEC 2023 comprises five main sectors: Agriculture, Mining & quarrying, Manufacturing, Construction, and Services.

2. USAGE OF ICT

The census findings show that a total of 1,091,867 establishments were operating in 2022 with 95.9 per cent of establishments used computers (including personal computers, laptops, and tablets), compared to 73.5 per cent in 2015. Internet usage (using the internet accessible through computers and other devices such as mobile phones) in establishments increased 93.3 per cent (2015: 61.5%). Meanwhile, establishments with web presence recorded 71.4 per cent (2015: 28.4%), as shown in **Figure 1**.

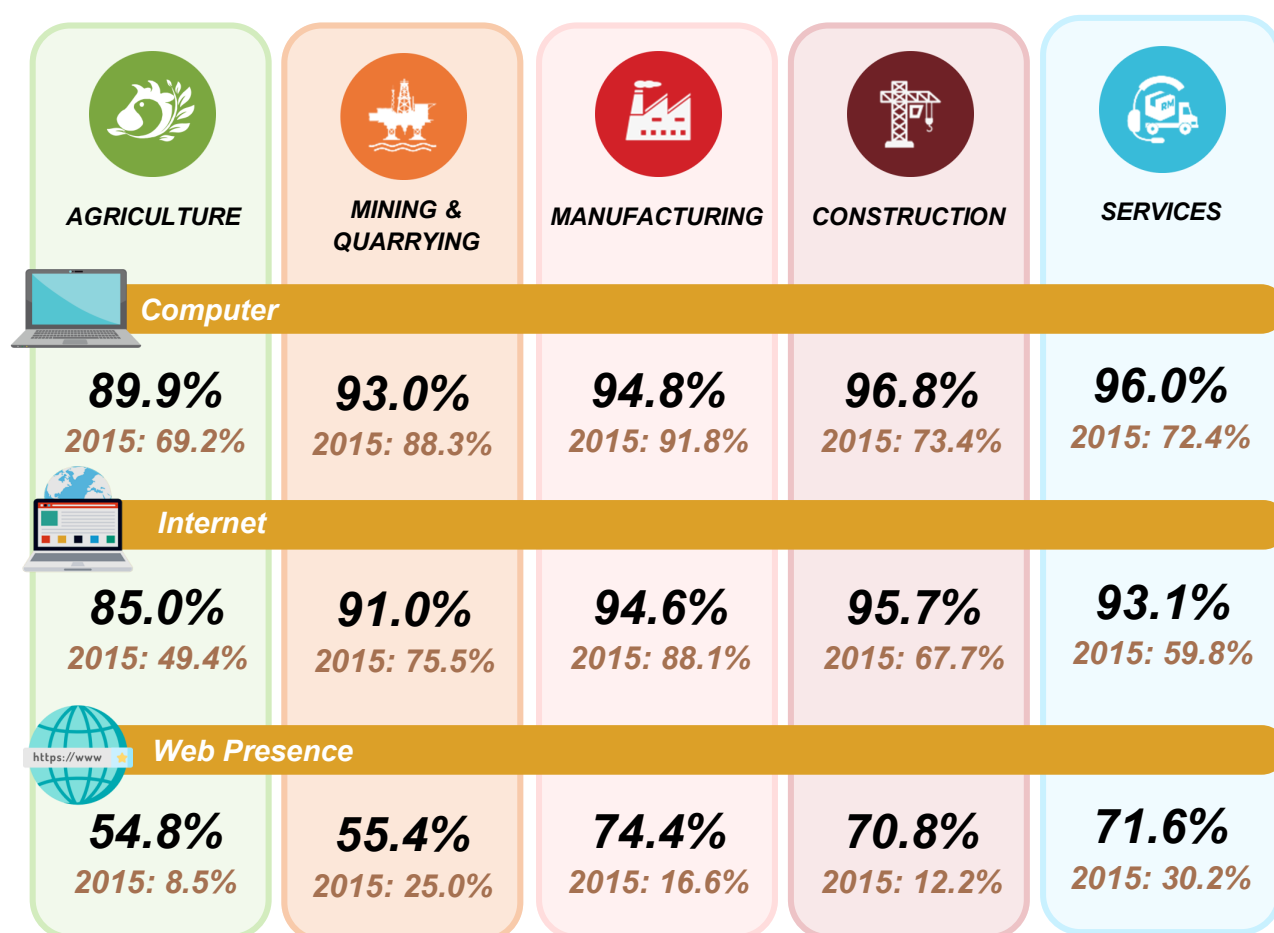
Figure 1: Usage of Computer, Internet and Web Presence, 2015 and 2022



2.1 USAGE OF ICT BY SECTOR

The usage of computer, internet, and web presence by sector is shown in **Figure 2**. Construction sector recorded the highest percentage in computer and internet usage at 96.8 per cent (2015: 73.4%) and 95.7 per cent (2015: 67.7%), respectively. Meanwhile, Manufacturing sector recorded the highest percentage in web presence usage at 74.4 per cent (2015: 16.6%).

Figure 2: Percentage Usage of Computer, Internet and Web Presence by Sector, 2015 and 2022



2.2 ICT USAGE BY STATE

W. P. Kuala Lumpur recorded the highest percentage of computer, internet and web presence usage by establishments at 99.8 per cent, 99.6 per cent, and 91.0 per cent, respectively, as shown in **Figure 3**.

Figure 3: Percentage of Computer, Internet and Web Presence Usage by State, 2022

	 Computer	 Internet	 Web Presence
 Johor	97.9%	97.6%	79.7%
 Kedah	90.7%	81.8%	55.7%
 Kelantan	93.2%	79.3%	40.5%
 Melaka	97.0%	93.1%	67.7%
 Negeri Sembilan	93.8%	92.9%	60.8%
 Pahang	94.0%	92.6%	58.6%
 Pulau Pinang	99.0%	98.7%	78.9%
 Perak	95.5%	84.9%	58.7%
 Perlis	93.8%	78.4%	56.6%
 Selangor	99.2%	98.9%	85.2%
 Terengganu	92.1%	91.3%	62.1%
 Sabah	88.3%	84.8%	45.6%
 Sarawak	85.6%	82.3%	47.8%
 W.P. Kuala Lumpur	99.8%	99.6%	91.0%
 W.P. Labuan	95.3%	93.3%	64.3%
 W.P. Putrajaya	99.2%	99.2%	88.9%
Supra	100.0%	100.0%	100.0%
 MALAYSIA	95.9%	93.3%	71.4%

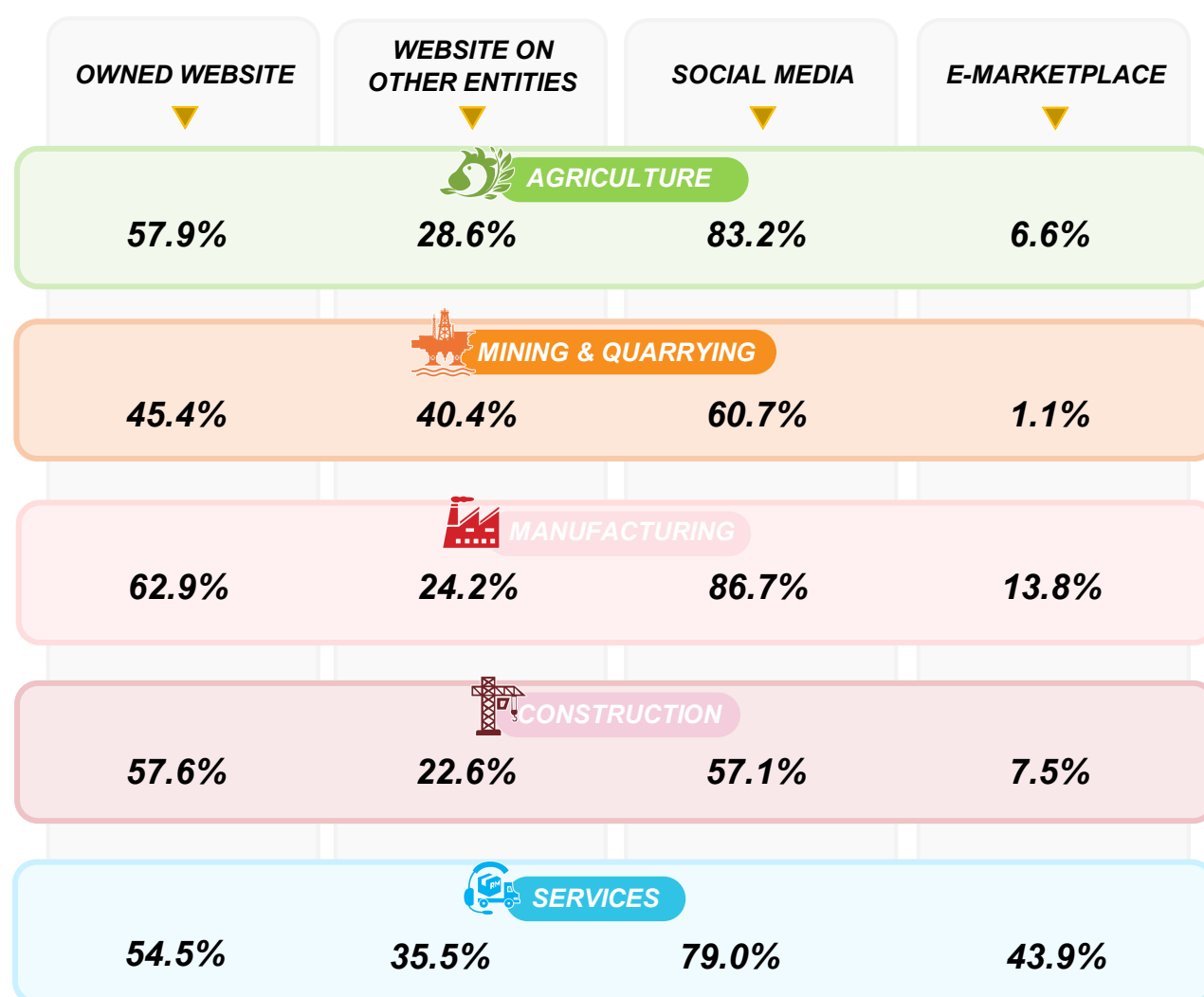
Note.

Supra - Covers production activities that beyond the centre of predominant economic interest for any state

3. TYPES OF WEB PRESENCE OWNERSHIP BY SECTOR

Figure 4 shows the types of web presence owned by establishments according to sector. Manufacturing sector recorded the highest percentage in two types of web presence usage: social media usage (86.7%) and owned websites (62.9%). Meanwhile, Mining & quarrying sector recorded the highest percentage in the use of websites on other entities (40.4%), and Services sector recorded the highest percentage in e-marketplace usage (43.9%).

Figure 4 : Types of Web Presence Ownership by Sector, 2022

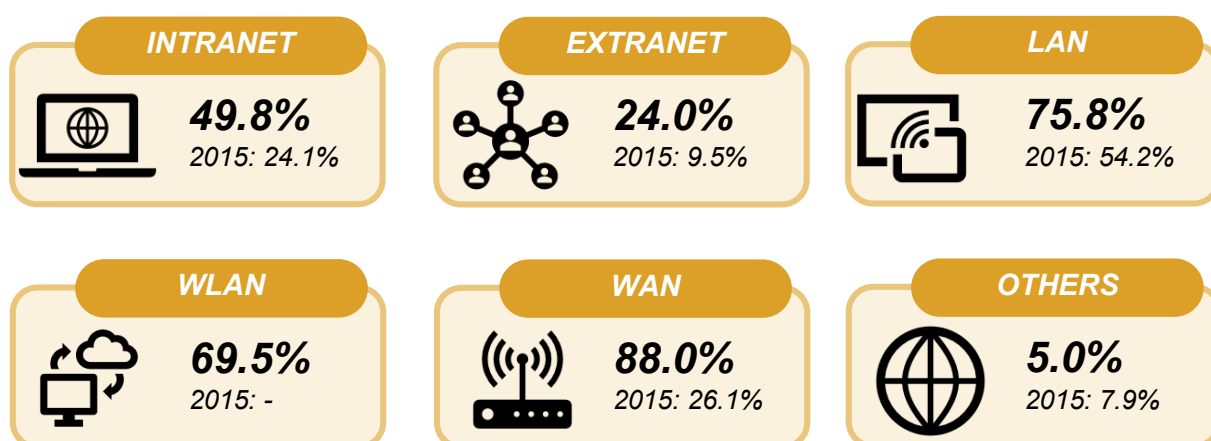


4. COMPUTER NETWORK INFRASTRUCTURE

In 2022, the adoption of network technologies saw substantial increase compared to 2015, with Wide Area Network (WAN) leading at 88.0 per cent, up from 26.1 per cent. Local Area Network (LAN) reached 75.8 per cent, while Wireless LAN (WLAN) recorded 69.5 per cent. Usage of Intranet stood at 49.8 per cent, and extranet at 24.0 per cent, reflecting steady integration in establishments. The Others category reduce to 5.0 per cent, indicating a shift towards more established network solutions, emphasising the growing reliance on advanced connectivity for operational efficiency.

These trends underscore the growing adoption of robust network systems to enhance communication and operational capabilities. The data also indicates a steady shift from less-defined network categories towards more reliable and integrated systems, demonstrating advancements in digital infrastructure across industries as shown in **Figure 5**.

Figure 5: Types of Computer Network Infrastructure Usage, 2015 and 2022



Note.

“-” refers to data not available

4.1 COMPUTER NETWORK INFRASTRUCTURE BY SECTOR

The use of intranet, extranet and LAN is dominated by Manufacturing sector, with 70.0 per cent, 52.5 per cent and 89.0 per cent, respectively. Meanwhile, for WLAN (70.7%) and WAN (91.0%) were recorded by Services sector, and other infrastructures (23.4%) were recorded by Mining & quarrying sector, as shown in **Figure 6**.

Figure 6: Types of Computer Network Infrastructure Usage by Sector, 2015 and 2022

 INTRANET	 EXTRANET	 LAN	 WLAN	 WAN	 OTHERS
 AGRICULTURE					
58.6% 2015: 23.2%	16.7% 2015: 4.5%	84.2% 2015: 54.2%	54.9% 2015: -	53.0% 2015: 26.4%	10.4% 2015: 10.8%
 MINING & QUARRYING					
53.2% 2015: 28.9%	21.4% 2015: 7.7%	84.5% 2015: 57.8%	64.4% 2015: -	53.1% 2015: 35.5%	23.4% 2015: 7.5%
 MANUFACTURING					
70.0% 2015: 46.1%	52.5% 2015: 36.0%	89.0% 2015: 61.8%	69.0% 2015: -	52.5% 2015: 22.6%	12.8% 2015: 8.8%
 CONSTRUCTION					
40.5% 2015: 16.8%	13.2% 2015: 2.6%	62.4% 2015: 50.8%	57.2% 2015: -	81.4% 2015: 34.1%	5.8% 2015: 11.8%
 SERVICES					
49.2% 2015: 22.5%	23.2% 2015: 7.6%	75.9% 2015: 53.7%	70.7% 2015: -	91.0% 2015: 26.0%	4.4% 2015: 7.5%

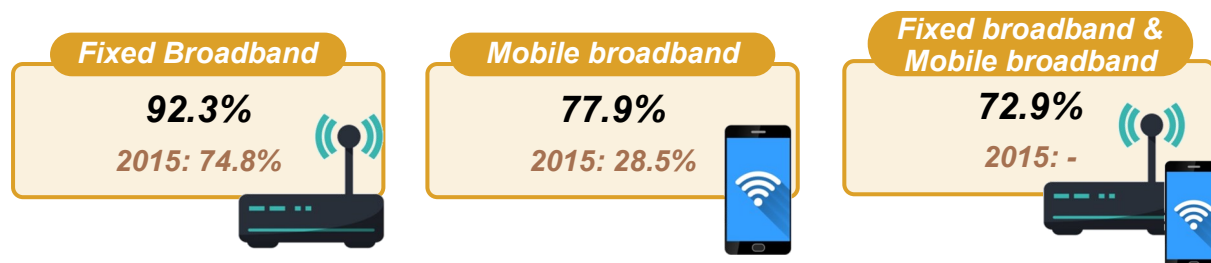
Note.

“-” refers to data not available

5. TYPES OF INTERNET ACCESS

A total of 92.3 per cent (2015: 74.8%) of establishments use fixed broadband for internet access, followed by mobile broadband and the use of both fixed and mobile broadband at 77.9 per cent (2015: 28.5%) and 72.9 per cent, respectively, as shown in **Figure 7**.

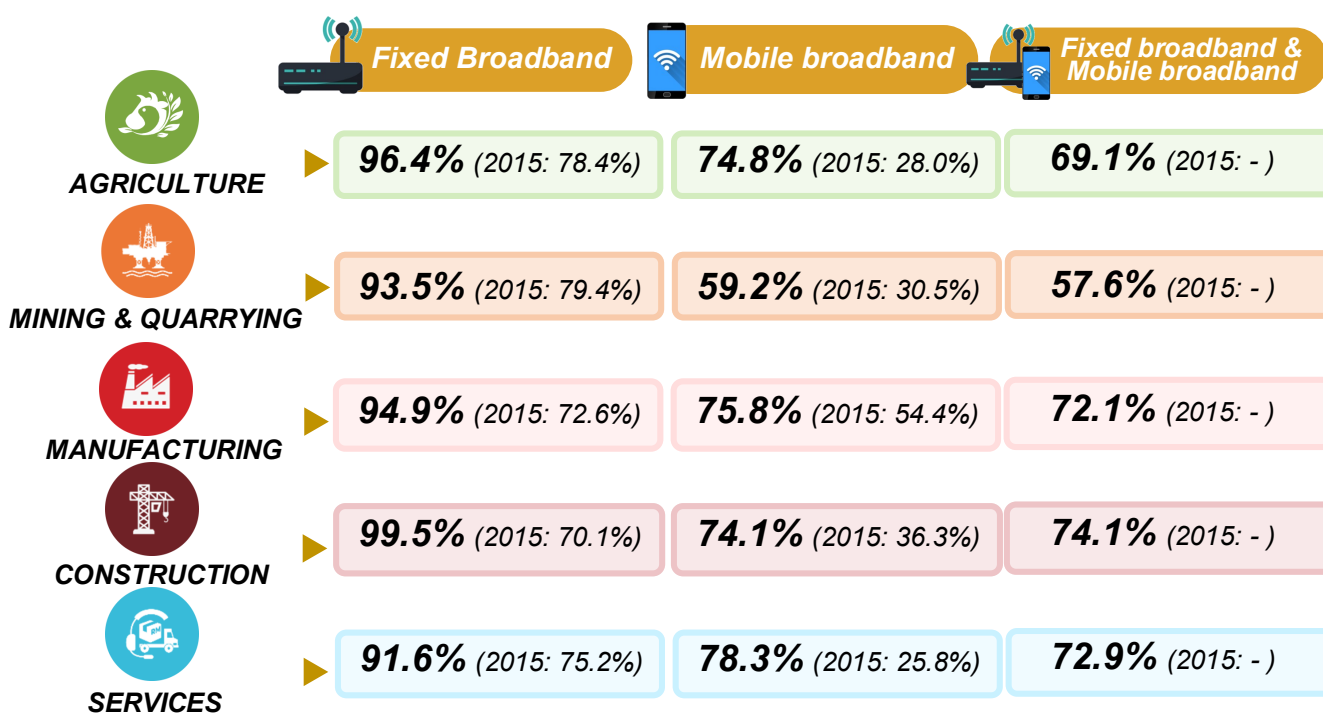
Figure 7: Types of Internet Access, 2015 and 2022



5.1 TYPES OF INTERNET ACCESS BY SECTOR

Establishments in Construction sector recorded the highest internet access for fixed broadband usage at 99.5 per cent in 2022 (2015: 70.1%), followed by Agriculture sector at 96.4 per cent (2015: 78.4%) and Manufacturing sector at 94.9 per cent (2015: 72.6%). Services sector recorded the highest usage of mobile broadband at 78.3 per cent (2015: 25.8%), followed by Manufacturing sector at 75.8 per cent (2015: 54.4%) and Agriculture sector at 74.8 per cent (2015: 28.0%). Meanwhile, Construction sector recorded the highest percentage for the usage of both types of broadband at 74.1 per cent, as shown in **Figure 8**.

Figure 8: Types of Internet Access by Sector, 2015 and 2022



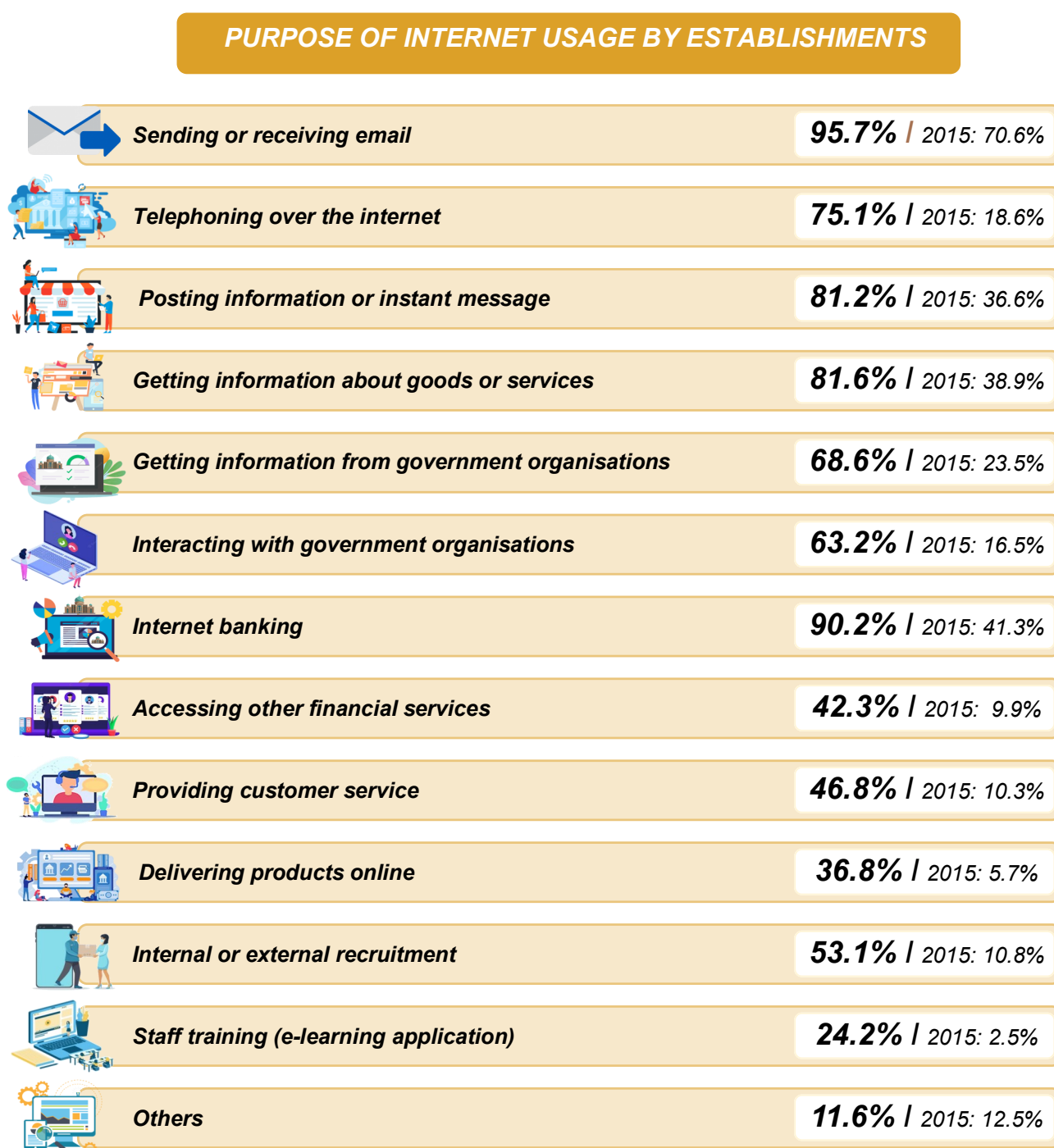
Note.

“-” refers to data not available

6. PURPOSE OF INTERNET USAGE

In **Figure 9** shows the percentage of internet usage purposes by establishments. The purpose of using the internet for sending or receiving emails recorded the highest percentage at 95.7 per cent (2015: 70.6%). This was followed by internet banking at 90.2 per cent (2015: 41.3%) and getting information about goods or services at 81.6 per cent (2015: 38.9%).

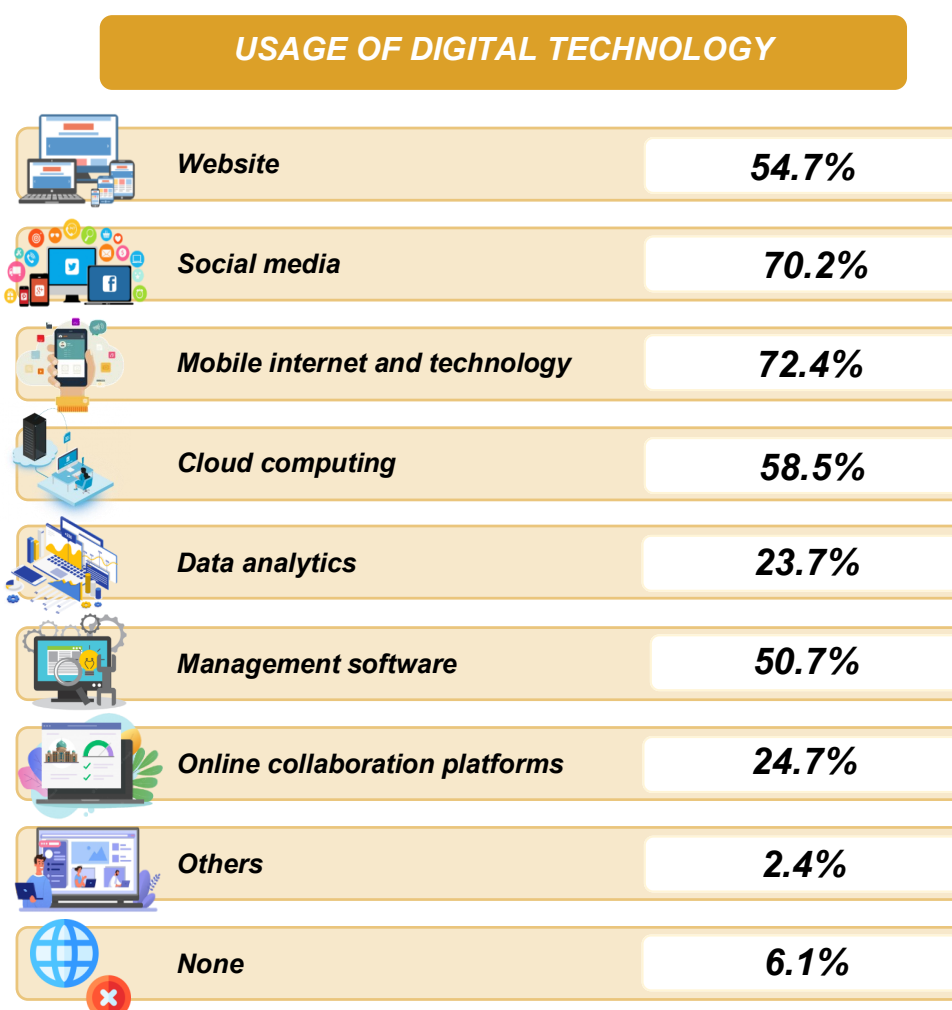
Figure 9: Purpose of Internet Usage by Establishments, 2015 and 2022



7. USAGE OF DIGITAL TECHNOLOGY

The usage of digital technology for mobile internet and technology recorded the highest percentage at 72.4 per cent. This was followed by social media at 70.2 per cent and cloud computing at 58.5 per cent, as shown in **Figure 10**.

Figure 10: Usage of Digital Technology, 2022

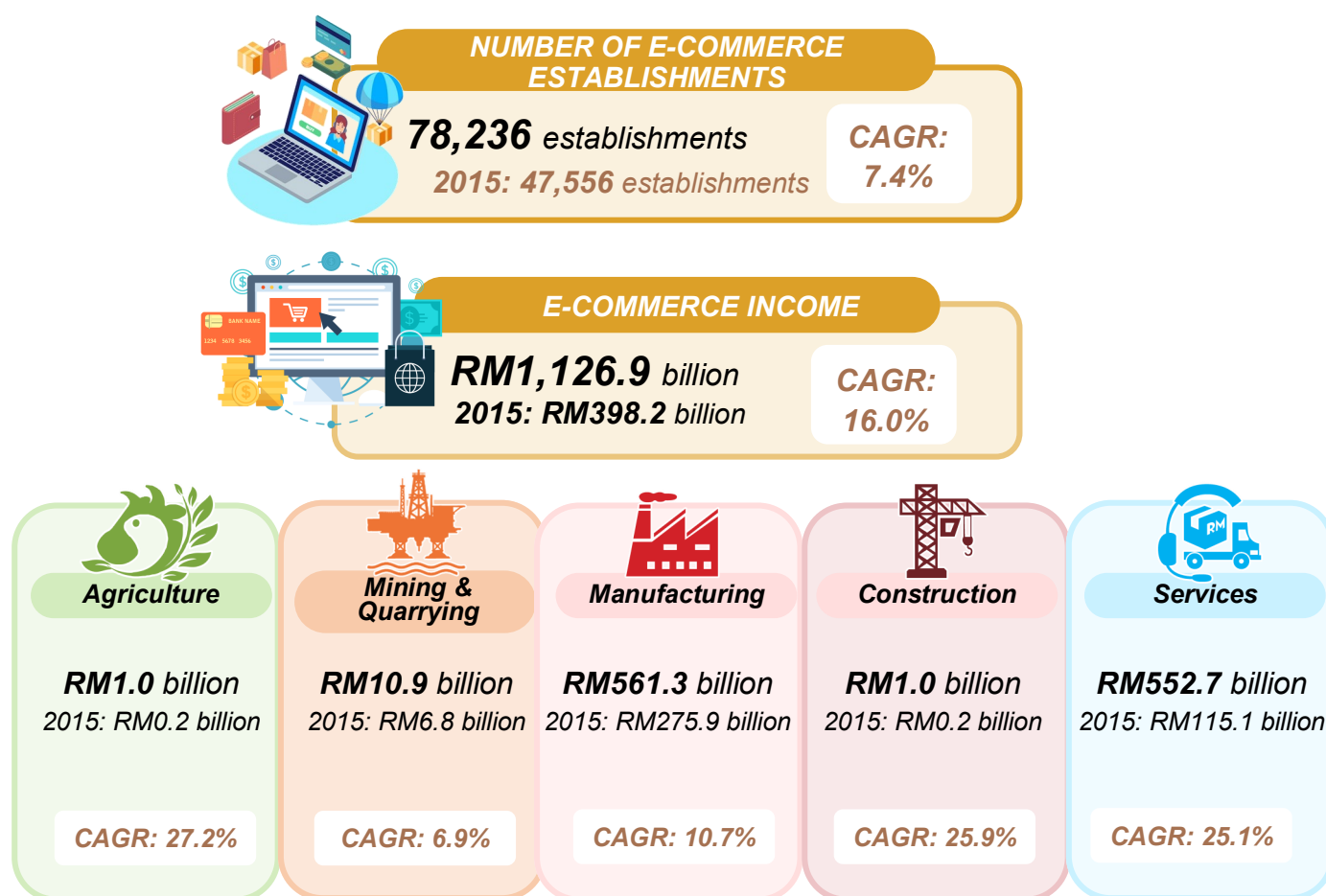


8. E-COMMERCE INCOME

8.1 E-COMMERCE INCOME BY SECTOR

A total of 78,236 establishments engaged in e-commerce transactions were recorded, from the overall 1,091,867 establishments in 2022 (2015: 47,556 establishments). Income from e-commerce transactions in Malaysia reached RM1,126.9 billion in 2022, compared to RM398.2 billion in 2015 with an annual growth rate of 16.0 per cent. Manufacturing sector is the primary contributor amounting to RM561.3 billion, with an annual growth rate of 10.7 per cent. This was followed by Services sector with RM552.7 billion (CAGR: 25.1%) and Mining & quarrying with RM10.9 billion (CAGR: 6.9%), as shown in **Figure 11**.

Figure 11: E-Commerce Income, 2015 and 2022



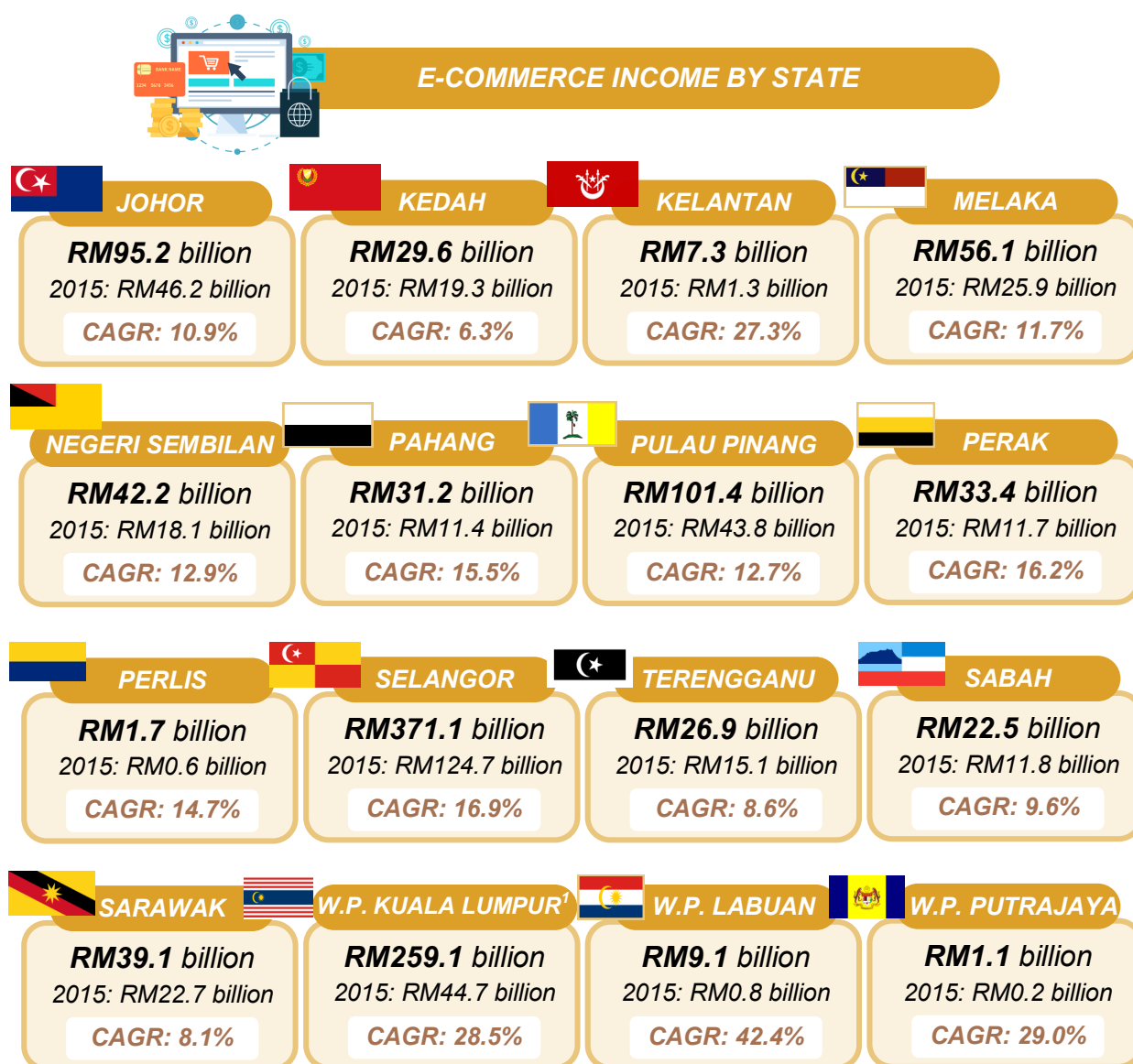
Note.

CAGR - Compound annual growth rate

8.2 E-COMMERCE INCOME BY STATE

Figure 12 illustrates e-commerce income by state. Selangor recorded the highest income from e-commerce transactions, totalling RM371.1 billion, with an annual growth rate of 16.9 per cent. W. P. Kuala Lumpur ranks second with RM259.1 billion (CAGR: 28.5%), while Pulau Pinang recorded RM101.4 billion (CAGR: 12.7%) as the third highest.

Figure 12: E-Commerce Income by State, 2015 and 2022



Note.

CAGR - Compound annual growth rate

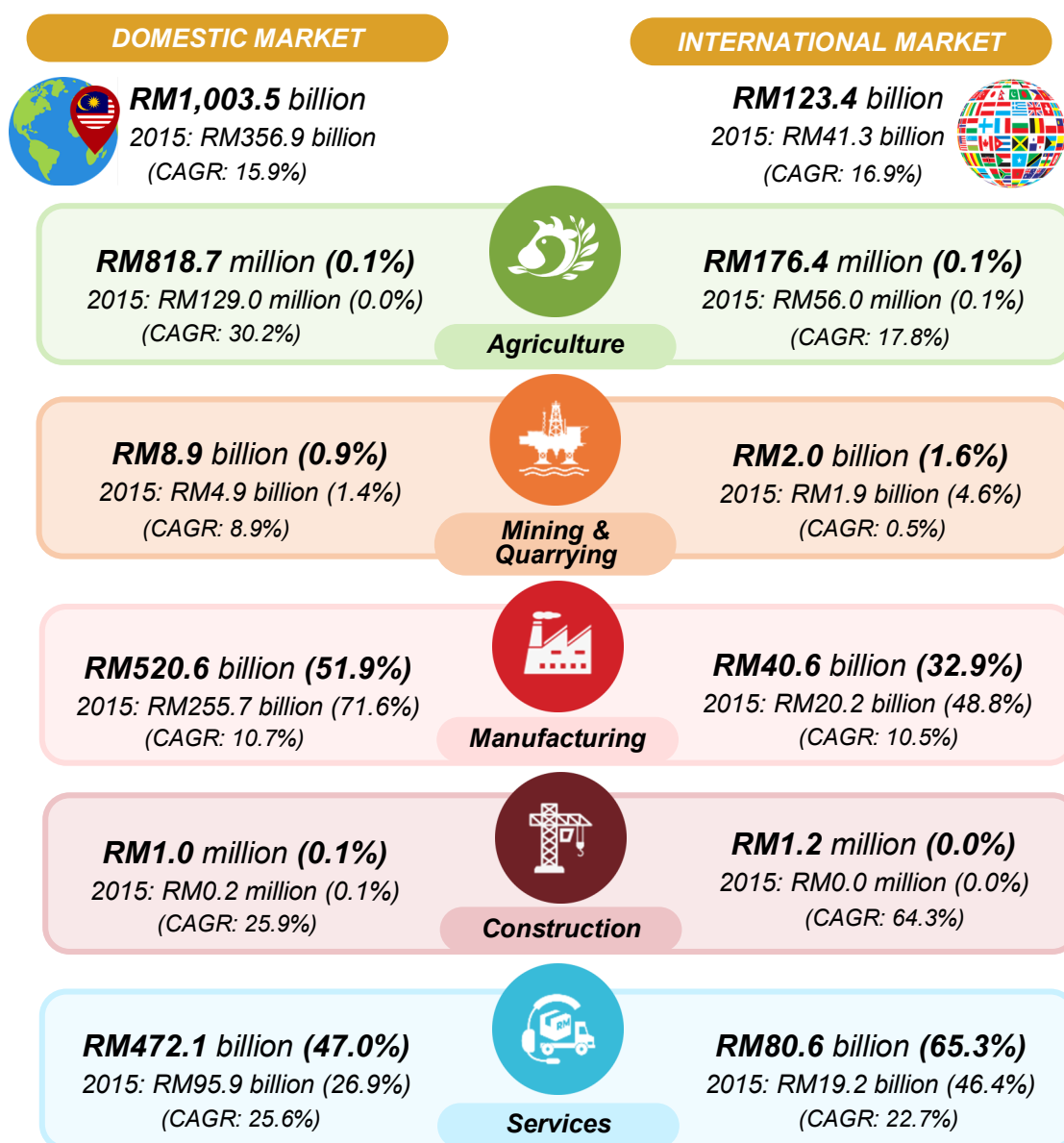
¹ Include SUPRA

Supra - Covers production activities that beyond the centre of predominant economic interest for any state

8.3 E-COMMERCE INCOME BY TYPE OF MARKET

E-commerce income in Malaysia is primarily driven by the domestic market, totalling RM1,003.5 billion. Meanwhile, the international market contributes only RM123.4 billion in 2022. For the domestic market, Manufacturing sector is the main contributor with a value of RM520.6 billion. On the other hand, the international market is dominated by the Services sector, with an income of RM80.6 billion, as illustrated in **Figure 13**.

Figure 13: E-Commerce Income by Type of Market, 2015 and 2022



Note.

CAGR - Compound annual growth rate

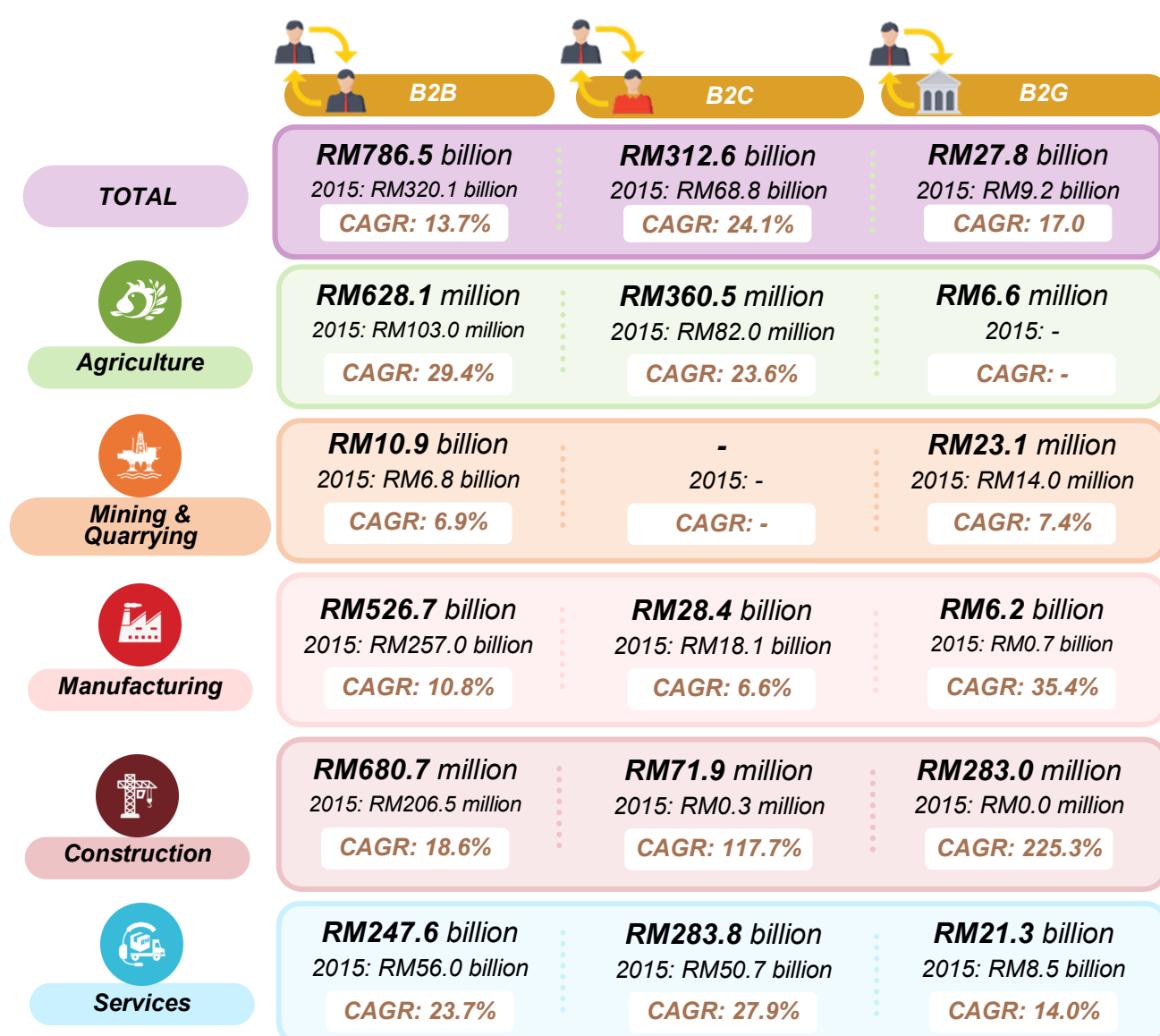
(%) - Percentage share

"0" refers to a value of less than RM500,000

8.4 E-COMMERCE INCOME BY TYPE OF CUSTOMER

The highest e-commerce income by type of customer comes from Business to Business (B2B), totalling RM786.5 billion with an annual growth rate of 13.7 per cent. Subsequently, Business to Consumer (B2C) recorded RM312.6 billion (CAGR: 24.1%), and Business to Government (B2G) contributed RM27.8 billion (CAGR: 17.0%). The Manufacturing sector is the primary contributor to B2B income, amounting to RM526.7 billion. Meanwhile, the Services sector dominates B2C and B2G with contributions of RM283.8 billion and RM21.3 billion, respectively, as shown in **Figure 14**.

Figure 14: E-Commerce Income by Type of Customer, 2015 and 2022



Note.

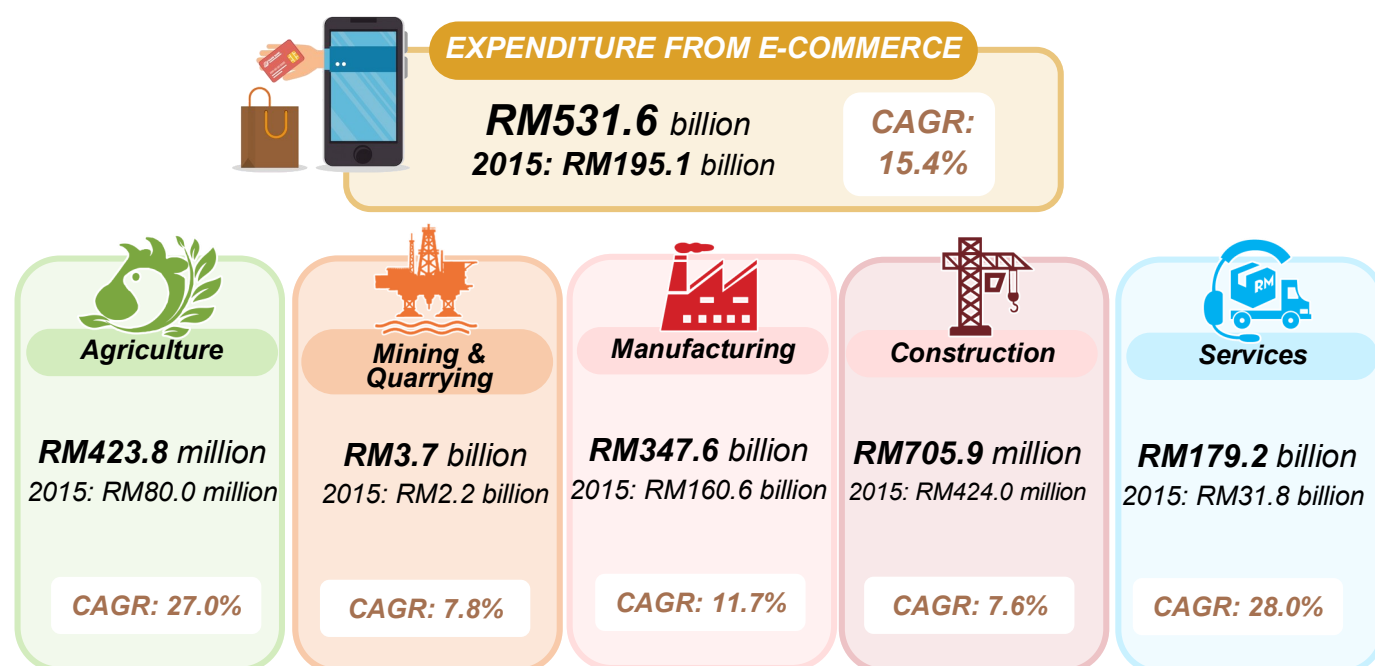
CAGR - Compound annual growth rate
 "0" refers to a value of less than RM500,000
 "-" refers to data not available

9. EXPENDITURE FROM E-COMMERCE

9.1 E-COMMERCE EXPENDITURE BY SECTOR

Expenditure recorded from e-commerce transactions in 2022 amounted to RM531.6 billion, an increase from RM195.1 billion in 2015, with an annual growth rate of 15.4 per cent. Manufacturing sector is the primary contributor, with RM347.6 billion and an annual growth rate of 11.7 per cent. This was followed by Services sector with a value of RM179.2 billion (CAGR: 28.0%), and Mining & quarrying sector with RM3.7 billion (CAGR: 7.8%), respectively, as shown in **Figure 15**.

Figure 15: Expenditure from E-Commerce , 2015 and 2022



Note.

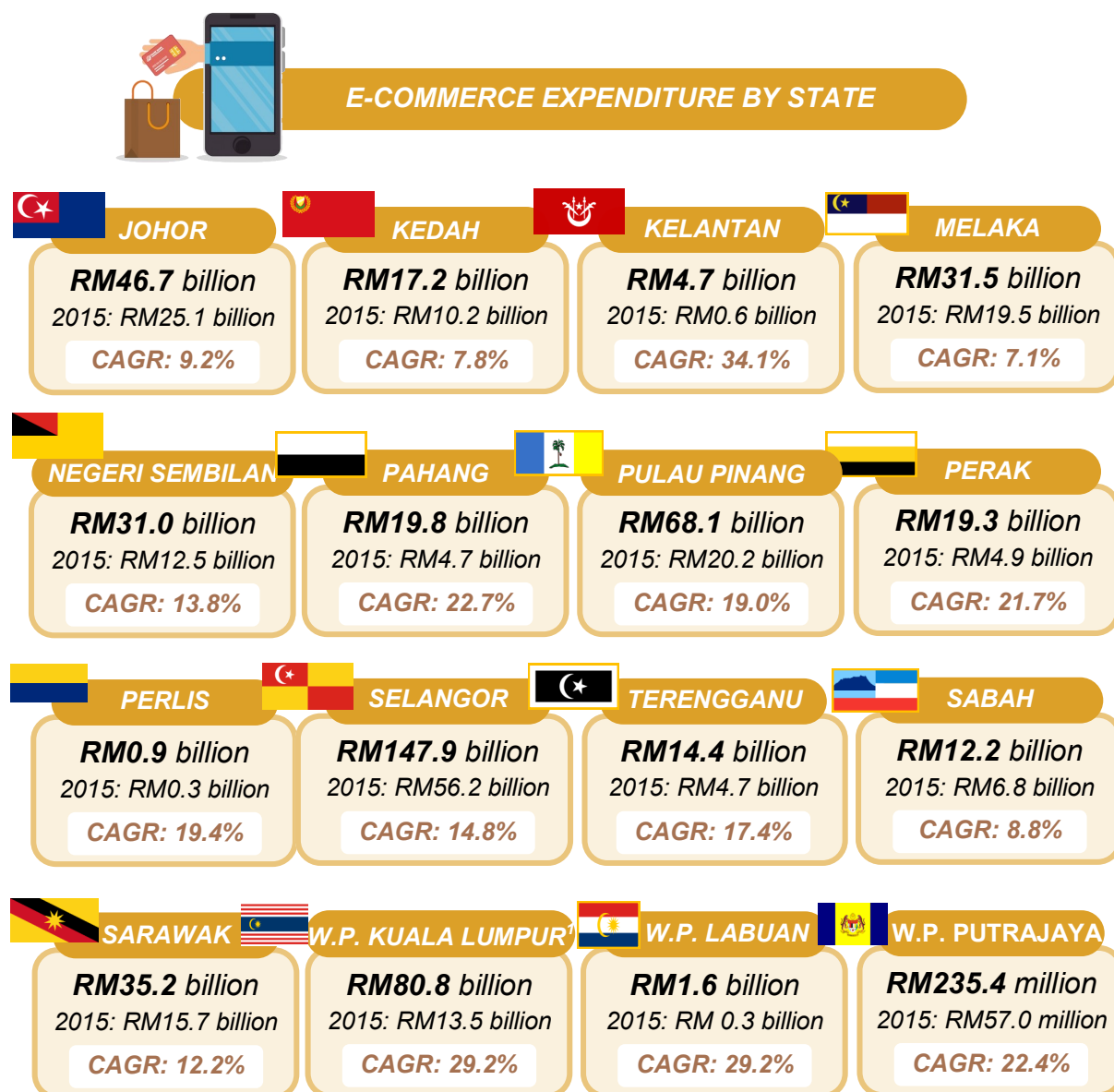
(%) - Percentage share

CAGR - Compound annual growth rate

9.2 E-COMMERCE EXPENDITURE BY STATE

Figure 16 shows that Selangor continued to record the highest expenditure from e-commerce transactions by RM147.5 billion, with an annual growth rate of 14.8 per cent. W. P. Kuala Lumpur ranks second with RM80.8 billion (CAGR: 29.2%), followed by Pulau Pinang with e-commerce expenditure of RM68.1 billion (CAGR: 19.0%).

Figure 16: E-Commerce Expenditure by State, 2015 and 2022



Note.

CAGR - Compound annual growth rate

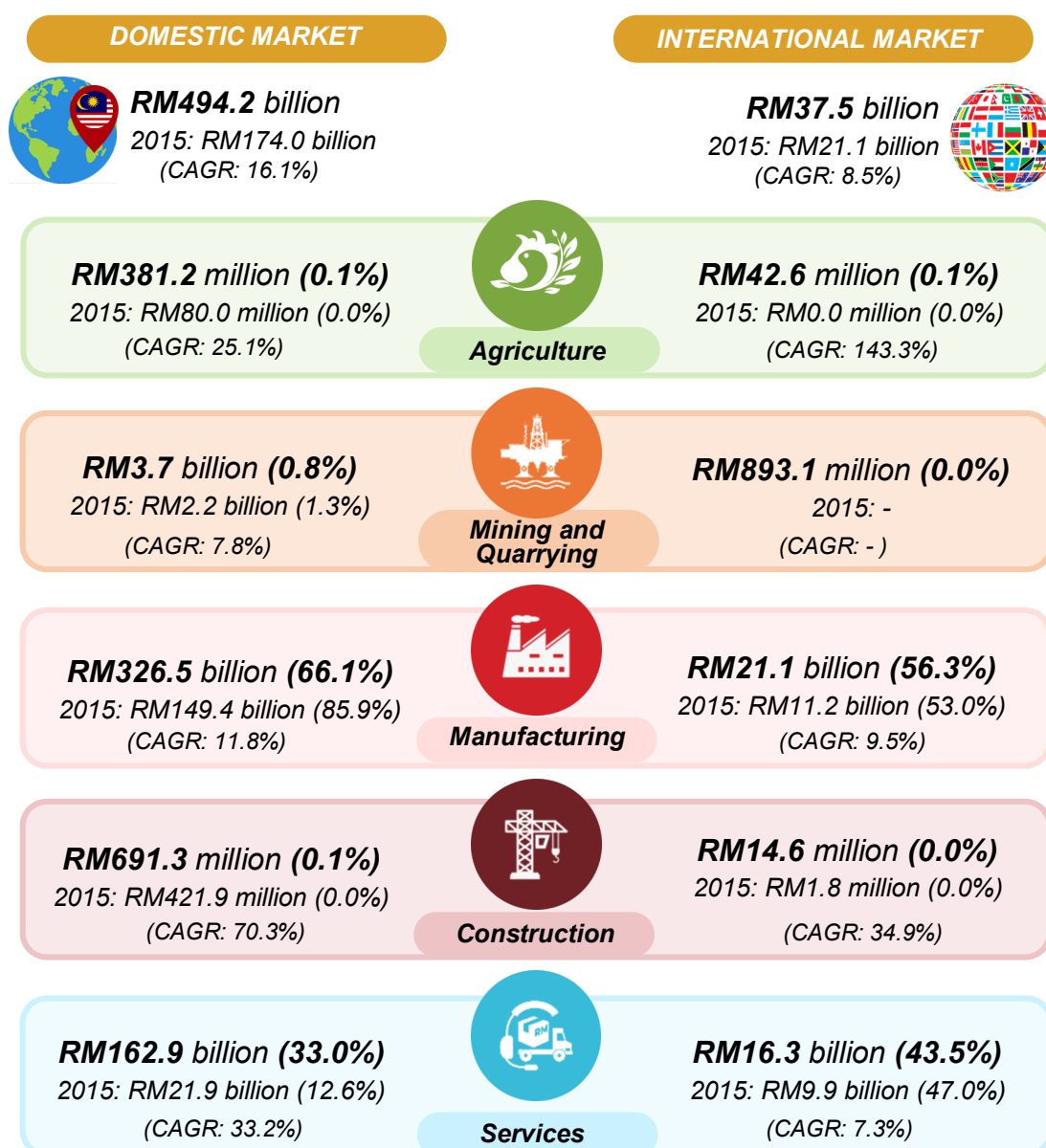
¹ Include SUPRA

Supra - Covers production activities that beyond the centre of predominant economic interest for any state

9.3 E-COMMERCE EXPENDITURE BY TYPE OF MARKET

E-commerce expenditure in Malaysia is dominated by the domestic market, totalling RM494.2 billion while the international market recorded RM37.5 billion. Manufacturing sector is the main contributor to e-commerce expenditure in both type of markets, with RM326.5 billion for the domestic market and RM21.1 billion for the international market, as shown in Figure 17.

Figure 17: E-Commerce Expenditure by Type of Market, 2015 and 2022



Note.

(%) - Percentage share

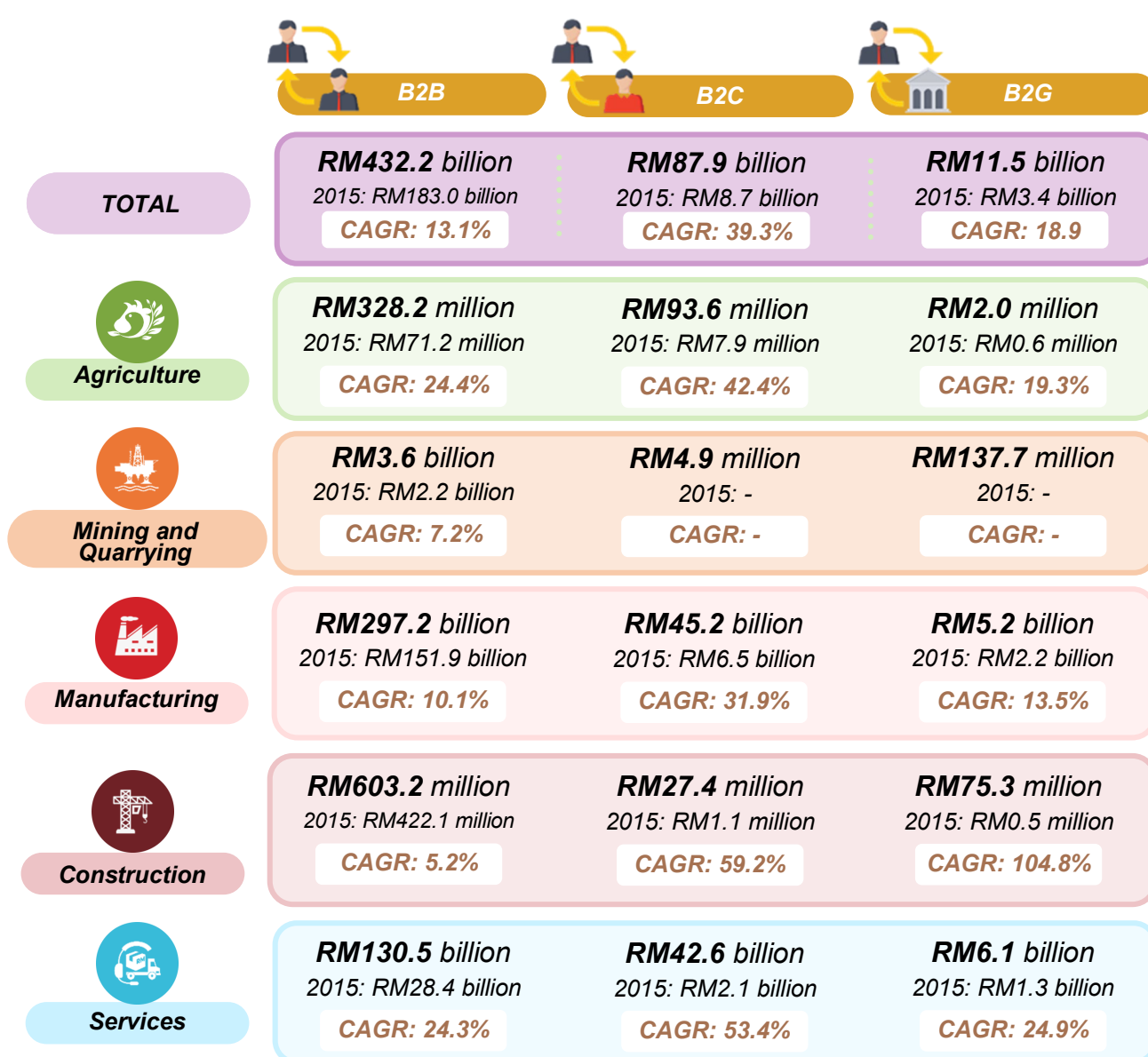
"0" refers to a value of less than RM500,000

"-" refers to data not available

9.4 E-COMMERCE EXPENDITURE BY TYPE OF CUSTOMER

Expenditure from e-commerce transactions by type of customer shows that B2B recorded RM432.2 billion with an annual growth rate of 13.1 per cent. Subsequently, B2C recorded RM87.9 billion (CAGR: 39.3%), while B2G contributed RM11.5 billion (CAGR: 18.9%). The primary contributor to e-commerce expenditure is the Manufacturing sector, RM297.2 billion in B2B transactions. Meanwhile, the Services sector leads in both B2C and B2G, RM42.6 billion (CAGR: 53.4%) and RM6.1 billion (CAGR: 24.9%), respectively, as illustrated in **Figure 18**.

Figure 18: E-Commerce Expenditure by Type of Customer, 2015 and 2022



Note.

CAGR - Compound annual growth rate

"0" refers to a value of less than RM500,000

"-" refers to data not available

USAGE OF ICT AND E-COMMERCE BY MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs)

1. INTRODUCTION

This part presents MSMEs statistics for the usage of ICT and e-commerce. Classification of MSMEs used was based on the new definition of MSMEs which came into effect on 1 January, 2014 as in **Table 1**.

Table 1: MSMEs Definition

Sector	MSMEs Size	Annual Turnover	Number of Full-Time Employees
Manufacturing	Micro	Less than RM300,000	Less than 5 employees
	Small	Between RM300,000 to less than RM15 million	From 5 to less than 75 employees
	Medium	Between RM15 million to not exceeding RM50 million	From 75 to not exceeding 200 employees
Agriculture, Mining and Quarrying, Construction and Services	Micro	Less than RM300,000	Less than 5 employees
	Small	Between RM300,000 to less than RM3 million	From 5 to less than 30 employees
	Medium	Between RM3 million to not exceeding RM20 million	From 30 to not exceeding 75 employees

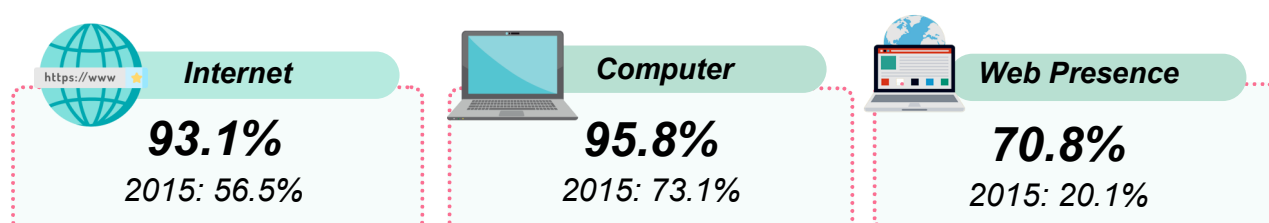
Note.

Source: Guideline for New SME Definition, SME Corp. Malaysia, October 2013

2. USAGE OF ICT AND E-COMMERCE

The census findings show that a total of 1,069,831 MSMEs were operating in 2022. 95.8 per cent from the total MSMEs used computers (including personal computers, laptops, and tablets), compared to 73.1 per cent in 2015. Internet usage (via computers and other devices such as mobile phones) among MSMEs also increased to 93.1 per cent (2015: 56.5%). Additionally, 70.8 per cent of these establishments have a web presence, up from 20.1 per cent in 2015, as shown in **Figure 19**.

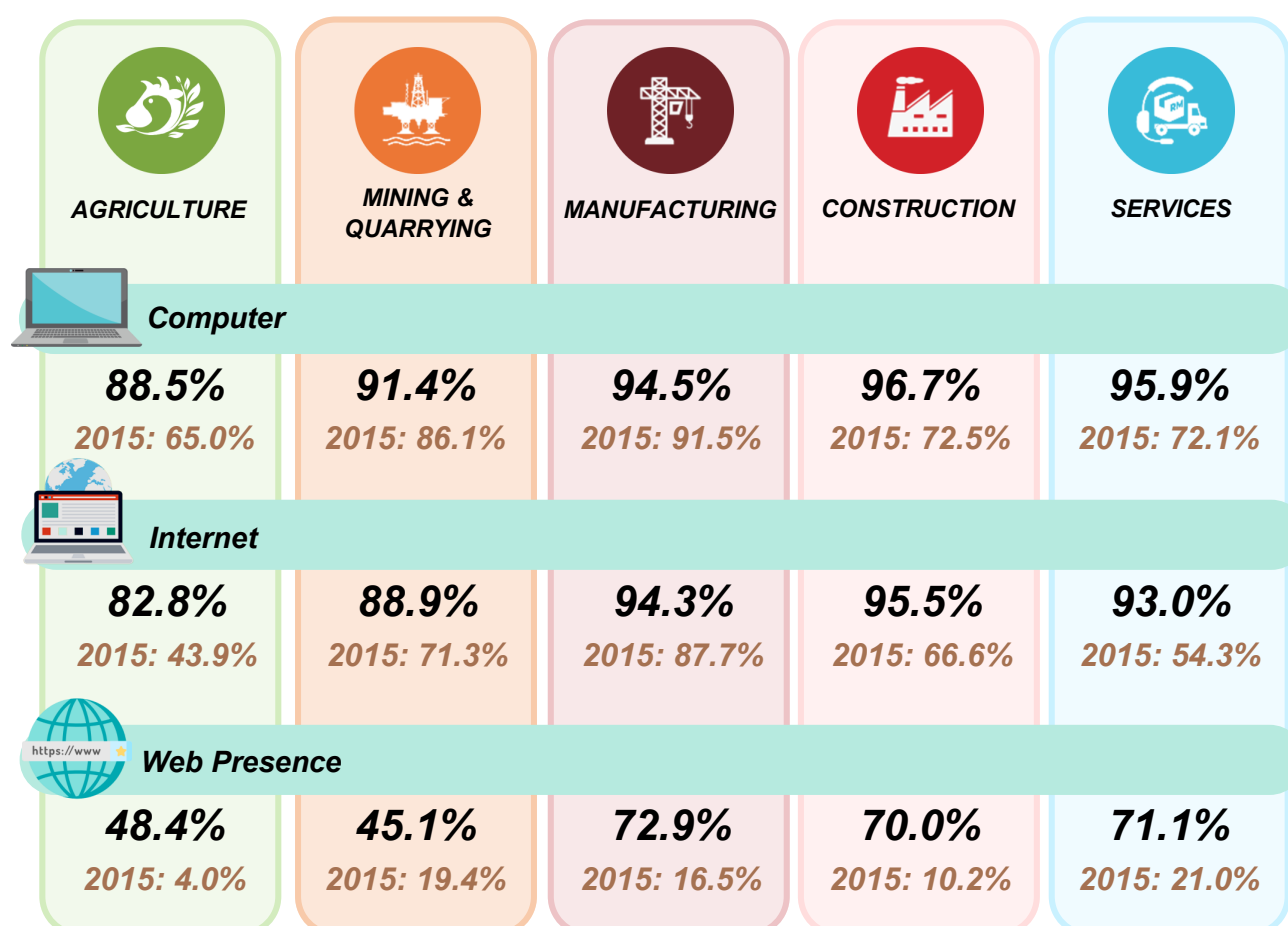
Figure 19: Percentage of Computer, Internet and Web Presence Use - MSMEs, 2015 and 2022



2.1 USAGE OF ICT BY SECTOR

Figure 20 shows the usage of computers, internet, and web presence by sector for MSMEs. Construction sector recorded the highest percentage for computer and internet usage at 96.7 per cent (2015: 72.5%) and 95.5 per cent (2015: 66.6%), respectively. However, for the use of web presence, Manufacturing sector recorded the highest percentage of 72.9 per cent (2015: 16.5%).

Figure 20: Percentage of Computer, Internet and Web Presence Use by Sector - MSMEs, 2015 and 2022



2.2 USAGE OF ICT BY STATE

W.P. Kuala Lumpur recorded the highest percentage in computer, internet and web presence usage among MSMEs, at 99.7 per cent, 99.6 per cent and 90.8 per cent, respectively. This was followed by the state of W. P. Putrajaya recorded the second highest percentage in computer and internet at 99.2 per cent, as shown in **Figure 21**.

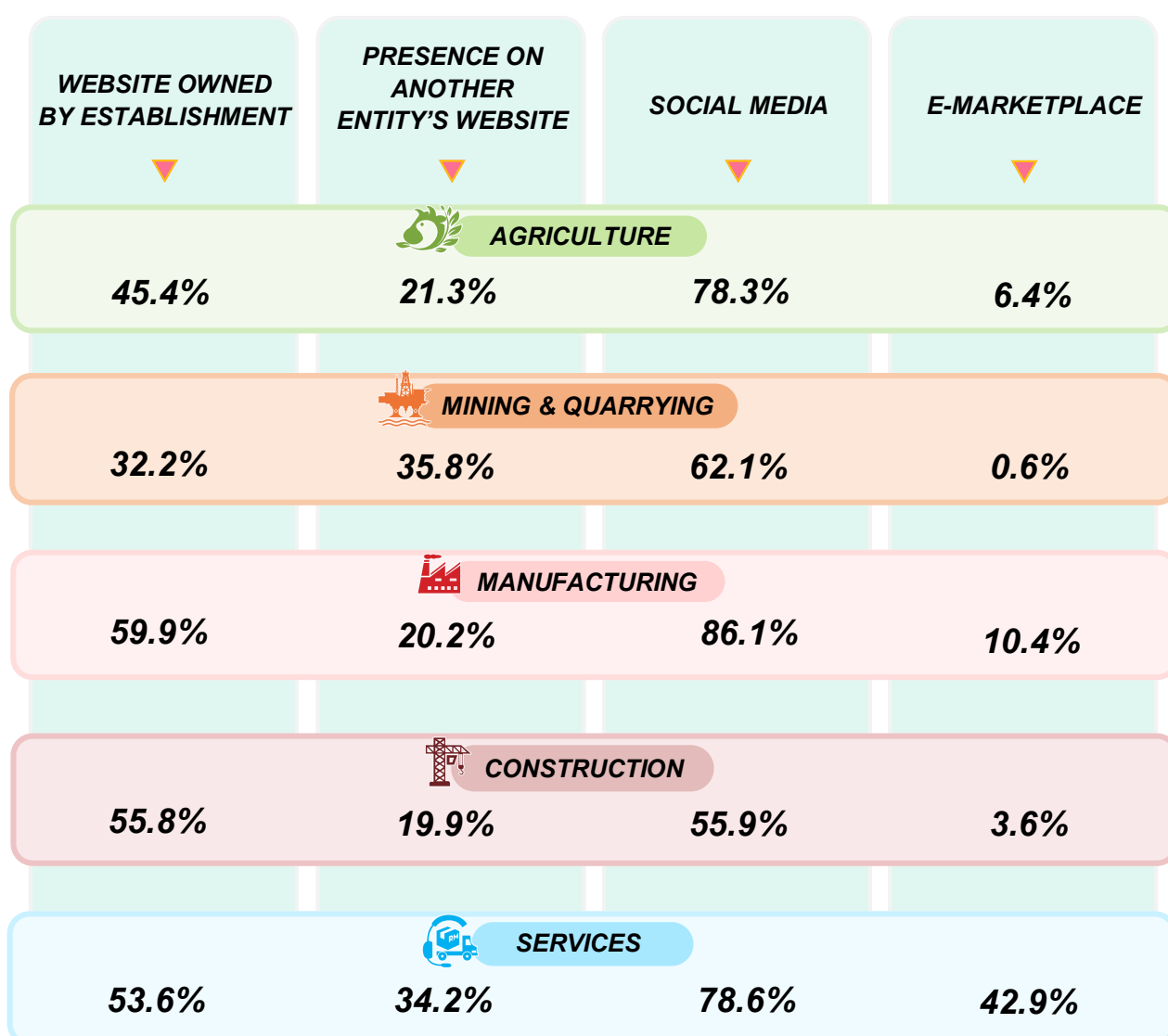
**Figure 21: Percentage of Computer, Internet and Web Presence Use
by State - MSMEs, 2022**

		 Computer	 Internet	 Web Presence
	Johor	97.9%	97.6%	79.2%
	Kedah	90.5%	81.5%	55.0%
	Kelantan	93.1%	79.0%	39.7%
	Melaka	96.9%	93.0%	67.2%
	Negeri Sembilan	93.7%	92.8%	60.1%
	Pahang	93.8%	92.4%	57.6%
	Pulau Pinang	99.0%	98.7%	78.4%
	Perak	95.4%	84.6%	58.1%
	Perlis	93.7%	78.1%	56.2%
	Selangor	99.2%	98.9%	84.9%
	Terengganu	92.0%	91.2%	61.5%
	Sabah	88.1%	84.5%	44.3%
	Sarawak	85.3%	81.9%	46.5%
	W.P. Kuala Lumpur	99.7%	99.6%	90.8%
	W.P. Labuan	95.2%	93.2%	63.5%
	W.P. Putrajaya	99.2%	99.2%	88.4%
	MALAYSIA	95.8%	93.1%	70.8%

2.3 TYPE OF WEB PRESENCE OWNED BY SECTOR

Figure 22 shows the types of web presence utilised by MSMEs by sector. Manufacturing sector recorded the highest percentage for two types of web presence: social media usage (86.1%) and own website (59.9%). Mining & quarrying sector recorded the highest percentage in the use of presence on another entity's website (35.8%), while Services sector led in the usage of e-marketplace (42.9%).

Figure 22: Type of Web Presence Owned by Sector - MSMEs, 2022

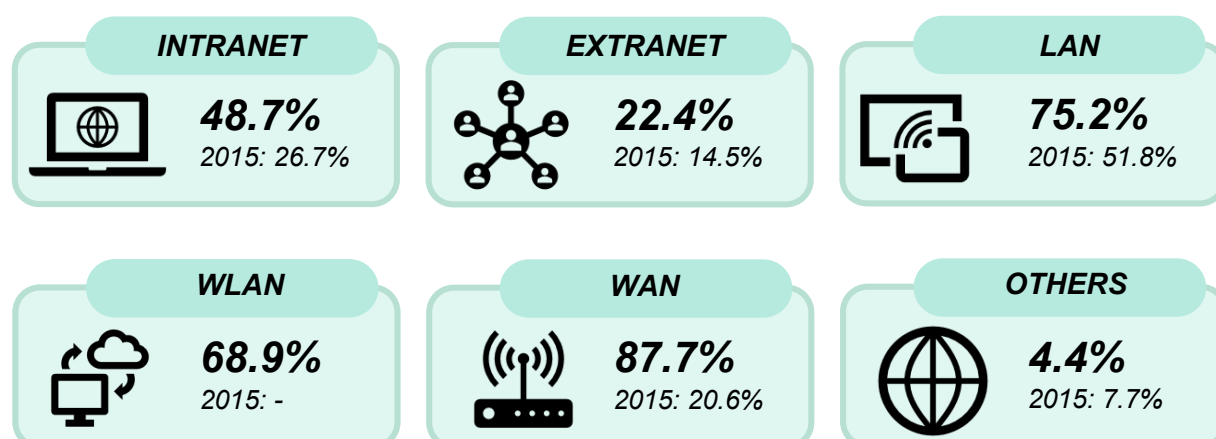


3. COMPUTER NETWORK INFRASTRUCTURE

In 2022, internet usage based on the type of computer network infrastructure by MSMEs recorded significant growth compared to 2015. Wide Area Network (WAN) led the way with usage at 87.7 per cent, a substantial increase from 20.6 per cent in 2015. Local Area Network (LAN) reached 75.2 per cent, increased from 51.8 per cent in 2015, while Wireless Local Area Network (WLAN) recorded usage at 68.9 per cent as shown in **Figure 23**.

This development reflects the continued adoption of advanced network technologies, highlighting the growing importance of reliable computer network infrastructure in business operations. This trend indicates a shift towards more robust network solutions, with MSMEs increasingly adapting digital infrastructure to support communication and operational efficiency.

Figure 23: Computer Network Infrastructure - MSMEs, 2015 dan 2022



Note.

"-" refers to data not available

3.1 COMPUTER NETWORK INFRASTRUCTURE BY SECTOR

The usage of intranet, extranet and LAN among MSMEs was dominated by Manufacturing sector with percentage of 68.5 per cent, 49.6 per cent and 88.3 per cent, respectively. Services sector reported the highest usage for WLAN (70.2%) and WAN (90.9%). Meanwhile, the highest usage for others infrastructure, recorded at 18.5 per cent, in Mining & quarrying sector, as shown in **Figure 24**.

**Figure 24: Type of Computer Network Infrastructure
by Sector - MSMEs, 2015 and 2022**

 INTRANET	 EXTRANET	 LAN	 WLAN	 WAN	 OTHERS
 AGRICULTURE					
54.7% 2015: 21.2%	2.3% 2015: 3.3%	81.5% 2015: 52.4%	47.1% 2015: -	44.9% 2015: 26.1%	12.0% 2015: 11.4%
 MINING & QUARRYING					
42.2% 2015: 26.6%	17.9% 2015: 5.5%	81.9% 2015: 54.3%	55.4% 2015: -	41.2% 2015: 31.1%	18.5% 2015: 9.1%
 MANUFACTURING					
68.5% 2015: 44.7%	49.6% 2015: 35.4%	88.3% 2015: 61.1%	68.7% 2015: -	49.6% 2015: 21.4%	7.4% 2015: 9.1%
 CONSTRUCTION					
38.7% 2015: 16.5%	10.5% 2015: 2.5%	61.2% 2015: 50.2%	55.9% 2015: -	80.8% 2015: 34.1%	5.9% 2015: 12.0%
 SERVICES					
48.3% 2015: 25.7%	22.0% 2015: 13.4%	75.5% 2015: 51.0%	70.2% 2015: -	90.9% 2015: 19.7%	4.0% 2015: 7.2%

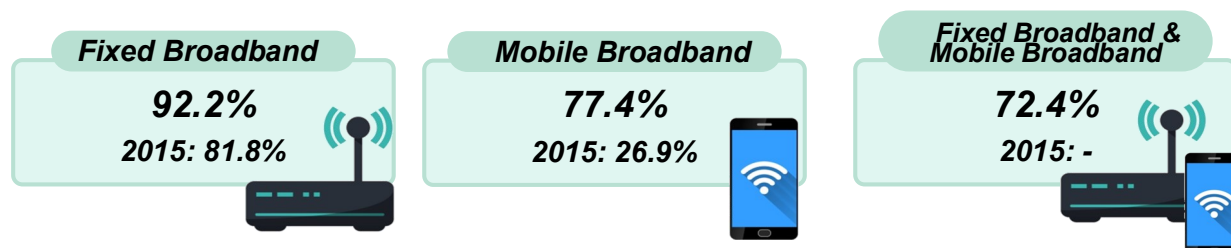
Note.

“-” refers to data not available

4. TYPE OF INTERNET ACCESS

A total of 92.2 per cent (2015: 81.8%) of MSMEs used fixed broadband for internet access, followed by mobile broadband at 77.4 per cent (2015: 26.9%) and both fixed broadband and mobile broadband at 72.4 per cent, as shown in **Figure 25**.

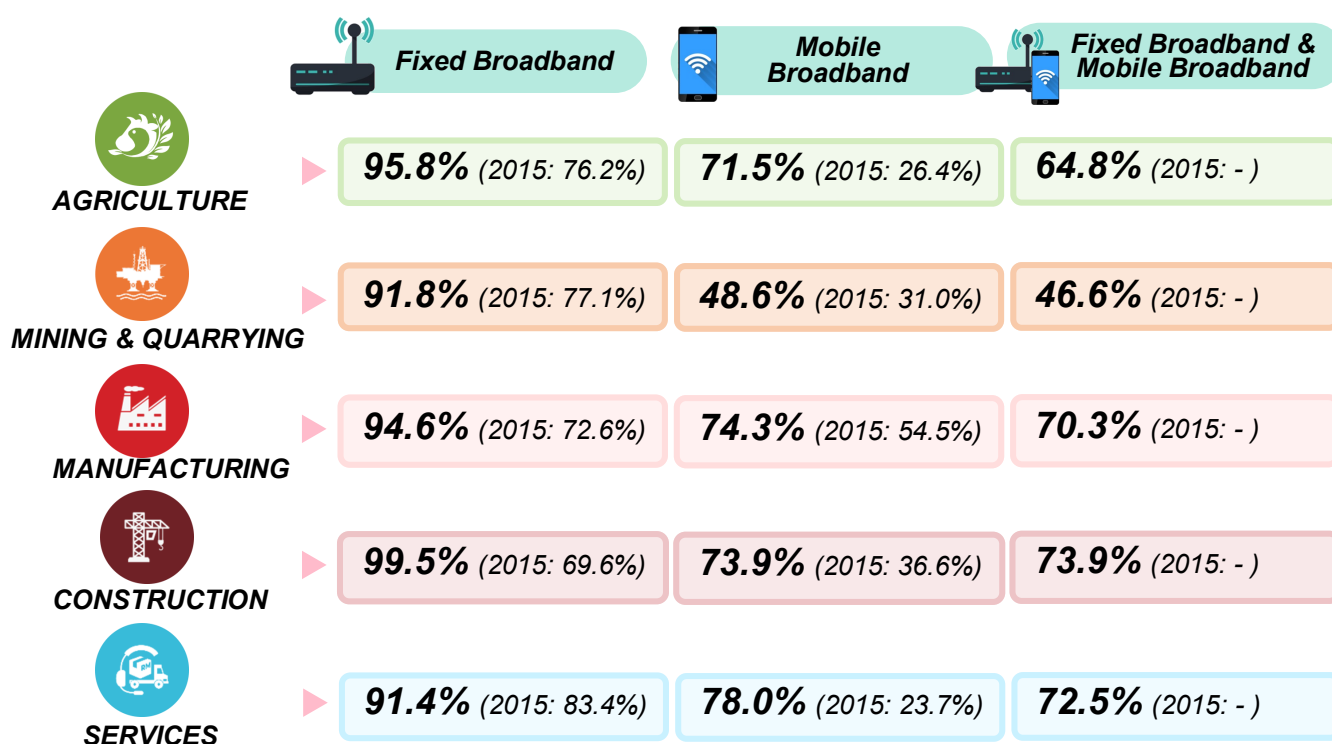
Figure 25: Type of Internet Access - MSMEs, 2015 and 2022



4.1 TYPE OF INTERNET ACCESS BY SECTOR

MSMEs in Construction sector recorded the highest access to the internet for fixed broadband use at 99.5 per cent in 2022 (2015: 69.6%), followed by Agriculture sector at 95.8 per cent (2015: 76.2%) and Manufacturing sector at 94.6 per cent (2015: 72.6%). Services sector reported the highest usage of mobile broadband at 78.0 per cent (2015: 23.7%), followed by Manufacturing sector at 74.3 per cent (2015: 54.5%) and Construction sector at 73.9 per cent (2015: 36.6%). Additionally, Construction sector also registered the highest percentage of both broadband usage, 73.9 per cent, as shown in **Figure 26**.

Figure 26: Type of Internet Access by Sector - MSMEs, 2015 and 2022



Note.

"-" refers to data not available

5. PURPOSE OF INTERNET USAGE

Figure 27 shows the percentage of internet use among MSMEs by purpose. The purpose of using the internet for sending or receiving e-mail recorded the highest percentage with 95.7 per cent (2015: 71.2%). This was followed by internet banking at 90.0 per cent (2015: 41.2%) and getting information about goods or services at 81.2 per cent (2015: 38.5%).

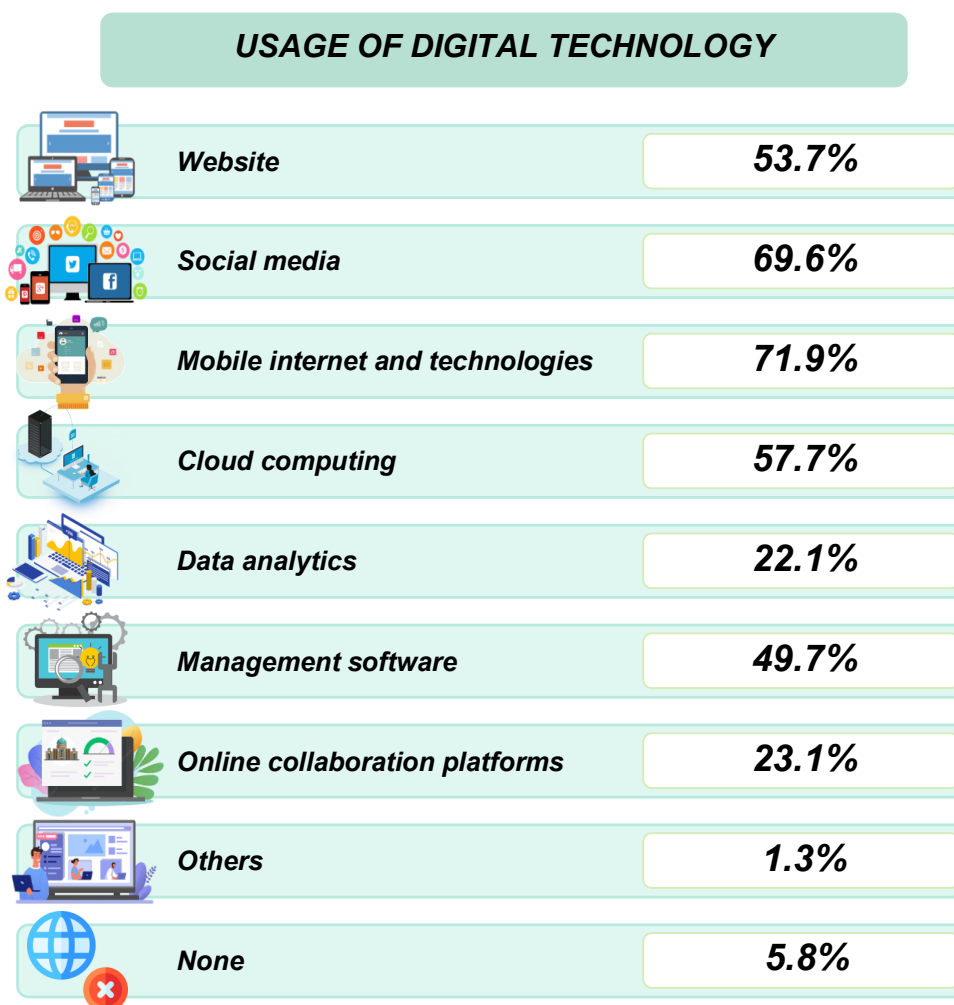
Figure 27: Purpose of Internet Usage - MSMEs, 2015 and 2022



6. USAGE OF DIGITAL TECHNOLOGY

The usage of digital technology among MSMEs shows that mobile internet and technologies recorded the highest percentage at 71.9 per cent. This was followed by social media at 69.6 per cent and cloud computing at 57.7 per cent, as shown in **Figure 28**.

Figure 28: Usage of Digital Technology - MSMEs, 2022



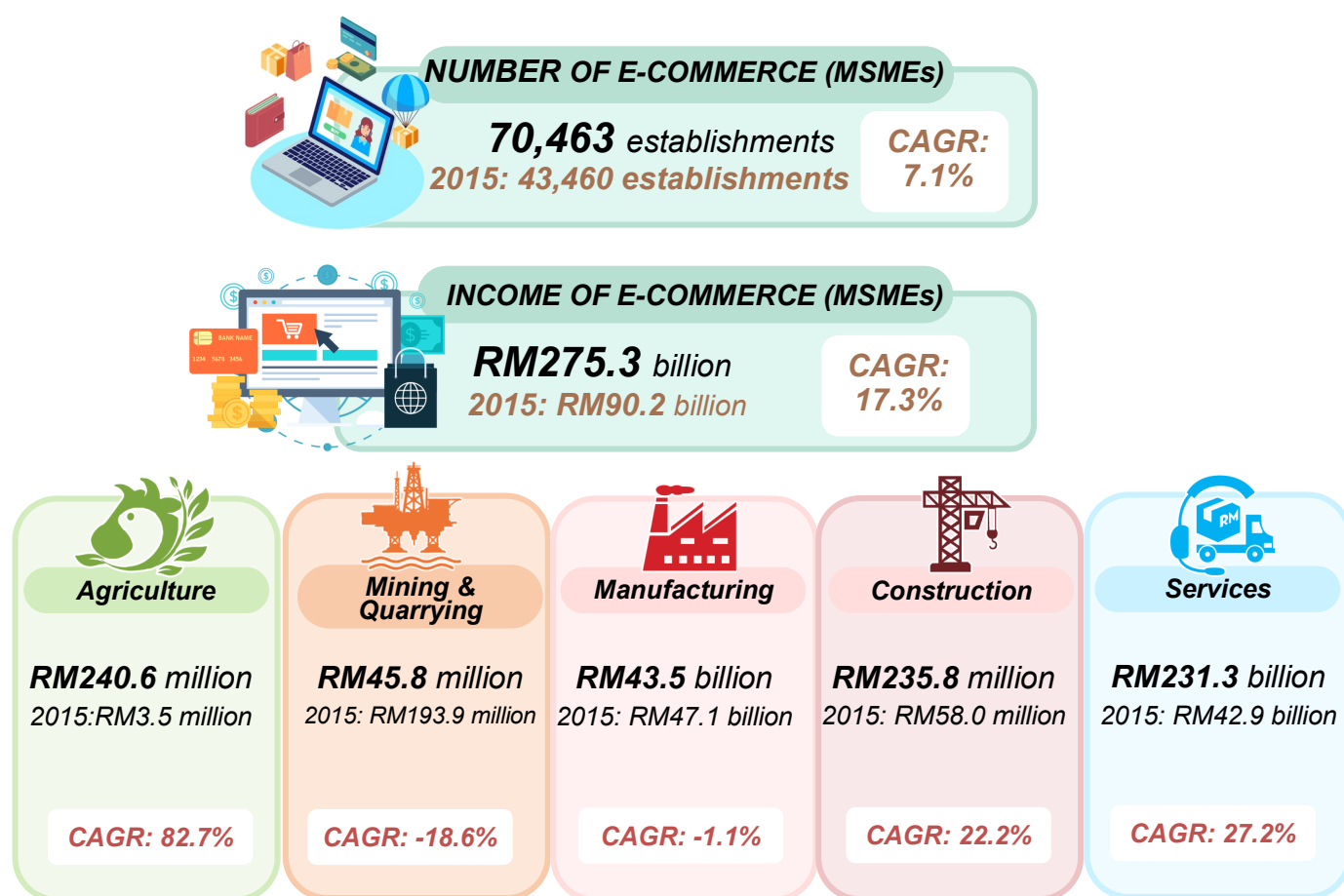
7. E-COMMERCE INCOME

7.1 E-COMMERCE INCOME BY SECTOR

A total of 70,463 MSMEs' establishments were engaged in e-commerce transactions, compared to 43,460 establishments in 2015. E-commerce income transactions by MSMEs in Malaysia reached RM275.3 billion in 2022, an increase from RM90.2 billion in 2015. The annual growth rate in 2022 registered at 17.3 per cent.

Services sector was the largest contributor with RM231.3 billion as compared to RM42.9 billion (CAGR: 27.2%) in 2015, followed by Manufacturing sector with RM43.5 billion (CAGR: -1.1%) and Agriculture sector at RM240.6 million (CAGR: 82.7%), as shown in **Figure 29**.

Figure 29: Income of E-Commerce - MSMEs, 2015 and 2022



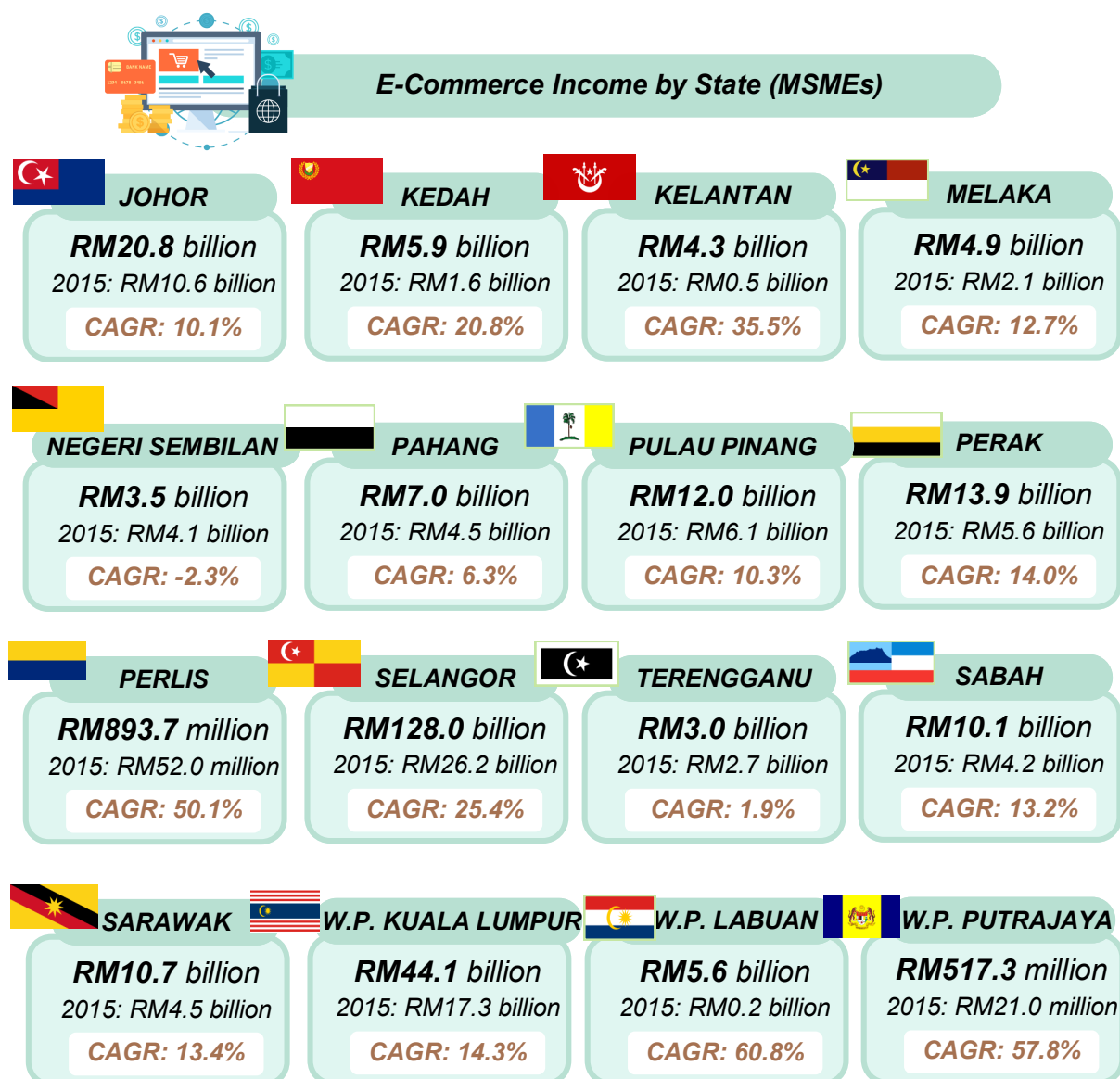
Note.

CAGR - Compound annual growth rate

7.2 E-COMMERCE INCOME BY STATE

Figure 30 shows the income of e-commerce generated by MSMEs according to state. Selangor recorded the highest income transactions, totalling RM128.0 billion, with an annual growth rate of 25.4 per cent. W.P. Kuala Lumpur ranked second with RM44.1 billion (CAGR: 14.3%), while Pulau Pinang registered RM12.0 billion (CAGR: 10.3%) as the third highest in e-commerce income.

Figure 30: E-Commerce Income by State - MSMEs, 2015 and 2022



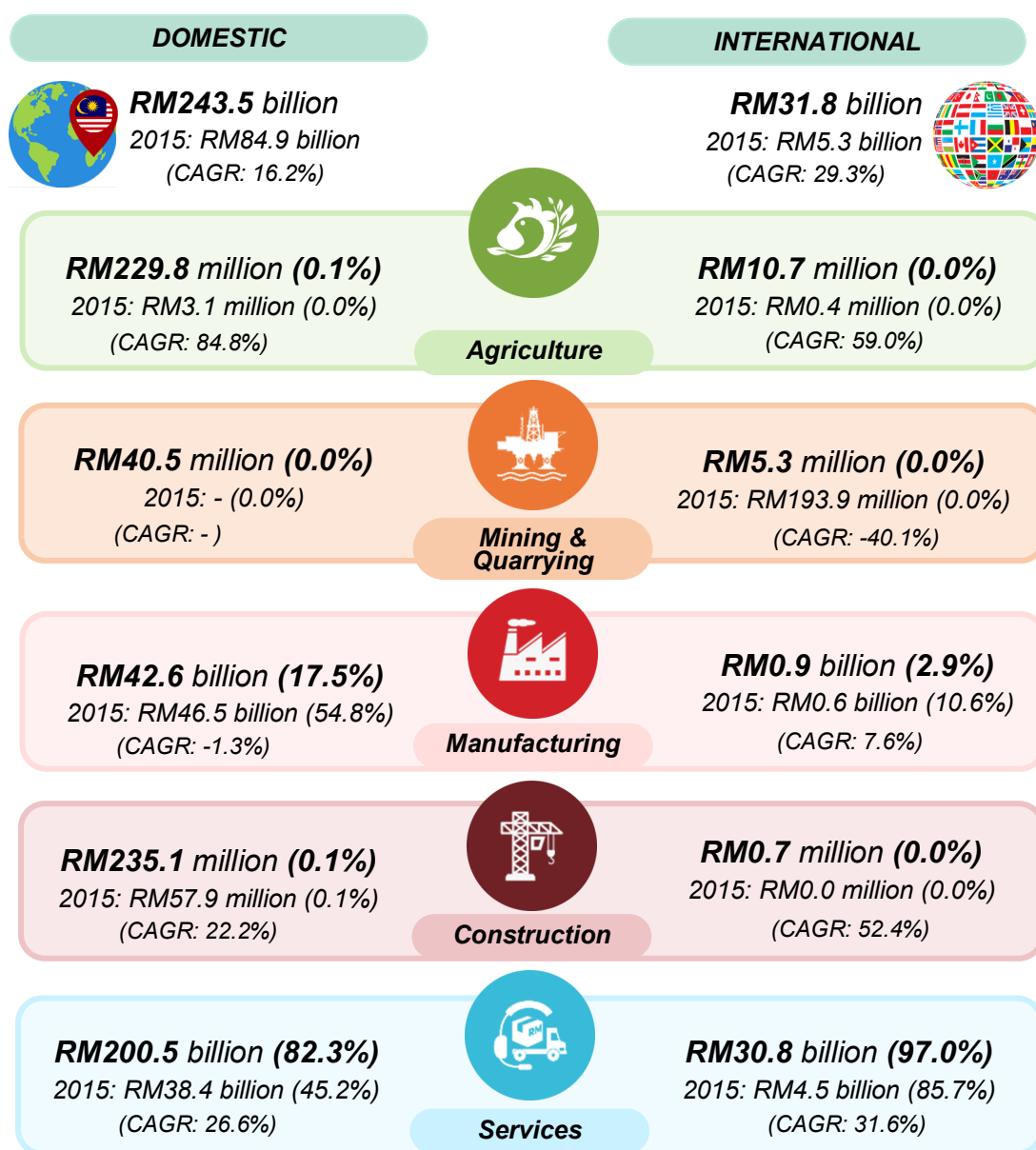
Note.

CAGR - Compound annual growth rate

7.3 E-COMMERCE INCOME BY TYPE OF MARKET

E-commerce income by MSMEs in Malaysia is largely driven by the domestic market, totalling RM243.5 billion. Meanwhile, the international market contributes RM31.8 billion. For the domestic market, Services sector is the largest contributor, with income amounting to RM200.5 billion. In addition, Services sector also recorded the highest contribution in the international market, with earnings of RM 30.8 billion, as shown in **Figure 31**.

Figure 31: E-Commerce Income by Type of Market - MSMEs, 2015 and 2022



Note.

(%) - Percentage share

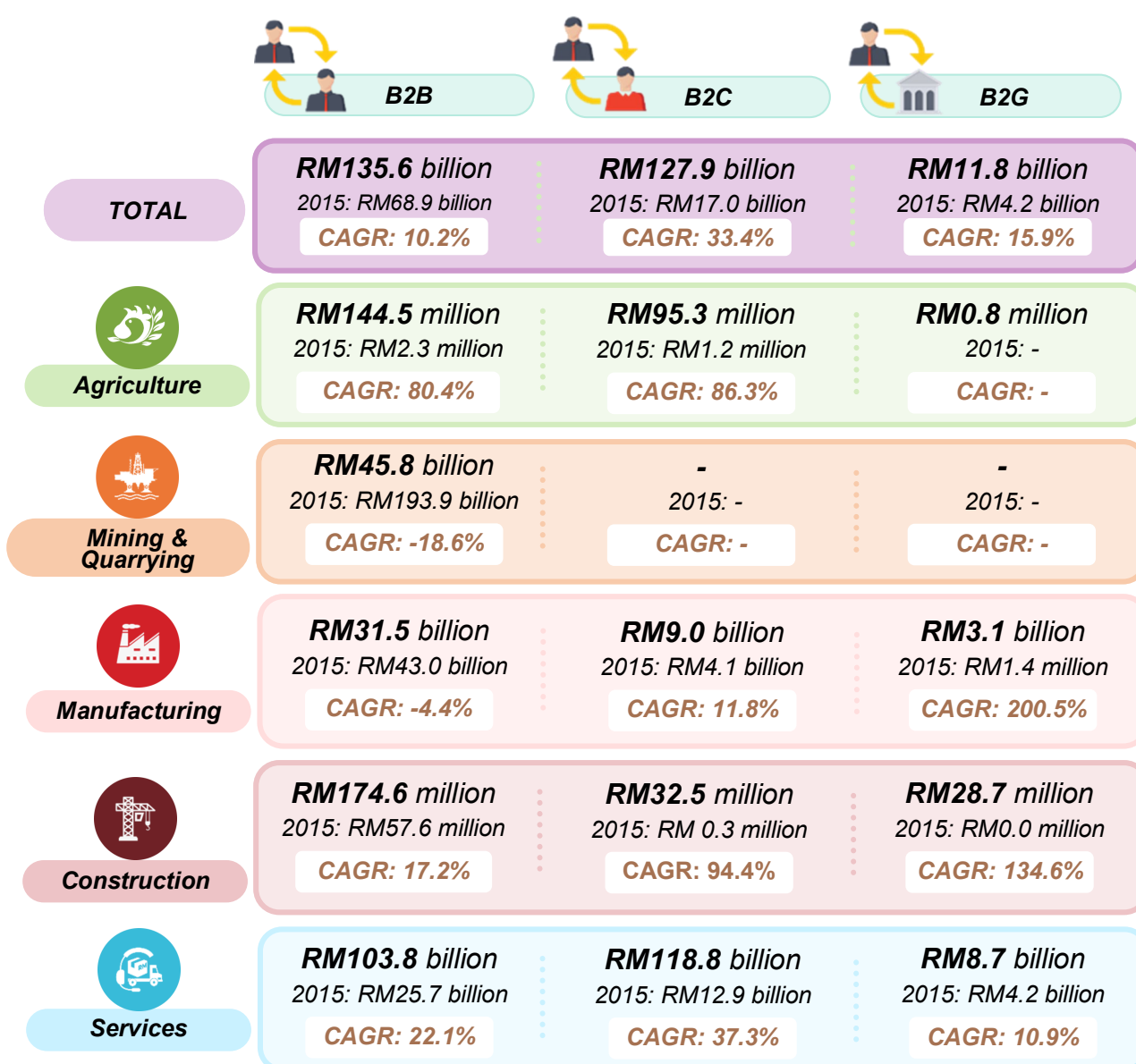
"0" refers to a value of less than RM500,000

"-" refers to data not available

7.4 E-COMMERCE INCOME BY TYPE OF CUSTOMER

The highest e-commerce income by MSMEs, based on customer type, comes from Business to Business (B2B) transaction, totalling RM135.6 billion with an annual growth rate of 10.2 per cent. This was followed by Business to Consumer (B2C) recorded RM127.9 billion (33.4%), and Business to Government (B2G) contributed RM11.8 billion, with an increase of 15.9 per cent. Services sector is the main contributor to B2B, B2C and B2G, with contribution of RM103.8 billion, RM 118.8 billion and RM 8.7 billion, respectively, as shown in **Figure 32**.

Figure 32: E-commerce Income by Type of Customer - MSMEs, 2015 and 2022



Note.

CAGR - Compound annual growth rate

"0" refers to a value of less than RM500,000

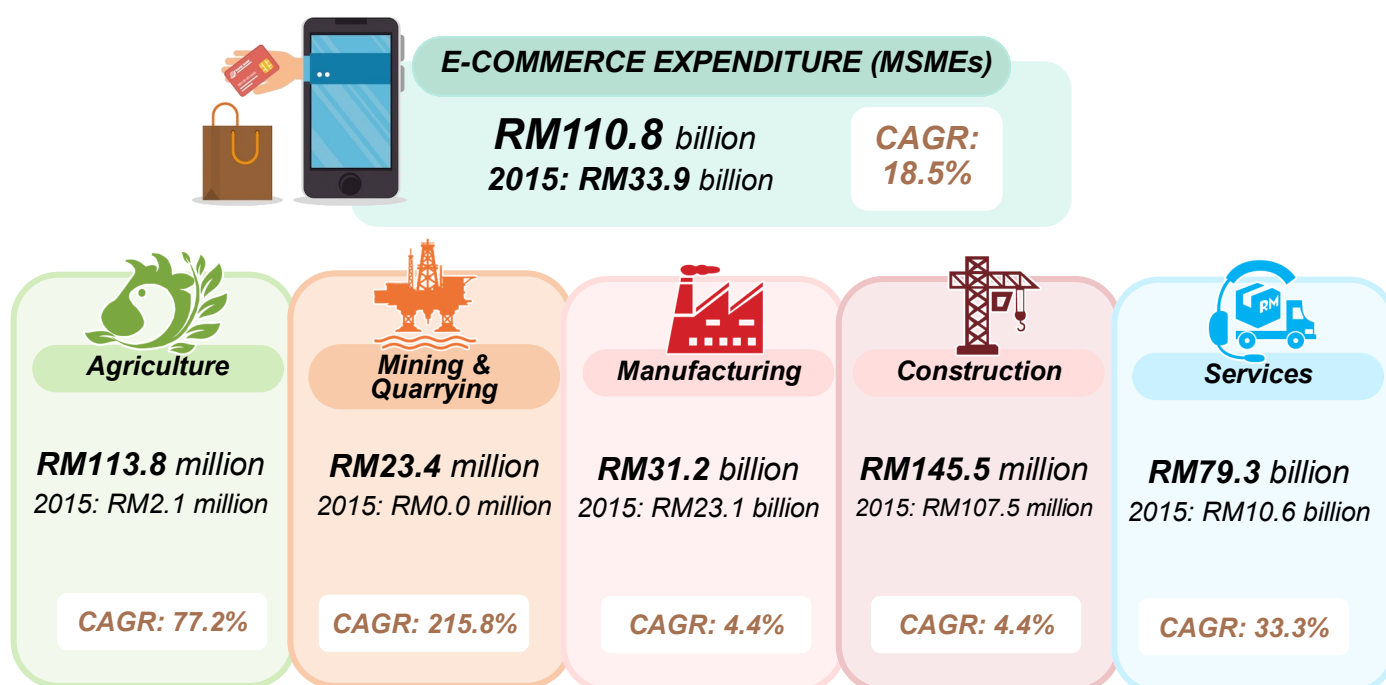
"-" refers to data not available

8. E-COMMERCE EXPENDITURE

8.1 E-COMMERCE EXPENDITURE BY SECTOR

In 2022, e-commerce expenditure recorded by MSMEs reached RM110.8 billion, up from RM33.9 billion in 2015, with an annual growth rate of 18.5 per cent. Services sector was the largest contributor, recording RM79.3 billion with an annual growth rate of 33.3 per cent. This was followed by Manufacturing sector at a RM31.2 billion (CAGR: 4.4%), while Construction sector recorded RM145.5 million, with an annual growth of 4.4 per cent, as shown in Figure 33.

Figure 33: E-Commerce Expenditure - MSMEs, 2015 and 2022



Note.

(%) - Percentage share

CAGR - Compound annual growth rate

"0" refers to a value of less than RM500,000

8.2 E-COMMERCE EXPENDITURE BY STATE

As shown in **Figure 34**, Selangor continued to hold the highest e-commerce expenditure among MSMEs, amounting to RM41.5 billion, with an annual growth rate of 25.4 per cent. W.P. Kuala Lumpur ranked second with RM18.8 billion (CAGR: 23.2%), followed by Pulau Pinang with e-commerce expenditures of RM6.0 billion (CAGR: 12.9%).

Figure 34: E-Commerce Expenditure by State - MSMEs, 2015 and 2022



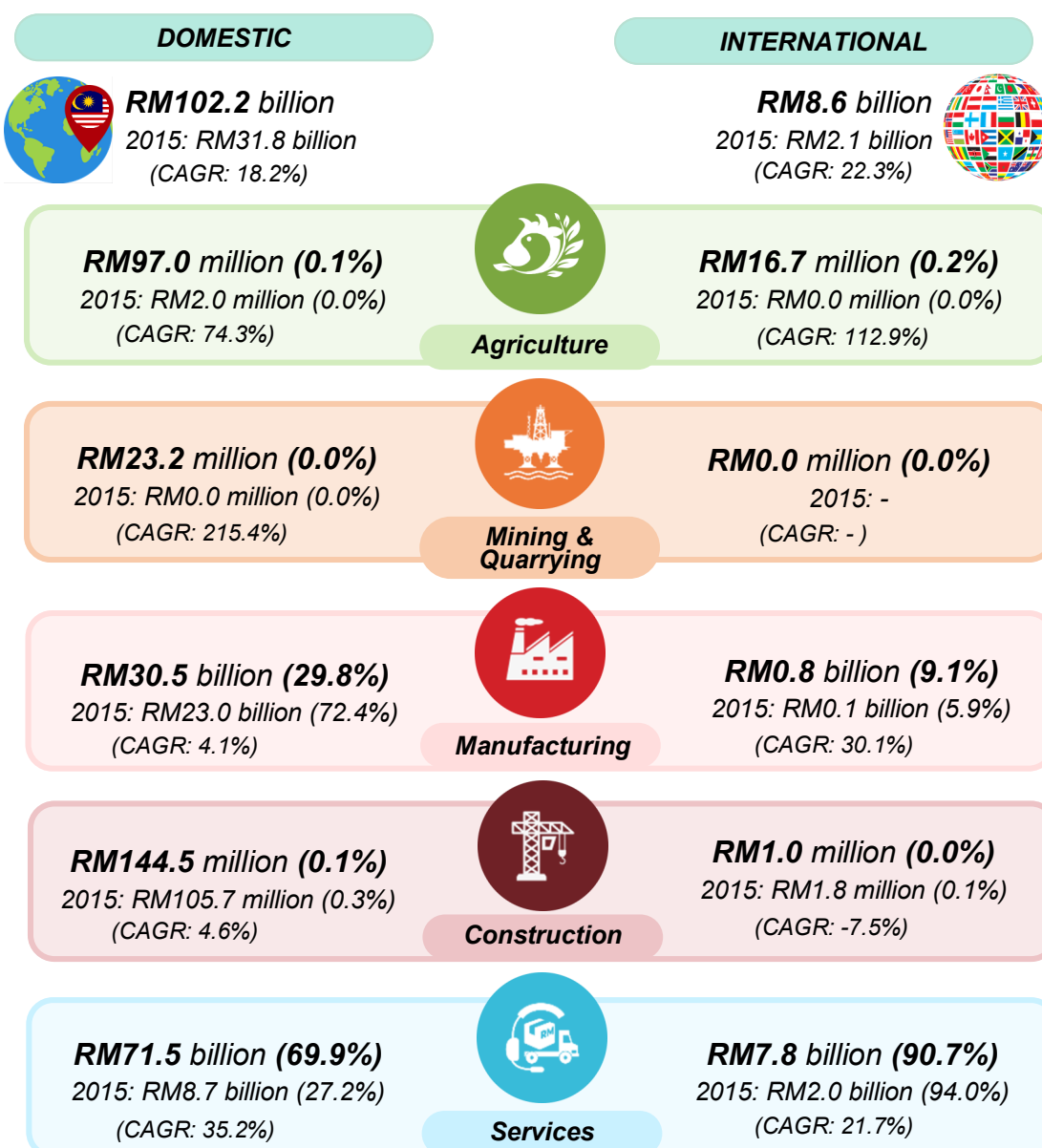
Note.

CAGR - Compound annual growth rate

8.3 E-COMMERCE EXPENDITURE BY TYPE OF MARKET

E-commerce expenditure by MSMEs in Malaysia were predominantly led by the domestic market, which recorded RM102.2 billion. Meanwhile, the international market recorded RM8.6 billion. Services sector is the primary contributor to e-commerce expenditure in both markets, with RM71.5 billion for the domestic market and RM7.8 billion for the international market, as shown in **Figure 35**.

Figure 35: E-Commerce Expenditure by Type of Market - MSMEs, 2015 and 2022



Note.

CAGR - Compound annual growth rate

(%) - Percentage share

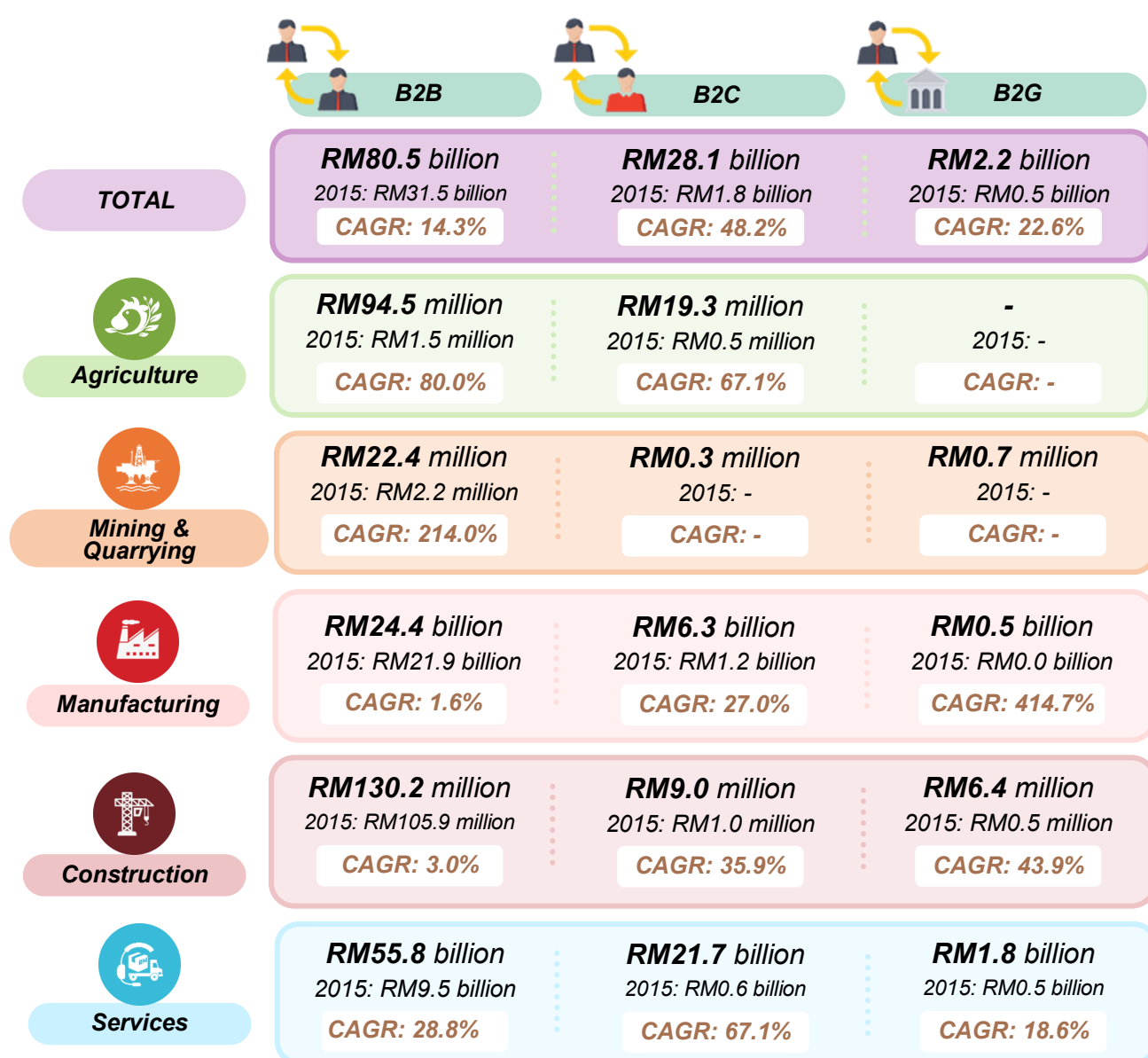
"0" refers to a value of less than RM500,000

"-" refers to data not available

8.4 E-COMMERCE EXPENDITURE BY TYPE OF CUSTOMER

E-commerce expenditure transactions among MSMEs by type of customer shows that B2B recorded RM80.5 billion with an annual growth rate of 14.3 per cent. This was followed by B2C registered RM28.1 billion (CAGR: 48.2%), and B2G contributed RM2.2 billion (CAGR: 22.6%). Services sector is the main contributor to e-commerce expenditure across all three customer types, with RM55.8 billion for B2B, RM21.7 billion for B2C, and RM1.8 billion for B2G, as shown in **Figure 36**.

Figure 36: E-Commerce Expenditure by Type of Customer - MSMEs, 2015 and 2022



Note.

CAGR - Compound annual growth rate

"0" refers to a value of less than RM500,000

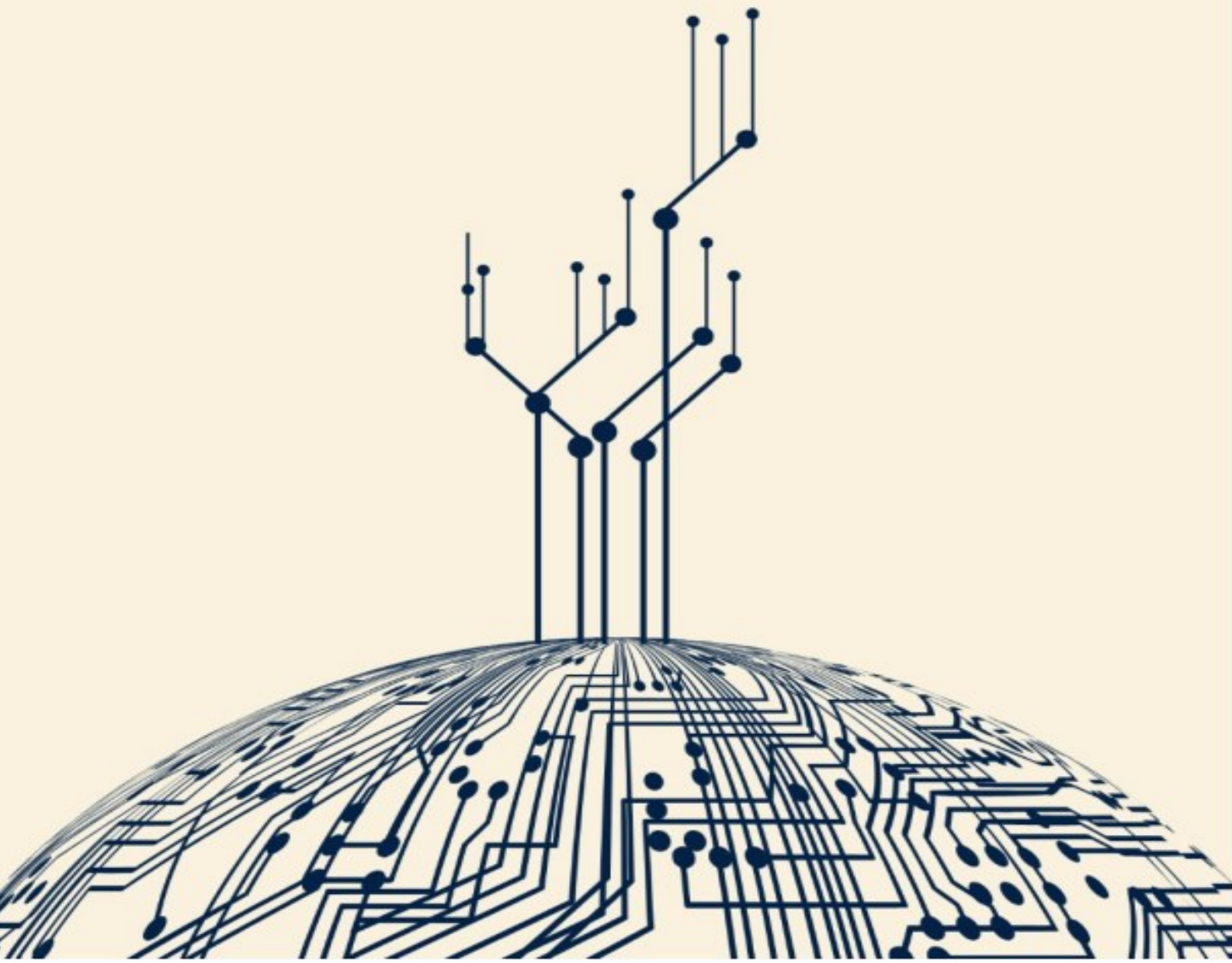
"-" refers to data not available

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Jadual

Table



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Jadual A1: Penggunaan Komputer, Internet dan Web Presence mengikut Sektor/ Subsektor, 2015 dan 2022
Table A1: Usage of Computer, Internet and Web Presence by Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Penggunaan komputer <i>Computer usage</i>	Penggunaan internet <i>Internet usage</i>	Pemilikan web presence <i>Web presence owned</i>
		%	%	%
Jumlah <i>Total</i>	2022 2015	95.9 73.5	93.3 61.5	71.4 28.4
Pertanian <i>Agriculture</i>	2022 2015	89.9 69.2	85.0 49.4	54.8 8.5
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	93.0 88.3	91.0 75.5	55.4 25.0
Pembuatan <i>Manufacturing</i>	2022 2015	94.8 91.8	94.6 88.1	74.4 16.6
Pembinaan <i>Construction</i>	2022 2015	96.8 73.4	95.7 67.7	70.8 12.2
Perkhidmatan <i>Services</i>	2022 2015	96.0 72.4	93.1 59.8	71.6 30.2
Utiliti <i>Utility</i>	2022 2015	98.2 78.7	97.9 71.5	70.4 17.3
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	96.3 87.0	95.0 74.3	67.4 46.2
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	91.7 33.7	88.6 38.5	65.3 22.2
Penginapan <i>Accommodation</i>	2022 2015	99.6 90.9	99.5 76.1	92.8 28.6
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	91.0 41.3	77.5 20.2	66.8 11.8
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	100.0 100.0	100.0 100.0	100.0 89.7
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	100.0 100.0	100.0 100.0	100.0 26.2
Hartanah <i>Real Estate</i>	2022 2015	100.0 99.8	100.0 99.7	70.1 12.3
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	100.0 98.5	97.9 93.8	75.8 17.5
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	99.6 84.9	99.6 75.2	72.7 11.5
Pendidikan <i>Education</i>	2022 2015	98.5 86.8	98.1 74.4	76.4 18.0
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	99.0 82.8	99.0 68.4	82.4 12.7
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	96.0 81.7	94.8 76.0	77.4 15.1
Perkhidmatan Lain <i>Other Services</i>	2022 2015	95.2 38.7	95.2 23.5	80.3 10.2

Jadual A2: Penggunaan Komputer, Internet dan Web Presence mengikut Negeri, 2015 dan 2022
Table A2: Usage of Computer, Internet and Web Presence by State, 2015 and 2022

Negeri <i>States</i>	Tahun <i>Year</i>	Penggunaan komputer <i>Computer usage</i>	Penggunaan internet <i>Internet usage</i>	Penggunaan web presence <i>Web presence usage</i>
		%	%	%
Jumlah <i>Total</i>	2022 2015	95.9 73.5	93.3 61.5	71.4 28.4
Johor	2022 2015	97.9 74.7	97.6 60.6	79.7 24.1
Kedah	2022 2015	90.7 59.3	81.8 45.6	55.7 17.8
Kelantan	2022 2015	93.2 46.5	79.3 32.1	40.5 11.5
Melaka	2022 2015	97.0 73.6	93.1 64.8	67.7 35.9
Negeri Sembilan	2022 2015	93.8 50.4	92.9 38.8	60.8 14.9
Pahang	2022 2015	94.0 64.8	92.6 47.2	58.6 18.9
Perak	2022 2015	95.5 64.9	84.9 48.9	58.7 19.0
Perlis	2022 2015	93.8 52.7	78.4 42.0	56.6 16.9
Pulau Pinang	2022 2015	99.0 87.0	98.7 80.4	78.9 34.9
Sabah	2022 2015	88.3 58.5	84.8 43.4	45.6 17.1
Sarawak	2022 2015	85.6 63.0	82.3 49.2	47.8 20.7
Selangor	2022 2015	99.2 87.9	98.9 78.5	85.2 43.1
Terengganu	2022 2015	92.1 51.0	91.3 36.8	62.1 13.7
W.P. Kuala Lumpur	2022 2015	99.8 90.7	99.6 82.5	91.0 40.7
W.P. Labuan	2022 2015	95.3 63.9	93.3 53.1	64.3 24.4
W.P. Putrajaya	2022 2015	99.2 83.9	99.2 76.9	88.9 36.3
Supra	2022 2015	100.0 -	100.0 -	100.0 -

Nota.

'-' merujuk kepada data tidak tersedia

Supra merangkumi aktiviti pengeluaran yang melangkaui pusat kepentingan ekonomi utama bagi mana-mana negeri

Notes.

'-' refers to data not available

Supra covers production activities that beyond centre of predominant economic interest for any state

Jadual A3: Jenis Web Presence yang Dimiliki mengikut Sektor/ Subsektor, 2022
Table A3: Type of Web Presence Owned by Sector/ Sub-sector, 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Laman web kepunyaan sendiri <i>Website owned by establishment</i>	Laman web di entiti lain <i>Presence on another entity's website</i>	Media sosial <i>Social media</i>	E-Pasaran <i>E-Marketplace</i>
		%	%	%	%
Jumlah <i>Total</i>	2022	55.2	34.0	78.0	39.6
Pertanian <i>Agriculture</i>	2022	57.9	28.6	83.2	6.6
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	45.4	40.4	60.7	1.1
Pembuatan <i>Manufacturing</i>	2022	62.9	24.2	86.7	13.8
Pembinaan <i>Construction</i>	2022	57.6	22.6	57.1	7.5
Perkhidmatan <i>Services</i>	2022	54.5	35.5	79.0	43.9
Utiliti <i>Utility</i>	2022	38.4	14.1	94.3	1.9
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	52.0	31.4	79.6	60.0
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	56.6	31.0	57.8	43.6
Penginapan <i>Accommodation</i>	2022	68.1	48.6	84.8	59.8
Makanan dan Minuman <i>Food and Beverages</i>	2022	47.4	52.4	90.4	61.1
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	84.4	53.4	95.3	33.7
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	66.7	31.2	82.1	12.4
Hartanah <i>Real Estate</i>	2022	50.1	39.6	77.1	17.0
Profesional, Sainifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	59.3	49.5	70.2	11.4
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	46.9	42.6	76.0	8.0
Pendidikan <i>Education</i>	2022	46.6	20.3	74.3	4.2
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	50.7	29.2	80.6	8.0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	77.1	31.8	91.3	24.9
Perkhidmatan Lain <i>Other Services</i>	2022	61.7	17.4	67.5	10.8

Jadual A4: Jenis Rangkaian Komputer yang Digunakan mengikut Sektor/ Subsektor, 2015 dan 2022
Table A4: Type of Computer Network Infrastructure Used by Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Intranet Intranet	Extranet Extranet	Rangkaian kawasan setempat Local area network (LAN)	Rangkaian kawasan setempat tanpa wayar Wireless local area network (WLAN)	Rangkaian kawasan luas Wide area network (WAN)	Lain- lain Others
		%	%	%	%	%	%
Jumlah <i>Total</i>	2022 2015	49.8 24.1	24.0 9.5	75.8 54.2	69.5 -	88.0 26.1	5.0 7.9
Pertanian <i>Agriculture</i>	2022 2015	58.6 23.2	16.7 4.5	84.2 54.2	54.9 -	53.0 26.4	10.4 10.8
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	53.2 28.9	21.4 7.7	84.5 57.8	64.4 -	53.1 35.5	23.4 7.5
Pembuatan <i>Manufacturing</i>	2022 2015	70.0 46.1	52.5 36.0	89.0 61.8	69.0 -	52.5 22.6	12.8 8.8
Pembinaan <i>Construction</i>	2022 2015	40.5 16.8	13.2 2.6	62.4 50.8	57.2 -	81.4 34.1	5.8 11.8
Perkhidmatan <i>Services</i>	2022 2015	49.2 22.5	23.2 7.6	75.9 53.7	70.7 -	91.0 26.0	4.4 7.5
Utiliti <i>Utility</i>	2022 2015	50.4 26.4	20.3 8.0	61.4 50.8	69.3 -	98.1 36.6	1.9 11.9
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	45.0 17.3	20.8 9.0	77.1 48.8	72.4 -	96.7 24.6	4.0 8.6
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	76.7 50.8	25.5 4.0	75.7 43.5	69.9 -	97.6 19.9	5.3 8.3
Penginapan <i>Accommodation</i>	2022 2015	52.4 16.3	28.8 6.5	80.6 60.2	68.8 -	65.3 35.9	8.0 7.9
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	49.7 20.6	33.5 3.6	66.9 68.0	51.6 -	66.4 32.0	6.8 3.0
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	75.9 29.0	23.3 7.2	79.8 61.8	79.8 -	95.8 29.0	4.8 4.4
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	95.2 64.5	34.3 18.4	82.1 79.3	93.9 -	94.5 54.4	3.4 3.4
Hartanah <i>Real Estate</i>	2022 2015	43.4 26.9	12.5 2.0	97.5 88.1	65.4 -	85.6 9.2	7.2 1.2
Profesional, Sainifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	49.0 31.9	19.7 3.1	75.9 63.3	73.8 -	96.0 24.7	4.4 6.4
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	47.9 24.6	28.9 3.8	78.1 56.9	78.1 -	96.9 25.6	2.6 8.3
Pendidikan <i>Education</i>	2022 2015	44.3 27.3	32.4 4.0	73.4 49.5	63.7 -	80.8 26.0	0.2 9.1
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	40.9 25.9	24.6 5.8	74.7 52.6	91.1 -	81.5 29.8	8.2 8.8
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	38.9 27.5	12.1 4.3	78.5 49.6	70.4 -	71.2 23.2	1.3 9.1
Perkhidmatan Lain <i>Other Services</i>	2022 2015	35.5 19.3	16.8 4.5	68.2 42.0	67.8 -	92.4 36.9	2.2 8.4

Nota.

'-' merujuk kepada data tidak tersedia

Lain-lain termasuk Rangkaian Kawasan Metropolitan (MAN), Rangkaian Kawasan Storan (SAN), dan Rangkaian Kawasan Peribadi (PAN)

Notes.

'-' refers to data not available

Others include Metropolitan Area Network (MAN), Storage Area Network (SAN), and Personal Area Network (PAN)

Jadual A5: Jenis Capaian Internet mengikut Sektor/ Subsektor, 2015 dan 2022
Table A5: Type of Internet Access by Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Jalur lebar tetap <i>Fixed broadband</i>	Jalur lebar mudah alih <i>Mobile broadband</i>	Kedua-dua jalur lebar <i>Both types of broadband</i>
		%	%	%
Jumlah	2022	92.3	77.9	72.9
<i>Total</i>	2015	74.8	28.5	-
Pertanian	2022	96.4	74.8	69.1
<i>Agriculture</i>	2015	78.4	28.0	-
Perlombongan dan Pengkuarian	2022	93.5	59.2	57.6
<i>Mining and Quarrying</i>	2015	79.4	30.5	-
Pembuatan	2022	94.9	75.8	72.1
<i>Manufacturing</i>	2015	72.6	54.4	-
Pembinaan	2022	99.5	74.1	74.1
<i>Construction</i>	2015	70.1	36.3	-
Perkhidmatan	2022	91.6	78.3	72.9
<i>Services</i>	2015	75.2	25.8	-
Utiliti	2022	91.3	65.1	62.1
<i>Utility</i>	2015	82.2	27.2	-
Perdagangan Borong dan Runcit	2022	91.5	75.6	70.5
<i>Wholesale and Retail Trade</i>	2015	71.1	25.7	-
Pengangkutan dan Penyimpanan	2022	90.5	86.5	85.0
<i>Transportation and Storage</i>	2015	75.9	23.6	-
Penginapan	2022	95.4	69.4	69.0
<i>Accommodation</i>	2015	86.3	22.3	-
Makanan dan Minuman	2022	88.5	87.3	81.7
<i>Food and Beverages</i>	2015	87.1	30.0	-
Maklumat dan Komunikasi	2022	100.0	95.4	86.8
<i>Information and Communication</i>	2015	81.1	30.3	-
Kewangan dan Insurans/ Takaful	2022	95.3	69.1	66.1
<i>Financial and Insurance/ Takaful</i>	2015	93.5	46.4	-
Hartanah	2022	97.5	71.1	69.6
<i>Real Estate</i>	2015	92.0	8.0	-
Profesional, Saintifik dan Teknikal	2022	93.0	76.6	69.6
<i>Professional, Scientific and Technical</i>	2015	79.6	20.3	-
Pentadbiran dan Khidmat Sokongan	2022	98.1	96.5	96.5
<i>Administrative and Support Service</i>	2015	78.5	24.8	-
Pendidikan	2022	94.2	88.9	82.6
<i>Education</i>	2015	77.1	25.1	-
Kesihatan Kemanusiaan dan Kerja Sosial	2022	96.7	63.9	66.1
<i>Human Health and Social Work</i>	2015	76.7	26.8	-
Kesenian, Hiburan dan Rekreasi	2022	99.5	75.6	75.5
<i>Arts, Entertainment and Recreation</i>	2015	84.1	19.7	-
Perkhidmatan Lain	2022	82.2	76.4	58.6
<i>Other Services</i>	2015	66.7	35.6	-

Nota .

'-' merujuk kepada data tidak tersedia

Notes.

'-' refers to data not available

Jadual A6: Tujuan Penggunaan Internet mengikut Sektor/ Subsektor, 2015 dan 2022
Table A6: Purpose of Internet Usage by Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Menghantar atau menerima e-mel <i>Sending or receiving e-mail</i>	Telefon melalui internet <i>Telephoning over the internet</i>	Menghantar informasi atau pesanan dengan segera <i>Posting information or instant messaging</i>	Mendapatkan maklumat berkenaan barangan atau perkhidmatan <i>Getting information about goods or services</i>
		%	%	%	%
Jumlah <i>Total</i>	2022 2015	95.7 70.6	75.1 18.6	81.2 36.6	81.6 38.9
Pertanian <i>Agriculture</i>	2022 2015	98.1 89.7	75.1 13.5	81.2 40.1	78.5 37.3
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	98.2 93.5	65.3 14.2	81.6 45.2	75.9 43.4
Pembuatan <i>Manufacturing</i>	2022 2015	96.5 93.6	75.8 12.3	80.8 47.0	81.6 66.1
Pembinaan <i>Construction</i>	2022 2015	93.2 90.0	68.4 18.6	76.3 42.2	78.6 38.9
Perkhidmatan <i>Services</i>	2022 2015	95.9 67.2	75.6 19.2	81.6 35.3	81.9 36.5
Utiliti <i>Utility</i>	2022 2015	98.6 94.1	57.0 25.8	73.7 45.6	73.5 45.7
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	96.0 54.3	75.0 20.1	82.0 30.7	83.6 36.1
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	98.1 91.5	86.6 16.1	88.5 29.9	79.8 20.2
Penginapan <i>Accommodation</i>	2022 2015	99.7 93.3	56.8 20.3	81.8 41.6	88.6 36.5
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	93.5 78.9	82.0 10.8	85.5 22.8	80.8 31.7
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	99.0 100.0	92.1 29.0	90.3 99.9	82.2 42.0
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	99.9 99.6	69.0 12.1	66.4 39.1	70.8 13.6
Hartanah <i>Real Estate</i>	2022 2015	95.4 94.0	71.2 24.3	72.9 40.1	74.3 83.3
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	97.7 94.3	73.2 29.9	88.8 48.7	83.8 41.8
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	92.8 91.4	75.2 31.3	84.1 48.1	90.1 36.1
Pendidikan <i>Education</i>	2022 2015	97.0 89.5	96.1 17.9	80.2 37.2	82.4 32.3
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	94.5 90.2	73.3 20.9	79.8 43.7	78.2 35.1
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	96.0 70.0	64.5 21.5	73.1 34.3	90.5 24.0
Perkhidmatan Lain <i>Other Services</i>	2022 2015	93.6 83.8	65.1 19.8	69.8 52.6	74.5 37.9

Jadual A6: Tujuan Penggunaan Internet mengikut Sektor/ Subsektor, 2015 dan 2022 (samb.)
Table A6: Purpose of Internet Usage by Sector/ Sub-sector, 2015 and 2022 (cont'd.)

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Mendapatkan maklumat dari organisasi kerajaan <i>Getting information from government organisations</i>	Berhubung dengan organisasi kerajaan <i>Interacting with government organisations</i>	Perbankan melalui Internet <i>Internet banking</i>	Mengakses perkhidmatan kewangan yang lain <i>Accessing other financial services</i>
		%	%	%	%
Jumlah <i>Total</i>	2022 2015	68.6 23.5	63.2 16.5	90.2 41.3	42.3 9.9
Pertanian <i>Agriculture</i>	2022 2015	73.2 42.6	65.8 31.6	90.1 34.2	43.3 6.8
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	65.2 39.5	64.0 26.5	79.3 43.4	44.0 9.9
Pembuatan <i>Manufacturing</i>	2022 2015	69.9 48.4	66.4 23.4	90.3 76.1	44.2 9.8
Pembinaan <i>Construction</i>	2022 2015	72.5 30.8	59.9 22.6	86.3 44.5	38.9 7.1
Perkhidmatan <i>Services</i>	2022 2015	68.2 20.6	63.3 15.4	90.6 38.1	42.4 10.1
Utiliti <i>Utility</i>	2022 2015	74.1 41.7	64.2 28.0	77.5 43.0	33.4 11.2
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	65.6 14.6	61.2 8.7	90.0 32.3	38.2 9.2
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	75.8 16.4	74.9 14.0	90.1 27.8	44.9 4.6
Penginapan <i>Accommodation</i>	2022 2015	81.3 35.5	78.2 28.8	91.4 51.1	26.6 10.1
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	69.8 12.1	58.2 9.2	90.9 26.2	39.9 8.9
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	74.0 23.4	71.0 20.1	95.6 61.1	68.9 12.7
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	54.6 49.7	48.2 47.4	100.0 96.2	96.8 40.3
Hartanah <i>Real Estate</i>	2022 2015	75.1 29.9	72.3 73.9	98.1 90.4	43.2 7.5
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	80.9 34.5	75.6 29.0	90.4 46.2	43.7 13.0
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	72.1 24.4	79.9 21.3	90.7 39.2	50.4 8.8
Pendidikan <i>Education</i>	2022 2015	74.1 29.0	70.9 20.4	89.3 33.3	47.2 8.9
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	75.6 31.1	73.6 22.5	90.3 47.9	63.8 8.0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	73.5 15.8	66.0 11.0	85.0 34.8	40.0 6.1
Perkhidmatan Lain <i>Other Services</i>	2022 2015	60.1 27.7	51.9 23.4	86.2 41.4	29.5 4.2

Jadual A6: Tujuan Penggunaan Internet mengikut Sektor/ Subsektor, 2015 dan 2022 (samb.)
Table A6: Purpose of Internet Usage by Sector/ Sub-sector, 2015 and 2022 (cont'd.)

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Penyediaan perkhidmatan pelanggan Providing customer services	Penghantaran produk secara atas talian Delivering products online	Pemberitahuan jawatan kosong dalam atau luaran Internal or external recruitment	Latihan untuk kakitangan (aplikasi e-pembelajaran) Staff training (e-learning application)	Lain- lain Others
		%	%	%	%	%
Jumlah <i>Total</i>	2022 2015	46.8 10.3	36.8 5.7	53.1 10.8	24.2 2.5	11.6 12.5
Pertanian <i>Agriculture</i>	2022 2015	26.3 4.9	24.6 1.6	17.3 6.8	20.0 3.3	15.4 20.9
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	29.5 7.1	27.9 7.4	53.8 9.5	23.3 4.6	7.9 19.2
Pembuatan <i>Manufacturing</i>	2022 2015	48.0 11.0	32.3 14.9	52.6 10.2	19.8 3.2	11.2 12.8
Pembinaan <i>Construction</i>	2022 2015	36.7 3.3	23.5 1.5	36.9 6.5	16.9 2.4	11.8 24.0
Perkhidmatan <i>Services</i>	2022 2015	47.8 10.7	38.3 5.1	54.9 11.2	25.1 2.4	11.5 11.7
Utiliti <i>Utility</i>	2022 2015	38.1 9.5	29.2 2.4	57.6 8.0	21.8 1.5	11.1 20.2
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	47.5 6.6	40.0 5.6	51.4 7.7	25.7 1.3	11.0 12.2
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	51.9 5.5	42.3 1.8	50.9 3.6	31.1 1.6	9.0 9.6
Penginapan <i>Accommodation</i>	2022 2015	60.2 22.4	37.5 14.4	53.3 9.4	20.6 3.1	4.2 16.9
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	45.9 10.1	40.2 5.9	61.1 10.4	30.1 1.4	19.6 8.5
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	74.8 16.7	45.3 7.3	61.5 12.2	36.8 7.2	15.3 13.9
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	62.5 76.3	34.7 4.7	55.4 32.9	11.6 23.3	16.0 0.9
Hartanah <i>Real Estate</i>	2022 2015	29.2 10.5	35.1 4.3	44.9 29.3	10.1 0.5	9.3 0.4
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	51.2 13.5	32.9 4.1	56.3 9.7	20.1 3.7	4.2 15.3
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	50.2 12.3	35.3 2.9	54.9 6.6	21.0 2.0	15.6 18.3
Pendidikan <i>Education</i>	2022 2015	51.3 11.7	30.6 4.1	65.4 11.2	51.0 5.6	11.1 13.7
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	54.4 14.1	47.0 2.2	65.6 8.3	18.7 3.4	11.7 15.9
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	41.2 16.5	30.9 5.2	40.4 4.0	21.3 1.4	25.9 26.1
Perkhidmatan Lain <i>Other Services</i>	2022 2015	32.5 21.5	27.9 2.3	67.9 16.9	20.5 1.5	5.2 11.6

Nota.
Lain-lain termasuk memuat turun perisian, hiburan dan ruang penyimpanan dalam talian
Notes.
Others includes downloading software, entertainment and online space storage

Jadual A7: Penggunaan Teknologi Digital mengikut Sektor/ Subsektor, 2022
Table A7: Usage of Digital Technology by Sector/ Sub-sector, 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Laman web <i>Website</i>	Media sosial <i>Social media</i>	Internet mudah alih dan teknologi <i>Mobile internet and technologies</i>	Pengkomputeran awan <i>Cloud computing</i>
		%	%	%	%
Jumlah <i>Total</i>	2022	54.7	70.2	72.4	58.5
Pertanian <i>Agriculture</i>	2022	56.9	67.0	64.0	63.9
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	55.5	56.8	56.2	67.7
Pembuatan <i>Manufacturing</i>	2022	66.2	81.9	68.1	55.6
Pembinaan <i>Construction</i>	2022	57.8	54.6	63.7	58.6
Perkhidmatan <i>Services</i>	2022	53.8	70.7	73.4	58.5
Utiliti <i>Utility</i>	2022	41.5	86.4	72.7	59.8
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	52.3	69.3	75.0	58.7
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	73.8	57.0	83.6	71.8
Penginapan <i>Accommodation</i>	2022	52.7	79.2	59.3	52.2
Makanan dan Minuman <i>Food and Beverages</i>	2022	50.7	90.3	66.5	40.3
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	89.2	95.3	95.4	70.3
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	50.0	50.5	82.3	65.0
Hartanah <i>Real Estate</i>	2022	48.5	71.5	76.6	58.8
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	62.8	65.9	78.0	74.5
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	20.6	81.5	76.3	68.2
Pendidikan <i>Education</i>	2022	65.8	80.0	86.7	70.8
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	60.3	67.1	79.2	86.4
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	65.4	73.5	61.5	64.6
Perkhidmatan Lain <i>Other Services</i>	2022	52.1	54.5	47.3	41.2

Jadual A7: Penggunaan Teknologi Digital mengikut Sektor/ Subsektor, 2015 dan 2022 (samb.)
Table A7: Usage of Digital Technology by Sector/ Sub-sector, 2015 and 2022(cont'd)

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Analitik data <i>Data analytics</i>	Perisian pengurusan <i>Management software</i>	Platform kolaborasi atas talian <i>Online collaborative platforms</i>	Lain-lain <i>Others</i>	Tiada <i>None</i>
		%	%	%	%	%
Jumlah <i>Total</i>	2022	23.7	50.7	24.7	2.4	6.1
Pertanian <i>Agriculture</i>	2022	17.2	48.1	27.1	3.4	8.9
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	25.1	53.6	41.9	0.2	0.1
Pembuatan <i>Manufacturing</i>	2022	17.3	53.9	27.1	2.9	6.9
Pembinaan <i>Construction</i>	2022	20.3	47.3	30.2	1.2	0.7
Perkhidmatan <i>Services</i>	2022	24.4	50.8	24.1	2.5	6.4
Utiliti <i>Utility</i>	2022	25.2	40.4	29.8	1.4	9.4
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	21.0	50.7	21.7	2.6	7.8
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	37.0	54.4	35.1	0.0	2.1
Penginapan <i>Accommodation</i>	2022	28.1	60.3	36.7	0.8	9.0
Makanan dan Minuman <i>Food and Beverages</i>	2022	30.4	39.9	28.0	2.5	8.2
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	30.6	85.2	30.7	0.0	0.0
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	15.0	52.0	35.0	4.7	9.2
Hartanah <i>Real Estate</i>	2022	28.8	50.2	32.2	0.3	1.5
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	19.4	57.6	14.4	2.2	2.5
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	25.2	45.8	22.0	8.2	5.7
Pendidikan <i>Education</i>	2022	19.6	53.6	28.2	0.1	1.6
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	43.8	48.1	23.3	1.2	8.1
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	49.7	57.5	14.0	1.6	2.6
Perkhidmatan Lain <i>Other Services</i>	2022	25.8	50.8	22.3	2.8	3.0

Nota.

Lain-lain termasuk alat digital seperti pembayaran digital (contohnya, DuitNow QR), kecerdasan buatan (AI), dan Internet Kebendaan (IoT)

Notes.

Others include digital tools such as digital payments (e.g., DuitNow QR), artificial intelligence (AI), and the Internet of Things (IoT)

Jadual A8: Pendapatan dan Perbelanjaan E-Dagang mengikut Sektor/ Subsektor, 2015 dan 2022
Table A8: Income and Expenditure of E-Commerce by Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Bilangan pertubuhan yang menjalankan transaksi e-dagang <i>Number of establishment involved in e-commerce</i>	Pendapatan <i>Income</i>	Perbelanjaan <i>Expenditure</i>
			(RM juta) (RM million)	(RM juta) (RM million)
Jumlah <i>Total</i>	2022 2015	78,236 47,556	1,126,854 398,207	531,631 195,098
Pertanian <i>Agriculture</i>	2022 2015	427 81	995 185	424 80
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	95 53	10,895 6,827	3,730 2,204
Pembuatan <i>Manufacturing</i>	2022 2015	4,248 3,856	561,260 275,857	347,617 160,584
Pembinaan <i>Construction</i>	2022 2015	412 272	1,036 207	706 424
Perkhidmatan <i>Services</i>	2022 2015	73,054 43,294	552,668 115,131	179,155 31,808
Utiliti <i>Utility</i>	2022 2015	63 7	13,376 2,303	2,669 254
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	43,782 32,424	227,894 62,427	80,313 18,195
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	1,835 178	24,212 21,952	14,038 6,889
Penginapan <i>Accommodation</i>	2022 2015	1,285 512	6,145 5,924	3,884 3,546
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	11,677 1,760	8,932 2,043	2,112 604
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	6,851 6,719	92,373 8,575	26,600 173
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	3,176 92	171,939 9,268	47,242 1,818
Hartanah <i>Real Estate</i>	2022 2015	432 24	87 9	42 9
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	374 172	496 206	78 33
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	770 237	2,749 1,611	743 181
Pendidikan <i>Education</i>	2022 2015	796 750	1,283 317	332 61
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	195 28	1,275 4	683 17
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	598 305	1,834 483	373 25
Perkhidmatan Lain <i>Other Services</i>	2022 2015	1,220 86	75 8	47 3

Jadual A9: Pendapatan dan Perbelanjaan E-Dagang mengikut Negeri, 2015 dan 2022
Table A9: Income and Expenditure of E-Commerce by State, 2015 and 2022

Negeri States	Tahun Year	Bilangan pertubuhan yang menjalankan transaksi e-dagang <i>Number of establishment involved in e-commerce</i>	Pendapatan Income (RM juta) (RM million)	Perbelanjaan Expenditure (RM juta) (RM million)
Jumlah <i>Total</i>	2022 2015	78,236 47,556	1,126,854 398,207	531,631 195,098
Johor	2022 2015	5,349 3,729	95,162 46,187	46,665 25,127
Kedah	2022 2015	1,847 898	29,603 19,281	17,223 10,203
Kelantan	2022 2015	912 518	7,278 1,341	4,671 598
Melaka	2022 2015	3,357 3,038	56,099 25,881	31,531 19,450
Negeri Sembilan	2022 2015	1,517 736	42,188 18,081	30,986 12,521
Pahang	2022 2015	1,676 910	31,215 11,376	19,812 4,729
Perak	2022 2015	3,812 1,901	33,390 11,668	19,259 4,864
Perlis	2022 2015	376 92	1,674 640	912 264
Pulau Pinang	2022 2015	4,669 2,991	101,359 43,763	68,134 20,206
Sabah	2022 2015	2,217 1,116	22,478 11,830	12,197 6,763
Sarawak	2022 2015	3,141 1,478	39,143 22,653	35,214 15,737
Selangor	2022 2015	32,704 16,215	371,129 124,736	147,940 56,163
Terengganu	2022 2015	1,483 574	26,913 15,076	14,418 4,685
W.P. Kuala Lumpur¹	2022 2015	14,417 13,190	259,084 44,749	80,828 13,463
W.P. Labuan	2022 2015	306 98	9,072 765	1,607 268
W.P. Putrajaya	2022 2015	453 72	1,067 179	235 57

Nota.

'-' merujuk kepada data tidak tersedia

¹Termasuk Supra

Supra merangkumi aktiviti pengeluaran yang melangkaui pusat kepentingan ekonomi utama bagi mana-mana negeri

Notes.

'-' refers to data not available

¹ Including Supra

Supra covers production activities that beyond centre of predominant economic interest for any state

Jadual A10: Pendapatan E-Dagang mengikut Jenis Pasaran dan Sektor/ Subsektor, 2015 dan 2022
Table A10: Income of E-Commerce by Type of Market and Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Jumlah <i>Total</i>	Tempatan <i>Domestic</i>	Antarabangsa <i>International</i>
		(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)
Jumlah <i>Total</i>	2022	1,126,854	1,003,480	123,374
	2015	398,207	356,887	41,320
Pertanian <i>Agriculture</i>	2022	995	819	176
	2015	185	129	56
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	10,895	8,917	1,977
	2015	6,827	4,922	1,906
Pembuatan <i>Manufacturing</i>	2022	561,260	520,611	40,649
	2015	275,857	255,691	20,166
Pembinaan <i>Construction</i>	2022	1,036	1,034	1
	2015	207	207	0
Perkhidmatan <i>Services</i>	2022	552,668	472,099	80,570
	2015	115,130	95,938	19,192
Utiliti <i>Utility</i>	2022	13,376	13,286	90
	2015	2,303	2,303	-
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	227,894	188,731	39,162
	2015	62,427	54,719	7,708
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	24,212	16,723	7,489
	2015	21,952	13,103	8,849
Penginapan <i>Accommodation</i>	2022	6,145	5,555	590
	2015	5,924	3,812	2,112
Makanan dan Minuman <i>Food and Beverages</i>	2022	8,932	8,912	20
	2015	2,043	2,032	11
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	92,373	92,335	38
	2015	8,575	8,517	58
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	171,939	138,935	33,003
	2015	9,268	8,967	301
Hartanah <i>Real Estate</i>	2022	87	81	6
	2015	9	9	-
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	496	491	5
	2015	206	196	9
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	2,749	2,708	41
	2015	1,611	1,564	46
Pendidikan <i>Education</i>	2022	1,283	1,247	36
	2015	317	292	25
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	1,275	1,260	16
	2015	4	3	0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	1,834	1,761	73
	2015	483	412	71
Perkhidmatan Lain <i>Other Services</i>	2022	75	74	1
	2015	8	6	1

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

'-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

'-' refers to data not available

Jadual A11: Pendapatan E-Dagang mengikut Jenis Pelanggan dan Sektor/ Subsektor, 2015 dan 2022

Table A11: Income of E-Commerce by Type of Customer and Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Jumlah <i>Total</i>	Perniagaan Kepada Perniagaan <i>Business to Business (B2B)</i>	Perniagaan Kepada Pengguna <i>Business to Consumer (B2C)</i>	Perniagaan Kepada Kerajaan <i>Business to Government (B2G)</i>
		(RM Juta) <i>(RM Million)</i>	(RM Juta) <i>(RM Million)</i>	(RM Juta) <i>(RM Million)</i>	(RM Juta) <i>(RM Million)</i>
Jumlah <i>Total</i>	2022 2015	1,126,854 398,207	786,501 320,113	312,583 68,847	27,769 9,247
Pertanian <i>Agriculture</i>	2022 2015	995 185	628 103	360 82	7 -
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	10,895 6,827	10,872 6,813	- -	23 14
Pembuatan <i>Manufacturing</i>	2022 2015	561,260 275,857	526,748 257,011	28,358 18,108	6,154 738
Pembinaan <i>Construction</i>	2022 2015	1,036 207	681 206	72 0	283 0
Perkhidmatan <i>Services</i>	2022 2015	552,668 115,131	247,573 55,979	283,793 50,657	21,303 8,495
Utiliti <i>Utility</i>	2022 2015	13,376 2,303	13,190 2,302	147 1	39 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	227,894 62,427	101,838 43,917	120,132 12,684	5,923 5,826
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	24,212 21,952	8,120 3,512	15,250 17,627	842 812
Penginapan <i>Accommodation</i>	2022 2015	6,145 5,924	1,210 1,603	4,618 3,241	317 1,080
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	8,932 2,043	767 406	8,025 1,588	139 49
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	92,373 8,575	44,651 1,473	46,267 6,931	1,454 171
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	171,939 9,268	74,997 2,152	84,629 6,706	12,312 410
Hartanah <i>Real Estate</i>	2022 2015	87 9	35 4	52 5	1 0
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	496 206	300 113	191 79	4 14
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	2,749 1,611	1,195 462	1,379 1,021	174 128
Pendidikan <i>Education</i>	2022 2015	1,283 317	516 18	736 297	31 3
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	1,275 4	426 0	842 3	7 0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	1,834 483	300 15	1,477 468	56 0
Perkhidmatan Lain <i>Other Services</i>	2022 2015	75 8	25 2	47 4	2 1

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

Nota.

'0' refers to value less than RM500,000

Jadual A12: Perbelanjaan E-Dagang mengikut Jenis Pasaran dan Sektor/ Subsektor, 2015 dan 2022
Table A12: Expenditure of E-Commerce by Type of Market and Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Jumlah Total	Tempatan Domestic (RM Juta) (RM Million)	Antarabangsa International (RM Juta) (RM Million)
Jumlah <i>Total</i>	2022 2015	531,631 195,098	494,160 173,963	37,471 21,135
Pertanian <i>Agriculture</i>	2022 2015	424 80	381 80	43 0
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	3,730 2,204	3,729 2,204	1 -
Pembuatan <i>Manufacturing</i>	2022 2015	347,617 160,584	326,505 149,387	21,112 11,197
Pembinaan <i>Construction</i>	2022 2015	706 424	691 422	15 2
Perkhidmatan <i>Services</i>	2022 2015	179,155 31,808	162,854 21,871	16,301 9,937
Utiliti <i>Utility</i>	2022 2015	2,669 254	2,649 254	20 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	80,313 18,195	71,368 14,920	8,944 3,275
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	14,038 6,889	8,540 1,858	5,498 5,031
Penginapan <i>Accommodation</i>	2022 2015	3,884 3,546	2,698 2,235	1,186 1,311
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	2,112 604	1,763 488	350 116
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	26,600 173	26,585 90	15 83
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	47,242 1,818	47,142 1,728	100 91
Hartanah <i>Real Estate</i>	2022 2015	42 9	39 9	3 0
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	78 33	75 31	3 2
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	743 181	659 165	84 16
Pendidikan <i>Education</i>	2022 2015	332 61	320 57	12 4
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	683 17	653 14	30 3
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	373 25	316 20	57 5
Perkhidmatan Lain <i>Other Services</i>	2022 2015	47 3	47 2	0 0

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

-' refers to data not available

Jadual A13: Perbelanjaan E-Dagang mengikut Jenis Pelanggan dan Sektor/ Subsektor, 2015 dan 2022
Table A13: Expenditure of E-Commerce by Type of Customer and Sector/ Sub-sector, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-Sector	Tahun Year	Jumlah Total	Perniagaan kepada Perniagaan Business to Business (B2B)	Perniagaan kepada Pengguna Business to Consumer (B2C)	Perniagaan Kepada Kerajaan Business to Government (B2G)
		(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)
Jumlah <i>Total</i>	2022 2015	531,631 195,098	432,160 183,002	87,937 8,656	11,535 3,440
Pertanian <i>Agriculture</i>	2022 2015	424 80	328 71	94 8	2 1
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	3,730 2,204	3,587 2,204	5 -	138 -
Pembuatan <i>Manufacturing</i>	2022 2015	347,617 160,584	297,157 151,914	45,223 6,517	5,238 2,153
Pembinaan <i>Construction</i>	2022 2015	706 424	603 422	27 1	75 0
Perkhidmatan <i>Services</i>	2022 2015	179,155 31,808	130,484 28,391	42,588 2,130	6,082 1,286
Utiliti <i>Utility</i>	2022 2015	2,669 254	2,599 254	64 -	6 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	80,313 18,195	60,690 16,467	17,711 728	1,912 1,001
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	14,038 6,889	11,300 6,696	2,437 -	301 194
Penginapan <i>Accommodation</i>	2022 2015	3,884 3,546	2,523 2,260	1,041 1,246	320 40
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	2,112 604	1,955 576	148 28	9 0
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	26,600 173	21,474 166	4,660 6	466 1
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	47,242 1,818	28,455 1,687	15,781 87	3,006 45
Hartanah <i>Real Estate</i>	2022 2015	42 9	31 9	10 0	1 -
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	78 33	47 30	30 3	1 0
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	743 181	399 148	295 27	49 5
Pendidikan <i>Education</i>	2022 2015	332 61	190 55	132 5	11 0
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	683 17	553 17	130 0	0 0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	373 25	255 24	116 1	2 0
Perkhidmatan Lain <i>Other Services</i>	2022 2015	47 3	13 3	33 0	1 -

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

'-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

'-' refers to data not available

Jadual B1: Penggunaan Komputer, Internet dan Web Presence mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B1: Usage of Computer, Internet and Web Presence by Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Penggunaan komputer <i>Computer usage</i>	Penggunaan internet <i>Internet usage</i>	Pemilikan web presence <i>Web presence owned</i>
		%	%	%
Jumlah <i>Total</i>	2022 2015	95.8 73.1	93.1 56.5	70.8 20.1
Pertanian <i>Agriculture</i>	2022 2015	88.5 65.0	82.8 43.9	48.4 4.0
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	91.4 86.1	88.9 71.3	45.1 19.4
Pembuatan <i>Manufacturing</i>	2022 2015	94.5 91.5	94.3 87.7	72.9 16.5
Pembinaan <i>Construction</i>	2022 2015	96.7 72.5	95.5 66.6	70.0 10.2
Perkhidmatan <i>Services</i>	2022 2015	95.9 72.1	93.0 54.3	71.1 21.0
Utiliti <i>Utility</i>	2022 2015	98.0 76.7	97.7 68.9	67.4 13.2
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	96.2 86.8	94.9 64.2	66.9 29.1
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	91.4 33.1	88.2 32.9	64.2 21.5
Penginapan <i>Accommodation</i>	2022 2015	99.6 90.5	99.5 75.2	92.8 27.1
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	90.8 40.5	77.0 19.1	66.1 5.4
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	100.0 100.0	100.0 100.0	100.0 89.3
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	100.0 100.0	100.0 100.0	100.0 23.5
Hartanah <i>Real Estate</i>	2022 2015	100.0 99.8	100.0 99.7	69.9 11.9
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	100.0 98.5	97.9 93.8	75.8 17.4
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	99.6 84.8	99.6 75.1	72.6 11.4
Pendidikan <i>Education</i>	2022 2015	98.5 86.7	98.1 74.1	76.2 17.2
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	99.0 82.7	99.0 68.1	82.2 12.2
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	96.0 81.6	94.8 75.9	77.3 14.7
Perkhidmatan Lain <i>Other Services</i>	2022 2015	95.2 38.7	95.2 23.5	80.3 6.1

Jadual B2: Penggunaan Komputer, Internet dan Web Presence mengikut Negeri - PMKS, 2015 dan 2022
Table B2: Usage of Computer, Internet and Web Presence by State - MSMEs, 2015 and 2022

Negeri States	Tahun Year	Penggunaan komputer Computer usage	Penggunaan internet Internet usage	Penggunaan web presence Web presence usage
		%	%	%
Jumlah	2022	95.8	93.1	70.8
<i>Total</i>	2015	73.1	56.5	20.1
Johor	2022	97.9	97.6	79.2
	2015	74.3	56.0	17.1
Kedah	2022	90.5	81.5	55.0
	2015	59.0	41.5	12.3
Kelantan	2022	93.1	79.0	39.7
	2015	46.2	24.9	6.2
Melaka	2022	96.9	93.0	67.2
	2015	73.3	59.2	24.3
Negeri Sembilan	2022	93.7	92.8	60.1
	2015	49.7	35.1	10.1
Pahang	2022	93.8	92.4	57.6
	2015	64.3	42.6	12.8
Perak	2022	95.4	84.6	58.1
	2015	64.7	44.7	13.0
Perlis	2022	93.7	78.1	56.2
	2015	50.2	39.1	13.1
Pulau Pinang	2022	99.0	98.7	78.4
	2015	87.1	74.8	25.0
Sabah	2022	88.1	84.5	44.3
	2015	55.3	39.3	11.8
Sarawak	2022	85.3	81.9	46.5
	2015	62.8	44.8	14.4
Selangor	2022	99.2	98.9	84.9
	2015	88.4	72.6	31.7
Terengganu	2022	92.0	91.2	61.5
	2015	49.8	33.5	9.5
W.P. Kuala Lumpur	2022	99.7	99.6	90.8
	2015	90.5	76.1	28.5
W.P. Labuan	2022	95.2	93.2	63.5
	2015	63.7	50.0	18.9
W.P. Putrajaya	2022	99.2	99.2	88.4
	2015	83.3	73.1	30.6

Nota.

'-' merujuk kepada data tidak tersedia

Notes.

'-' refers to data not available

Jadual B3: Jenis Web Presence yang Dimiliki mengikut Sektor/ Subsektor - PMKS, 2022
Table B3: Type of Web Presence Owned by Sector/ Sub-sector - MSMEs, 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Laman web kepunyaan sendiri <i>Website owned by establishment</i>	Laman web di entiti lain <i>Presence on another entity's website</i>	Media sosial <i>Social media</i>	E-Pasaran <i>E-Marketplace</i>
		%	%	%	%
Jumlah <i>Total</i>	2022	53.9	32.5	77.5	38.5
Pertanian <i>Agriculture</i>	2022	45.4	21.3	78.3	6.4
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	32.2	35.8	62.1	0.6
Pembuatan <i>Manufacturing</i>	2022	59.9	20.2	86.1	10.4
Pembinaan <i>Construction</i>	2022	55.8	19.9	55.9	3.6
Perkhidmatan <i>Services</i>	2022	53.6	34.2	78.6	42.9
Utiliti <i>Utility</i>	2022	29.1	8.8	93.5	0.4
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	50.8	29.7	79.0	59.0
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	54.4	27.6	55.7	40.8
Penginapan <i>Accommodation</i>	2022	67.8	48.1	84.9	59.4
Makanan dan Minuman <i>Food and Beverages</i>	2022	45.6	50.8	90.1	59.8
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	83.9	51.6	95.1	34.3
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	66.6	31.7	83.5	12.2
Hartanah <i>Real Estate</i>	2022	49.7	39.1	76.9	16.5
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	59.1	49.3	70.0	11.0
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	46.6	42.3	75.9	8.0
Pendidikan <i>Education</i>	2022	46.2	19.6	74.1	3.6
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	50.3	28.6	80.5	7.1
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	76.9	31.4	91.3	24.4
Perkhidmatan Lain <i>Other Services</i>	2022	61.7	17.4	67.5	10.8

Jadual B4: Jenis Rangkaian Komputer yang Digunakan mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B4: Type of Computer Network Infrastructure Used by Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Intranet Intranet	Extranet Extranet	Rangkaian kawasan setempat Local area network (LAN)	Rangkaian kawasan setempat tanpa wayar Wireless local area network (WLAN)	Rangkaian kawasan luas Wide area network (WAN)	Lain- lain Others
		%	%	%	%	%	%
Jumlah <i>Total</i>	2022	48.7	22.4	75.2	68.9	87.7	4.4
	2015	26.7	14.5	51.8	-	20.6	7.7
Pertanian <i>Agriculture</i>	2022	54.7	2.3	81.5	47.1	44.9	12.0
	2015	21.2	3.3	52.4	-	26.1	11.4
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	42.2	17.9	81.9	55.4	41.2	18.5
	2015	26.6	5.5	54.3	-	31.1	9.1
Pembuatan <i>Manufacturing</i>	2022	68.5	49.6	88.3	68.7	49.6	7.4
	2015	44.7	35.4	61.1	-	21.4	9.1
Pembinaan <i>Construction</i>	2022	38.7	10.5	61.2	55.9	80.8	5.9
	2015	16.5	2.5	50.2	-	34.1	12.0
Perkhidmatan <i>Services</i>	2022	48.4	22.0	75.5	70.2	90.9	4.0
	2015	25.7	13.4	51.0	-	19.7	7.2
Utiliti <i>Utility</i>	2022	45.3	12.1	57.4	66.2	98.1	1.8
	2015	24.7	6.2	48.3	-	33.0	13.5
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	44.0	19.4	76.7	71.9	96.6	3.9
	2015	22.1	19.1	43.4	-	14.6	8.1
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	75.9	22.8	74.8	68.8	97.6	1.9
	2015	50.9	3.2	42.3	-	19.4	8.5
Penginapan <i>Accommodation</i>	2022	52.0	28.2	80.4	68.5	65.0	7.2
	2015	15.5	5.9	58.8	-	35.6	8.3
Makanan dan Minuman <i>Food and Beverages</i>	2022	48.2	32.1	66.0	50.2	65.5	6.2
	2015	18.4	1.2	71.2	-	28.7	3.2
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	75.2	24.1	79.1	79.1	95.6	4.3
	2015	28.6	6.5	61.2	-	28.6	4.6
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	95.1	32.9	81.7	93.8	94.4	3.3
	2015	63.8	18.9	78.7	-	53.7	3.5
Hartanah <i>Real Estate</i>	2022	43.1	12.0	97.5	65.2	85.6	6.9
	2015	27.0	2.0	88.2	-	9.1	1.2
Profesional, Sainifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	48.8	19.4	75.9	73.7	96.0	4.2
	2015	31.9	3.0	63.2	-	24.7	6.4
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	47.7	28.6	78.0	78.0	96.9	2.6
	2015	24.7	3.8	56.8	-	25.6	8.3
Pendidikan <i>Education</i>	2022	43.9	31.9	73.3	63.4	80.7	0.1
	2015	27.0	3.8	49.5	-	25.5	9.2
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	40.5	24.0	74.5	91.0	81.5	7.5
	2015	25.7	5.7	52.4	-	29.6	8.9
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	38.6	11.7	78.4	70.3	71.0	1.3
	2015	27.5	4.1	49.4	-	23.0	9.2
Perkhidmatan Lain <i>Other Services</i>	2022	35.5	16.8	68.2	67.8	92.4	2.2
	2015	19.3	4.5	42.0	-	36.9	8.4

Nota.

'-' merujuk kepada data tidak tersedia

Lain-lain termasuk Rangkaian Kawasan Metropolitan (MAN), Rangkaian Kawasan Storan (SAN), dan Rangkaian Kawasan Peribadi (PAN)

Notes.

'-' refers to data not available

Others include Metropolitan Area Network (MAN), Storage Area Network (SAN), and Personal Area Network (PAN)

Jadual B5: Jenis Capaian Internet mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B5: Type of Internet Access by Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Jalur lebar tetap <i>Fixed broadband</i>	Jalur lebar mudah alih <i>Mobile broadband</i>	Kedua-dua jalur lebar <i>Both types of broadband</i>
		%	%	%
Jumlah <i>Total</i>	2022 2015	92.2 81.8	77.4 26.9	72.4 -
Pertanian <i>Agriculture</i>	2022 2015	95.8 76.2	71.5 26.4	64.8 -
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	91.8 77.1	48.6 31.0	46.6 -
Pembuatan <i>Manufacturing</i>	2022 2015	94.6 72.6	74.3 54.5	70.3 -
Pembinaan <i>Construction</i>	2022 2015	99.5 69.6	73.9 36.6	73.9 -
Perkhidmatan <i>Services</i>	2022 2015	91.4 83.4	78.0 23.7	72.5 -
Utiliti <i>Utility</i>	2022 2015	90.5 80.2	61.5 26.4	58.2 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	91.3 84.4	75.1 22.2	70.0 -
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	90.1 75.8	86.0 23.2	84.4 -
Penginapan <i>Accommodation</i>	2022 2015	95.4 85.8	69.1 21.9	68.8 -
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	88.2 86.1	86.9 30.2	81.2 -
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	100.0 80.4	95.2 30.2	86.3 -
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	95.6 93.3	68.4 45.8	65.4 -
Hartanah <i>Real Estate</i>	2022 2015	97.5 92.0	70.9 7.9	69.5 -
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	92.9 79.6	76.5 20.3	69.4 -
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	98.1 78.4	96.5 24.8	96.5 -
Pendidikan <i>Education</i>	2022 2015	94.2 77.0	88.9 25.2	82.5 -
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	96.7 76.5	64.0 26.8	66.0 -
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	99.5 84.0	75.4 19.6	75.4 -
Perkhidmatan Lain <i>Other Services</i>	2022 2015	82.2 66.7	76.4 35.6	58.6 -

Jadual B6: Tujuan Penggunaan Internet mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B6: Purpose of Internet Usage by Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Menghantar atau menerima e-mel <i>Sending or receiving e-mail</i>	Telefon melalui internet <i>Telephoning over the internet</i>	Menghantar informasi atau pesanan dengan segera <i>Posting information or instant messaging</i>	Mendapatkan maklumat berkenaan barangan atau perkhidmatan <i>Getting information about goods or services</i>
		%	%	%	%
Jumlah	2022	95.7	74.6	80.8	81.2
<i>Total</i>	2015	71.2	18.6	36.9	38.5
Pertanian	2022	97.8	70.8	77.9	74.7
<i>Agriculture</i>	2015	87.8	13.0	36.3	34.3
Perlombongan dan Pengkuarian	2022	97.7	56.3	77.0	69.8
<i>Mining and Quarrying</i>	2015	92.5	13.0	42.1	40.7
Pembuatan	2022	96.6	74.4	79.7	80.5
<i>Manufacturing</i>	2015	93.5	12.5	47.3	66.3
Pembinaan	2022	93.0	67.4	75.6	77.9
<i>Construction</i>	2015	89.8	18.5	41.8	38.5
Perkhidmatan	2022	95.8	75.2	81.3	81.6
<i>Services</i>	2015	67.7	19.3	35.6	35.8
Utiliti	2022	98.4	52.6	71.0	70.7
<i>Utility</i>	2015	93.5	25.1	42.9	42.6
Perdagangan Borong dan Runcit	2022	95.9	74.5	81.7	83.3
<i>Wholesale and Retail Trade</i>	2015	53.6	20.2	30.6	35.2
Pengangkutan dan Penyimpanan	2022	98.0	86.1	88.1	79.1
<i>Transportation and Storage</i>	2015	91.3	16.3	29.2	18.6
Penginapan	2022	99.7	56.4	81.7	88.5
<i>Accommodation</i>	2015	93.1	19.7	40.3	35.4
Makanan dan Minuman	2022	93.3	81.5	85.1	80.3
<i>Food and Beverages</i>	2015	77.3	11.1	21.5	31.2
Maklumat dan Komunikasi	2022	99.0	91.8	89.9	81.8
<i>Information and Communication</i>	2015	100.0	28.7	79.9	41.3
Kewangan dan Insurans/ Takaful	2022	99.9	68.3	65.7	70.2
<i>Financial and Insurance/ Takaful</i>	2015	99.5	10.1	28.9	23.6
Hartanah	2022	95.4	71.1	72.8	74.1
<i>Real Estate</i>	2015	94.0	14.3	90.1	83.3
Profesional, Sainifik dan Teknikal	2022	97.7	73.1	88.7	83.8
<i>Professional, Scientific and Technical</i>	2015	94.3	29.9	48.6	41.6
Pentadbiran dan Khidmat Sokongan	2022	92.8	75.1	84.0	90.0
<i>Administrative and Support Service</i>	2015	91.4	31.4	48.1	36.0
Pendidikan	2022	97.0	96.1	80.0	82.3
<i>Education</i>	2015	89.5	17.9	36.9	32.0
Kesihatan Kemanusiaan dan Kerja Sosial	2022	94.5	73.1	79.6	78.1
<i>Human Health and Social Work</i>	2015	90.1	20.9	43.6	34.8
Kesenian, Hiburan dan Rekreasi	2022	96.0	64.3	72.9	90.4
<i>Arts, Entertainment and Recreation</i>	2015	69.8	21.4	34.1	23.9
Perkhidmatan Lain	2022	93.6	65.1	69.8	74.5
<i>Other Services</i>	2015	83.8	19.8	52.6	37.9

Jadual B6: Tujuan Penggunaan Internet mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022 (samb.)

Table B6: Purpose of Internet Usage by Sector/ Sub-sector - MSMEs, 2015 and 2022 (cont'd.)

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Mendapatkan maklumat dari organisasi kerajaan <i>Getting information from government organisations</i>	Berhubung dengan organisasi kerajaan <i>Interacting with government organisations</i>	Perbankan melalui Internet <i>Internet banking</i>	Mengakses perkhidmatan kewangan yang lain <i>Accessing other financial services</i>
		%	%	%	%
Jumlah	2022	67.9	62.4	90.0	41.0
<i>Total</i>	2015	23.2	16.2	41.2	9.3
Pertanian	2022	68.5	59.9	88.4	33.5
<i>Agriculture</i>	2015	38.8	27.7	31.4	5.2
Perlombongan dan Pengkuarian	2022	56.3	55.0	73.9	30.5
<i>Mining and Quarrying</i>	2015	35.8	22.2	38.9	7.8
Pembuatan	2022	68.1	64.5	89.7	41.0
<i>Manufacturing</i>	2015	48.4	23.4	76.1	9.9
Pembinaan	2022	71.6	58.7	85.9	37.0
<i>Construction</i>	2015	30.4	22.2	44.0	6.7
Perkhidmatan	2022	67.6	62.6	90.4	41.4
<i>Services</i>	2015	20.2	15.0	37.8	9.4
Utiliti	2022	71.4	60.4	75.1	26.5
<i>Utility</i>	2015	37.9	25.7	40.8	9.5
Perdagangan Borong dan Runcit	2022	65.0	60.5	89.8	37.1
<i>Wholesale and Retail Trade</i>	2015	13.6	17.7	31.3	8.5
Pengangkutan dan Penyimpanan	2022	74.9	74.0	89.8	42.9
<i>Transportation and Storage</i>	2015	15.0	12.6	26.4	3.4
Penginapan	2022	81.1	78.1	91.3	26.0
<i>Accommodation</i>	2015	34.4	28.0	50.7	9.6
Makanan dan Minuman	2022	68.9	57.0	90.6	38.2
<i>Food and Beverages</i>	2015	8.9	15.5	23.6	6.6
Maklumat dan Komunikasi	2022	73.0	70.1	95.5	68.2
<i>Information and Communication</i>	2015	22.3	18.8	60.2	12.1
Kewangan dan Insurans/ Takaful	2022	53.6	47.0	100.0	95.9
<i>Financial and Insurance/ Takaful</i>	2015	48.3	45.9	96.0	38.6
Hartanah	2022	74.9	72.2	98.1	42.9
<i>Real Estate</i>	2015	74.9	73.9	90.4	7.6
Profesional, Saintifik dan Teknikal	2022	80.8	75.5	90.4	43.5
<i>Professional, Scientific and Technical</i>	2015	34.4	29.0	46.1	12.8
Pentadbiran dan Khidmat Sokongan	2022	72.0	79.9	90.7	50.3
<i>Administrative and Support Service</i>	2015	24.3	21.2	39.2	8.7
Pendidikan	2022	74.0	70.7	89.2	46.9
<i>Education</i>	2015	28.8	20.2	33.0	8.6
Kesihatan Kemanusiaan dan Kerja Sosial	2022	75.5	73.4	90.2	63.6
<i>Human Health and Social Work</i>	2015	30.8	22.1	47.6	7.8
Kesenian, Hiburan dan Rekreasi	2022	73.4	65.9	84.9	39.7
<i>Arts, Entertainment and Recreation</i>	2015	15.6	10.8	34.6	6.0
Perkhidmatan Lain	2022	60.1	51.9	86.2	29.5
<i>Other Services</i>	2015	27.7	23.4	41.4	4.2

Jadual B6: Tujuan Penggunaan Internet mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022 (samb.)

Table B6: Purpose of Internet Usage by Sector/ Sub-sector - MSMEs, 2015 and 2022 (cont'd.)

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Penyediaan perkhidmatan pelanggan Providing customer services	Penghantaran produk secara atas talian Delivering products online	Pemberitahuan jawatan kosong dalam atau luaran Internal or external recruitment	Latihan untuk kakitangan (aplikasi e-pembelajaran) Staff training (e-learning application)	Lain- lain Others
		%	%	%	%	%
Jumlah <i>Total</i>	2022 2015	45.7 10.0	35.5 5.2	52.1 10.1	22.7 2.4	10.0 6.2
Pertanian <i>Agriculture</i>	2022 2015	13.6 4.1	11.6 1.0	3.0 3.9	9.7 1.2	0.8 20.7
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	13.1 5.7	11.8 5.8	44.1 4.2	6.5 1.6	3.0 21.2
Pembuatan <i>Manufacturing</i>	2022 2015	45.0 11.0	28.5 12.1	49.8 10.2	15.5 3.2	7.6 12.9
Pembinaan <i>Construction</i>	2022 2015	34.7 3.2	21.1 1.4	34.9 6.2	15.2 2.2	9.1 23.7
Perkhidmatan <i>Services</i>	2022 2015	47.0 10.4	37.3 4.8	54.1 10.4	23.8 2.3	10.3 4.4
Utiliti <i>Utility</i>	2022 2015	31.7 7.6	21.9 2.1	53.2 4.7	13.7 1.0	7.7 21.0
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	46.5 6.1	38.9 5.8	50.5 6.6	24.3 1.2	9.4 -
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	50.2 4.4	40.2 1.0	49.2 2.4	28.6 1.1	7.7 9.8
Penginapan <i>Accommodation</i>	2022 2015	59.9 21.3	36.9 10.2	52.9 8.5	19.9 2.5	3.5 17.0
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	44.3 8.2	38.5 1.6	60.0 6.8	28.1 1.4	18.3 8.8
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	74.3 15.2	43.2 5.2	60.0 10.6	34.6 6.5	13.1 14.2
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	63.5 75.9	35.3 4.5	54.4 30.9	9.4 21.3	16.3 0.9
Hartanah <i>Real Estate</i>	2022 2015	28.7 6.4	34.7 4.3	44.5 69.3	9.6 0.5	8.8 0.4
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	51.0 13.4	32.6 4.1	56.1 9.6	19.8 3.7	3.8 15.2
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	50.0 12.3	35.0 2.9	54.8 6.5	20.7 1.9	15.3 18.3
Pendidikan <i>Education</i>	2022 2015	51.0 11.4	30.1 3.6	65.1 10.9	50.6 5.5	10.5 13.7
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	54.0 13.8	46.8 2.2	65.4 8.0	18.1 3.2	11.0 15.9
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	40.9 16.4	30.7 4.7	40.1 3.9	20.9 1.3	25.5 26.1
Perkhidmatan Lain <i>Other Services</i>	2022 2015	32.5 21.5	27.9 2.3	67.9 16.9	20.5 1.5	5.2 11.6

Nota.

Lain-lain termasuk memuat turun perisian, hiburan dan ruang penyimpanan dalam talian

Notes.

Others includes downloading software, entertainment and online space storage

Jadual B7: Penggunaan Teknologi Digital mengikut Sektor/ Subsektor - PMKS, 2022
Table B7: Usage of Digital Technology by Sector/ Sub-sector- MSMEs, 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Laman web <i>Website</i>	Media sosial <i>Social media</i>	Internet mudah alih dan teknologi <i>Mobile internet and technologies</i>	Pengkomputeran awan <i>Cloud computing</i>
		%	%	%	%
Jumlah <i>Total</i>	2022	53.7	69.6	71.9	57.7
Pertanian <i>Agriculture</i>	2022	49.4	61.4	59.4	57.6
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	44.1	46.6	45.7	59.3
Pembuatan <i>Manufacturing</i>	2022	64.1	80.8	66.2	53.0
Pembinaan <i>Construction</i>	2022	56.5	53.8	63.6	59.9
Perkhidmatan <i>Services</i>	2022	53.0	70.3	73.0	57.8
Utiliti <i>Utility</i>	2022	35.5	85.0	69.9	55.6
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	51.5	68.7	74.5	57.9
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	72.8	55.5	83.0	70.8
Penginapan <i>Accommodation</i>	2022	52.3	79.2	58.9	51.8
Makanan dan Minuman <i>Food and Beverages</i>	2022	49.2	90.0	65.6	38.5
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	88.8	95.1	95.2	69.1
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	48.8	51.2	81.8	64.2
Hartanah <i>Real Estate</i>	2022	48.2	71.4	76.5	58.6
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	62.6	65.8	77.9	74.4
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	20.3	81.4	76.2	68.1
Pendidikan <i>Education</i>	2022	65.6	79.9	86.6	70.6
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	60.0	66.8	79.1	86.3
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	65.2	73.4	61.3	64.4
Perkhidmatan Lain <i>Other Services</i>	2022	52.1	54.5	47.3	41.2

Jadual B7: Penggunaan Teknologi Digital mengikut Sektor/ Subsektor - PMKS, 2022 (samb.)
Table B7: Usage of Digital Technology by Sector/ Sub-sector - MSMEs, 2022 (cont'd.)

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Analitik data <i>Data analytics</i>	Perisian pengurusan <i>Management software</i>	Platform kolaborasi atas talian <i>Online collaborative platforms</i>	Lain-lain <i>Others</i>	Tiada <i>None</i>
		%	%	%	%	%
Jumlah <i>Total</i>	2022	22.1	49.7	23.1	1.3	5.8
Pertanian <i>Agriculture</i>	2022	2.9	39.1	14.5	0.6	10.5
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022	7.3	42.1	28.0	0.2	0.1
Pembuatan <i>Manufacturing</i>	2022	12.9	51.3	23.0	2.9	6.8
Pembinaan <i>Construction</i>	2022	19.7	45.7	29.3	1.1	0.7
Perkhidmatan <i>Services</i>	2022	23.1	50.0	22.8	1.2	6.1
Utiliti <i>Utility</i>	2022	17.4	34.3	22.6	0.0	10.2
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022	19.6	49.9	20.3	0.8	7.9
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022	34.8	52.8	32.8	0.0	0.0
Penginapan <i>Accommodation</i>	2022	27.5	59.9	36.2	0.3	8.2
Makanan dan Minuman <i>Food and Beverages</i>	2022	28.5	38.1	26.0	0.0	5.7
Maklumat dan Komunikasi <i>Information and Communication</i>	2022	28.1	84.6	28.7	0.0	0.0
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022	13.0	50.8	33.4	4.1	9.4
Hartanah <i>Real Estate</i>	2022	28.4	49.9	31.8	0.3	1.5
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022	19.1	57.5	14.1	2.3	2.5
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022	24.9	45.6	21.7	8.2	5.4
Pendidikan <i>Education</i>	2022	19.0	53.3	27.8	0.0	1.0
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022	43.5	47.8	22.8	1.2	8.0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022	49.5	57.3	13.8	1.1	2.6
Perkhidmatan Lain <i>Other Services</i>	2022	25.8	50.7	22.3	2.8	3.1

Nota.

Lain-lain termasuk alat digital seperti pembayaran digital (contohnya, DuitNow QR), kecerdasan buatan (AI), dan Internet Kebendaan (IoT)

Notes.

Others include digital tools such as digital payments (e.g., DuitNow QR), artificial intelligence (AI), and the Internet of Things (IoT)

Jadual B8: Pendapatan dan Perbelanjaan E-Dagang mengikut Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B8: Income and Expenditure of E-Commerce by Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-sector</i>	Tahun <i>Year</i>	Bilangan pertubuhan yang menjalankan transaksi e-dagang <i>Number of establishment involved in e-commerce</i>	Pendapatan <i>Income</i>	Perbelanjaan <i>Expenditure</i>
			(RM juta) (RM million)	(RM juta) (RM million)
Jumlah <i>Total</i>	2022 2015	70,463 43,460	275,310 90,182	110,798 33,683
Pertanian <i>Agriculture</i>	2022 2015	353 36	241 4	114 2
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	31 34	46 194	23 0
Pembuatan <i>Manufacturing</i>	2022 2015	2,431 2,474	43,494 47,059	31,235 23,125
Pembinaan <i>Construction</i>	2022 2015	358 245	236 58	146 107
Perkhidmatan <i>Services</i>	2022 2015	67,290 40,671	231,294 42,867	79,281 10,629
Utiliti <i>Utility</i>	2022 2015	36 3	1,255 7	141 0
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	43,053 32,035	147,691 37,188	57,218 9,442
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	1,417 100	3,086 106	1,445 13
Penginapan <i>Accommodation</i>	2022 2015	1,175 354	2,783 915	1,794 482
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	8,762 174	1,561 63	263 17
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	6,166 6,442	5,856 810	2,090 117
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	2,538 44	65,508 1,765	15,514 303
Hartanah <i>Real Estate</i>	2022 2015	424 24	36 9	24 9
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	360 167	139 123	47 25
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	739 234	1,584 1,556	339 179
Pendidikan <i>Education</i>	2022 2015	675 710	597 144	171 31
Kesihatan Kemanusiaan dan Kerja <i>Human Health and Social Work</i>	2022 2015	148 26	261 2	61 5
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	578 272	862 173	127 4
Perkhidmatan Lain <i>Other Services</i>	2022 2015	1,219 86	75 8	47 3

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

Note.

'0' refers to value less than RM500,000

Jadual B9: Pendapatan dan Perbelanjaan E-Dagang mengikut Negeri - PMKS, 2015 dan 2022
Table B9: Income and Expenditure of E-Commerce by State - MSMEs, 2015 and 2022

Negeri States	Tahun Year	Bilangan pertubuhan yang menjalankan transaksi e-dagang Number of establishment involved in e-commerce	Pendapatan Income (RM juta) (RM million)	Perbelanjaan Expenditure (RM juta) (RM million)
Jumlah <i>Total</i>	2022 2015	70,463 43,460	275,310 90,182	110,798 33,863
Johor	2022 2015	4,460 3,212	20,809 10,634	8,091 5,219
Kedah	2022 2015	1,635 744	5,917 1,580	2,823 711
Kelantan	2022 2015	812 461	4,306 514	2,686 237
Melaka	2022 2015	3,203 2,892	4,950 2,146	2,013 826
Negeri Sembilan	2022 2015	1,293 570	3,481 4,107	2,694 1,931
Pahang	2022 2015	1,402 764	6,958 4,544	3,797 1,835
Perak	2022 2015	3,405 1,658	13,851 5,550	8,488 2,392
Perlis	2022 2015	357 82	894 52	466 25
Pulau Pinang	2022 2015	4,013 2,650	12,029 6,057	5,985 2,556
Sabah	2022 2015	1,863 963	10,091 4,225	5,953 2,249
Sarawak	2022 2015	2,758 1,270	10,744 4,456	5,130 2,243
Selangor	2022 2015	30,417 15,024	128,037 26,189	41,477 8,483
Terengganu	2022 2015	1,388 514	3,028 2,655	1,277 771
W.P. Kuala Lumpur	2022 2015	12,767 12,506	44,075 17,251	18,763 4,347
W.P. Labuan	2022 2015	278 93	5,626 203	999 33
W.P. Putrajaya	2022 2015	412 57	517 21	157 6

Nota.

'-' merujuk kepada data tidak tersedia

Notes.

'-' refers to data not available

Jadual B10: Pendapatan E-Dagang mengikut Jenis Pasaran dan Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B10: Income of E-Commerce by Type of Market and Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Jumlah Total (RM Juta) (RM Million)	Tempatan Domestic (RM Juta) (RM Million)	Antarabangsa International (RM Juta) (RM Million)
Jumlah <i>Total</i>	2022 2015	275,310 90,182	243,524 84,931	31,786 5,251
Pertanian <i>Agriculture</i>	2022 2015	241 4	230 3	11 0
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	46 194	40 -	5 194
Pembuatan <i>Manufacturing</i>	2022 2015	43,494 47,059	42,564 46,504	930 556
Pembinaan <i>Construction</i>	2022 2015	236 58	235 58	1 0
Perkhidmatan <i>Services</i>	2022 2015	231,294 42,867	200,455 38,366	30,839 4,501
Utiliti <i>Utility</i>	2022 2015	1,255 7	1,254 7	2 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	147,691 37,188	130,063 33,140	17,627 4,048
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	3,086 106	25,797 101	506 6
Penginapan <i>Accommodation</i>	2022 2015	2,783 915	2,543 626	240 289
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	1,561 63	1,557 63	4 0
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	5,856 810	5,851 786	5 23
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	65,508 1,765	53,156 1,701	12,353 63
Hartanah <i>Real Estate</i>	2022 2015	36 9	34 9	2 -
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	139 123	136 117	3 6
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	1,584 1,556	1,551 1,509	33 46
Pendidikan <i>Education</i>	2022 2015	597 144	582 140	15 4
Kesihatan Kemanusiaan dan Kerja <i>Human Health and Social Work</i>	2022 2015	261 2	252 1	9 0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	862 173	823 159	39 14
Perkhidmatan Lain <i>Other Services</i>	2022 2015	75 8	74 6	1 1

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

'-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

'-' refers to data not available

Jadual B11: Pendapatan E-Dagang mengikut Jenis Pelanggan dan Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B11: Income of E-Commerce by Type of Customer and Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Jumlah Total	Perniagaan Kepada Perniagaan Business to Business (B2B)	Perniagaan Kepada Pengguna Business to Consumer (B2C)	Perniagaan Kepada Kerajaan Business to Government (B2G)
		(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)
Jumlah <i>Total</i>	2022 2015	275,310 90,182	135,640 68,940	127,890 17,037	11,781 4,205
Pertanian <i>Agriculture</i>	2022 2015	241 4	145 2	95 1	1 -
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	46 194	46 194	- -	- -
Pembuatan <i>Manufacturing</i>	2022 2015	43,494 47,059	31,452 42,967	8,952 4,091	3,090 1
Pembinaan <i>Construction</i>	2022 2015	236 58	175 58	33 0	29 0
Perkhidmatan <i>Services</i>	2022 2015	231,294 42,867	103,823 25,719	118,810 12,944	8,662 4,204
Utiliti <i>Utility</i>	2022 2015	1,255 7	1,209 6	26 1	20 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	147,691 37,188	70,645 24,111	73,553 9,417	3,493 3,660
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	3,086 106	1,141 33	1,905 63	40 10
Penginapan <i>Accommodation</i>	2022 2015	2,783 915	632 245	2,010 492	141 178
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	1,561 63	117 24	1,424 39	20 0
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	5,856 810	3,212 106	2,636 688	8 16
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	65,508 1,765	25,632 667	35,050 901	4,826 197
Hartanah <i>Real Estate</i>	2022 2015	36 9	18 4	17 5	1 0
Profesional, Sainifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	139 123	76 68	60 41	3 14
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	1,584 1,556	698 446	812 983	74 126
Pendidikan <i>Education</i>	2022 2015	597 144	246 2	349 142	2 0
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	261 2	92 0	163 1	6 0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	862 173	79 5	758 167	25 0
Perkhidmatan Lain <i>Other Services</i>	2022 2015	75 8	25 2	47 4	2 1

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

'-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

'-' refers to data not available

Jadual B12: Perbelanjaan E-Dagang mengikut Jenis Pasaran dan Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B12: Expenditure of E-Commerce by Type of Market and Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor Sector/ Sub-sector	Tahun Year	Jumlah Total (RM Juta) (RM Million)	Tempatan Domestic (RM Juta) (RM Million)	Antarabangsa International (RM Juta) (RM Million)
Jumlah <i>Total</i>	2022 2015	110,798 33,863	102,219 31,765	8,580 2,098
Pertanian <i>Agriculture</i>	2022 2015	114 2	97 2	17 0
Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	2022 2015	23 0	23 0	0 -
Pembuatan <i>Manufacturing</i>	2022 2015	31,235 23,125	30,458 23,002	777 123
Pembinaan <i>Construction</i>	2022 2015	146 107	145 105	1 2
Perkhidmatan <i>Services</i>	2022 2015	79,281 10,629	71,496 8,655	7,785 1,973
Utiliti <i>Utility</i>	2022 2015	141 0	141 0	0 -
Perdagangan Borong dan Runcit <i>Wholesale and Retail Trade</i>	2022 2015	57,218 9,442	50,479 7,742	6,739 1,700
Pengangkutan dan Penyimpanan <i>Transportation and Storage</i>	2022 2015	1,445 13	1,022 13	423 0
Penginapan <i>Accommodation</i>	2022 2015	1,794 482	1,263 331	531 151
Makanan dan Minuman <i>Food and Beverages</i>	2022 2015	263 17	255 16	8 1
Maklumat dan Komunikasi <i>Information and Communication</i>	2022 2015	2,090 117	2,087 54	3 63
Kewangan dan Insurans/ Takaful <i>Financial and Insurance/ Takaful</i>	2022 2015	15,514 303	15,468 264	46 39
Hartanah <i>Real Estate</i>	2022 2015	24 9	24 9	1 0
Profesional, Saintifik dan Teknikal <i>Professional, Scientific and Technical</i>	2022 2015	47 25	45 23	2 2
Pentadbiran dan Khidmat Sokongan <i>Administrative and Support Service</i>	2022 2015	339 179	320 163	19 16
Pendidikan <i>Education</i>	2022 2015	171 31	165 30	6 0
Kesihatan Kemanusiaan dan Kerja Sosial <i>Human Health and Social Work</i>	2022 2015	61 5	55 5	6 0
Kesenian, Hiburan dan Rekreasi <i>Arts, Entertainment and Recreation</i>	2022 2015	127 4	127 3	1 1
Perkhidmatan Lain <i>Other Services</i>	2022 2015	47 3	47 2	0 0

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

'-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

'-' refers to data not available

Jadual B13: Perbelanjaan E-Dagang mengikut Jenis Pelanggan dan Sektor/ Subsektor - PMKS, 2015 dan 2022
Table B13: Expenditure of E-Commerce by Type of Customer and Sector/ Sub-sector - MSMEs, 2015 and 2022

Sektor/ Subsektor <i>Sector/ Sub-Sector</i>	Tahun <i>Year</i>	Jumlah <i>Total</i>	Perniagaan kepada Perniagaan <i>Business to Business (B2B)</i>	Perniagaan kepada Pengguna <i>Business to Consumer (B2C)</i>	Perniagaan Kepada Kerajaan <i>Business to Government (B2G)</i>
		(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)	(RM Juta) (RM Million)
Jumlah	2022	110,798	80,524	28,054	2,220
<i>Total</i>	2015	33,863	31,540	1,791	533
Pertanian	2022	114	94	19	-
<i>Agriculture</i>	2015	2	2	1	-
Perlombongan dan Pengkuarian	2022	23	22	0	1
<i>Mining and Quarrying</i>	2015	0	0	-	-
Pembuatan	2022	31,235	24,442	6,337	455
<i>Manufacturing</i>	2015	23,125	21,933	1,192	0
Pembinaan	2022	146	130	9	6
<i>Construction</i>	2015	107	106	1	0
Perkhidmatan	2022	79,281	55,835	21,688	1,758
<i>Services</i>	2015	10,629	9,500	597	532
Utiliti	2022	141	138	3	0
<i>Utility</i>	2015	0	0	-	-
Perdagangan Borong dan Runcit	2022	57,218	41,218	14,982	1,018
<i>Wholesale and Retail Trade</i>	2015	9,442	8,545	378	519
Pengangkutan dan Penyimpanan	2022	1,445	870	548	27
<i>Transportation and Storage</i>	2015	13	13	-	0
Penginapan	2022	1,794	1,152	520	121
<i>Accommodation</i>	2015	482	298	178	6
Makanan dan Minuman	2022	263	203	59	1
<i>Food and Beverages</i>	2015	17	17	0	0
Maklumat dan Komunikasi	2022	2,090	1,083	1,003	4
<i>Information and Communication</i>	2015	117	114	4	0
Kewangan dan Insurans/ Takaful	2022	15,514	10,709	4,243	562
<i>Financial and Insurance/ Takaful</i>	2015	303	298	4	1
Hartanah	2022	24	18	5	1
<i>Real Estate</i>	2015	9	9	0	-
Profesional, Saintifik dan Teknikal	2022	47	24	22	1
<i>Professional, Scientific and Technical</i>	2015	25	22	3	0
Pentadbiran dan Khidmat Sokongan	2022	339	177	147	15
<i>Administrative and Support Service</i>	2015	179	146	27	5
Pendidikan	2022	171	99	67	5
<i>Education</i>	2015	31	28	2	0
Kesihatan Kemanusiaan dan Kerja Sosial	2022	61	52	9	0
<i>Human Health and Social Work</i>	2015	5	5	0	0
Kesenian, Hiburan dan Rekreasi	2022	127	78	47	2
<i>Arts, Entertainment and Recreation</i>	2015	4	3	1	0
Perkhidmatan Lain	2022	47	13	33	1
<i>Other Services</i>	2015	3	3	0	-

Nota.

'0' merujuk kepada nilai kurang daripada RM500,000

'-' merujuk kepada data tidak tersedia

Note.

'0' refers to value less than RM500,000

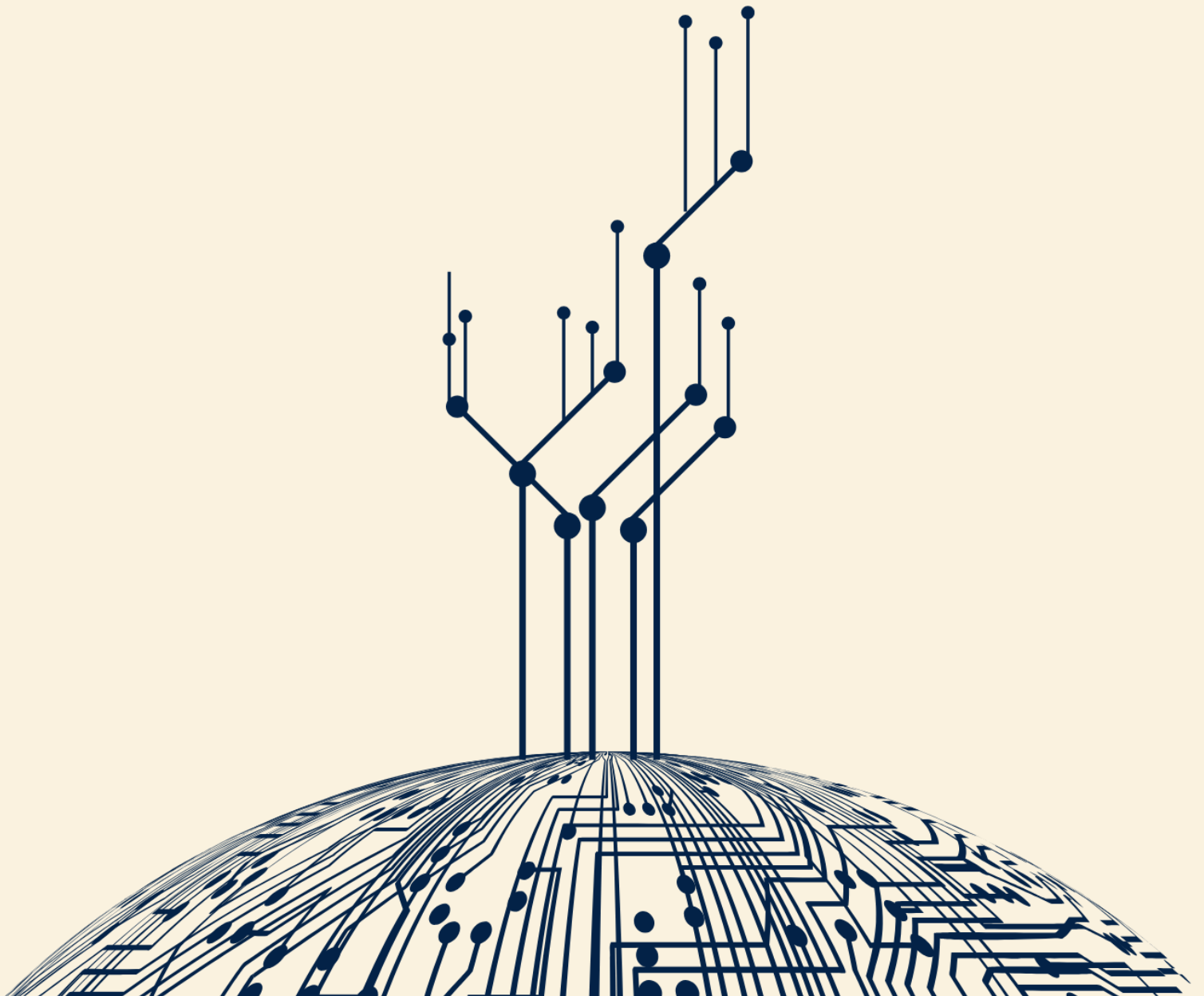
'-' refers to data not available

Bahagian | *Part*

4

Nota Teknikal

Technical Notes



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NOTA TEKNIKAL

1. PENDAHULUAN

Penerbitan ini membekalkan maklumat petunjuk ICT bagi Penggunaan ICT dan E-Dagang oleh Pertubuhan bagi tahun rujukan 2022. Data tersebut dikumpul dan disusun daripada Banci Ekonomi yang dilaksanakan pada tahun 2023.

Petunjuk ICT telah dibangunkan oleh *World Summit on the Information Society (WSIS)* dan telah dilancarkan pada Jun 2004. Tujuan senarai petunjuk ini adalah sebagai panduan/ input kepada negara-negara yang menjalankan survei data ICT. Senarai petunjuk ini juga boleh membantu dalam mengeluarkan data ICT yang berkualiti dan perbandingan diperingkat antarabangsa.

Terdapat 48 petunjuk ICT di dalam 6 kumpulan seperti berikut:

- | | |
|--|---------------|
| • Infrastruktur dan akses ICT | - 10 petunjuk |
| • Penggunaan dan akses ICT oleh isi rumah dan individu | - 13 petunjuk |
| • Penggunaan ICT oleh perniagaan | - 12 petunjuk |
| • Sektor ICT (Pengeluaran) | - 2 petunjuk |
| • Perdagangan Antarabangsa bagi barangan ICT | - 2 petunjuk |
| • ICT di dalam pendidikan | - 9 petunjuk |

2. KUASA PERUNDANGAN

Banci Ekonomi 2023 dilaksanakan di bawah **Akta Perangkaan 1965 (Disemak 1989)**. Di bawah **Seksyen 5** Akta ini, mana-mana pertubuhan yang beroperasi di Malaysia dikehendaki memberikan maklumat sebenar atau anggaran terbaik kepada Jabatan. Mengikut Akta ini, kandungan soal selidik adalah **sulit** dan hanya angka agregat diterbitkan.

3. SKOP DAN LIPUTAN

Penerbitan ini menggunakan data daripada Banci Ekonomi 2023 (tahun rujukan 2022). Banci mengumpul maklumat daripada pertubuhan berdaftar dalam sektor Pertanian, Perlombongan & pengkuarian, Pembuatan, Pembinaan dan Perkhidmatan. Klasifikasi industri merujuk kepada Piawaian Klasifikasi Industri Malaysia (MSIC) 2008 Versi 1.0 yang selaras dengan *International Standard Industrial Classification of All Economic Activities (ISIC), Revision. 4, United Nations*. Liputan bagi keseluruhan sektor merangkumi 1,200 kategori industri seperti yang ditunjukkan pada **Jadual 1**.

Jadual 1 : Bilangan Industri mengikut sektor

Sektor	Bilangan Industri
Pertanian*	142
Perlombongan & pengkuarian	56
Pembuatan	259
Pembinaan	72
Perkhidmatan	645
Jumlah	1,174

Nota: (*) Usahawan dalam sektor Pertanian yang hanya berdaftar dengan agensi-agensi kerajaan yang berkaitan bagi maksud menerima bantuan **TIDAK** diliputi kecuali pengusaha kelapa sawit.

4. SUMBER RANGKA STATISTIK

Sumber utama rangka statistik pertubuhan adalah daripada *Malaysia Statistical Business Register (MSBR)* manakala bagi subsektor Penginapan termasuk perniagaan inap desa yang tidak berdaftar. MSBR adalah senarai pertubuhan/ perusahaan yang beroperasi di Malaysia yang merangkumi Daftar Syarikat (ROC), Daftar Perniagaan (ROB) dan Perkongsian Liabiliti Terhad (LLP) yang berdaftar dengan Suruhanjaya Syarikat Malaysia (SSM) serta pertubuhan yang berdaftar dengan Pihak Berkuasa Tempatan (PBT) dan badan profesional. Senarai di MBSR dikemaskini secara berkala berdasarkan survei dan bancian yang dijalankan oleh Jabatan Perangkaan Malaysia (DOSM) dan sumber data pentadbiran daripada pelbagai agensi. Sumber utama data pentadbiran adalah daripada SSM.

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

5. 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. Klasifikasi industri bagi pertubuhan adalah berasaskan kepada aktiviti utama dan mengikut MSIC 2008 Versi 1.0 yang diselaraskan dengan *ISIC, Revision 4, United Nations* dan pengubahsuaian mengikut keperluan tempatan.

6. KONSEP DAN DEFINISI

Industri tersebut dikategorikan kepada lima sektor utama iaitu Pertanian, Perlombongan & pengkuarian, Pembuatan, Pembinaan dan Perkhidmatan. Definisi sektor adalah seperti berikut:

6.1 Pertanian

Merangkumi aktiviti penanaman, pemeliharaan dan penternakan haiwan dan pengeluaran produk haiwan, penebangan kayu balak dan tanaman lain, serta perikanan tangkapan dan akuakultur termasuk penggunaan sumber semulajadi tumbuh-tumbuhan dan haiwan. Terdapat empat subsektor iaitu tanaman, ternakan, perhutanan, & pembalakan dan perikanan.

6.1.1 **Tanaman** merujuk kepada penanaman dan pengeluaran produk tanaman termasuk pertanian organik. Tanaman juga meliputi penanaman tanaman tidak kekal dan kekal merangkumi penanaman tumbuh-tumbuhan untuk tujuan pengeluaran benih;

6.1.2 **Ternakan** merujuk kepada binatang atau unggas yang dipelihara untuk tujuan komersil atau pembiakbakaan. Pengeluaran ternakan termasuk penternakan (ladang) dan pembiakan semua haiwan serta pengeluaran daripada hasil ternakan seperti telur, susu, madu, dan sebagainya;

6.1.3 **Perhutanan dan pembalakan** termasuk pengeluaran kayu balak untuk industri berasaskan kayu, meliputi pengekstrakan dan pengumpulan produk hutan bukan kayu yang tumbuh liar. Selain pengeluaran kayu balak, aktiviti perhutanan yang menghasilkan produk melalui proses minima seperti kayu api, kayu arang, reja kayu dan kayu balak yang digunakan dalam bentuk yang belum diproses turut disertakan. Aktiviti ini boleh dijalankan dalam hutan asli dan ladang hutan. Ia juga termasuk sebahagian daripada aktiviti operasi perhutanan berdasarkan bayaran atau secara kontrak; dan

6.1.4 **Perikanan** termasuk perikanan tangkapan dan akuakultur meliputi penggunaan sumber perikanan daripada laut, air payau atau air tawar dengan tujuan menangkap dan mengumpul ikan, krustasia, moluska dan organisma dan produk laut lain. Akuakultur ialah proses pengeluaran yang melibatkan pengkulturan (termasuk tuaian) organisma akuatik menggunakan teknik yang direka bentuk untuk meningkatkan pengeluaran organisma tersebut melebihi kapasiti persekitaran semulajadi.

6.2 Perlombongan dan Pengkuarian

Perlombongan dan pengkuarian termasuk pengekstrakan mineral yang terjadi secara semulajadi seperti pepejal (batu orang dan bijih), cecair (petroleum) atau gas (gas asli). Pengekstrakan boleh dijalankan melalui pelbagai kaedah seperti perlombongan bawah tanah atau dedah, pengoperasian telaga, perlombongan dasar laut dan lain-lain. Walau bagaimanapun, subsektor perlombongan mineral dan pengkuarian tidak diliputi dalam penerbitan ini.

6.3 Pembuatan

Perubahan fizikal atau kimia ke atas bahan atau komponen menjadi produk baru sama ada kerja itu dilakukan oleh jentera pacuan kuasa atau yang dijalankan dengan tangan, sama ada dilaksanakan di kilang atau di rumah pekerja dan sama ada barang keluaran dijual secara borong atau runcit.

Pengelasan lapan (8) subsektor mengikut bahagian adalah seperti berikut:

Bahagian	Keterangan
Produk makananan	
10	Pembuatan produk makanan
Minuman dan produk tembakau	
11	Pembuatan minuman
12	Pembuatan produk tembakau
Produk tekstil, pakaian dan kulit	
13	Pembuatan tekstil
14	Pembuatan pakaian
15	Pembuatan produk kulit dan barangan berkaitan

Bahagian	Keterangan
Produk kayu, perabot, keluaran kertas dan percetakan	
16	Pembuatan kayu dan produk kayu dan gabus, kecuali perabot; pembuatan bagi artikel jerami dan bahan-bahan anyaman perabot
17	Pembuatan kertas dan produk kertas
18	Percetakan dan penerbitan semula media rakaman
31	Pembuatan perabot
Produk petroleum, kimia, getah dan plastik	
19	Pembuatan kok dan produk petroleum bertapis
20	Pembuatan kimia dan produk kimia
21	Pembuatan produk farmaseutikal asas, kimia perubatan dan botani
22	Pembuatan produk getah dan plastik
Produk mineral bukan logam, logam asas & produk logam yang direka	
23	Pembuatan produk galian bukan logam lain
24	Pembuatan logam asas
25	Pembuatan produk logam, kecuali mesin dan kelengkapan
Produk elektrik, elektronik dan optikal	
26	Pembuatan komputer, produk elektronik dan optikal
27	Pembuatan kelengkapan elektrik
28	Pembuatan jentera dan peralatan t.t.t.l.
Peralatan pengangkutan, pembuatan lain dan pembaikan	
29	Pembuatan kenderaan bermotor, treler dan semi treler
30	Pembuatan kelengkapan pengangkutan lain
32	Pembuatan lain
33	Membaiki dan pemasangan jentera dan kelengkapan

6.4 Pembinaan

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

6.5 Perkhidmatan

Perkhidmatan berkaitan Bekalan elektrik, gas, wap & pendingin udara; Bekalan air, pembentungan, pengurusan sisa & aktiviti pemulihan; Perdagangan Borong & runcit; Pengangkutan & penyimpanan; Maklumat & komunikasi; Penginapan; Makanan & minuman; Kewangan; Hartanah; Profesional, saintifik & teknikal; Pentadbiran & khidmat sokongan; Pendidikan swasta; Kesihatan swasta & kerja sosial; Kesenian, hiburan & rekreasi dan Perkhidmatan persendirian & lain-lain aktiviti.

6.5.1 Bekalan elektrik, gas, wap & pendinginan udara adalah ditakrifkan sebagai aktiviti pembekalan tenaga elektrik, gas asli, wap, air panas dan seumpamanya melalui satu infrastruktur (rangkai) tetap bagi talian, saluran utama dan paip. Dimensi rangkaian ini tidak dapat ditentukan; juga termasuk pengagihan elektrik, gas, wap, air panas dan seumpamanya di kawasan perindustrian atau bangunan tempat kediaman. Oleh itu, seksyen ini termasuk operasi utiliti elektrik dan gas yang menjana, mengawal dan mengagih tenaga elektrik atau gas. Juga termasuk bekalan wap dan pendinginan udara;

6.5.2 Bekalan air, pembentungan, pengurusan sisa & aktiviti pemulihan meliputi aktiviti yang berkaitan dengan pengurusan sisa termasuk pungutan, perawatan dan pelupusan seperti sisa terjadual, sisa pepejal dan air sisa daripada perindustrian dan isi rumah, termasuk juga pemulihan bahan dan tapak yang tercemar. Hasil sisa daripada proses perawatan boleh dilupus atau menjadi input kepada proses pengeluaran yang lain. Aktiviti yang berkaitan dengan perawatan dan bekalan air juga dimasukkan dalam sektor ini;

6.5.3 Perdagangan borong & runcit merangkumi perdagangan borong, perdagangan runcit, dan pembaikan kenderaan bermotor & motosikal;

6.5.4 Pengangkutan & penyimpanan meliputi pertubuhan yang menyediakan perkhidmatan darat, pengangkutan muatan melalui jalan raya, pengangkutan darat lain, pengangkutan air, penggudangan & aktiviti sokongan seperti pengoperasian terminal, tempat letak kereta, pengoperasian lebuh raya, pengoperasian pelabuhan, pengendalian kargo/ pemunggahan, agensi perkapalan & penghantaran serta lain-lain aktiviti sokongan perkhidmatan pengangkutan;

- 6.5.5 Maklumat & komunikasi** terdiri daripada aktiviti penerbitan, penerbitan wayang gambar, video & program televisyen, rakaman bunyi & penerbitan muzik, pemrograman & penyiaran, perkhidmatan telekomunikasi, pengaturcaraan komputer, perundingan & aktiviti yang berkaitan dan perkhidmatan maklumat;
- 6.5.6 Perkhidmatan penginapan** merujuk kepada penyediaan tempat penginapan jangka pendek berbayar, sama ada dibuka kepada orang awam atau terhad kepada ahli sebuah pertubuhan tertentu. Ianya tidak termasuk penyewaan tempat tinggal berperabot jangka panjang yang dikelaskan dalam Hartanah;
- 6.5.7 Perkhidmatan makanan & minuman** termasuk perkhidmatan makanan & minuman yang menyediakan hidangan atau minuman lengkap untuk penggunaan segera, sama ada di restoran tradisional, restoran layan diri atau bawa pulang, yang didirikan secara kekal atau sementara dengan atau tiada kemudahan tempat duduk;
- 6.5.8 Perkhidmatan kewangan** adalah meliputi aktiviti perantaraan kewangan; aktiviti perkhidmatan kewangan lain dan aktiviti sokongan kepada perkhidmatan kewangan; aktiviti insurans/ takaful, insurans takaful semula dan tabungan pencen & hemat; dan aktiviti sokongan kepada insurans/ takaful dan tabungan pencen;
- 6.5.9 Perkhidmatan hartanah** termasuk tindakan seperti pemberi pajak, agen dan atau broker di dalam satu atau lebih daripada yang berikut: penjualan atau pembelian hartanah, penyewaan hartanah, penyediaan perkhidmatan hartanah lain seperti penilaian hartanah, pengurusan hartanah atau bertindak sebagai agen hartanah eskrow. Aktiviti dalam bahagian ini mungkin dijalankan di atas hartanah milikan sendiri atau pajakan dan mungkin berlaku atas dasar bayaran atau kontrak. Termasuk juga pembangunan struktur, berserta mengekalkan hak milik atau pajakan bagi struktur tersebut;
- 6.5.10 Perkhidmatan profesional, saintifik & teknikal** termasuk aktiviti profesional khusus, saintifik dan teknikal yang memerlukan tahap latihan yang tinggi dan menjadikan pengetahuan dan kemahiran khusus tersedia kepada pengguna. Aktiviti yang dijalankan termasuk aktiviti guaman & perakaunan, aktiviti ibu pejabat, aktiviti perundingan pengurusan, aktiviti arkitek & kejuruteraan, ujian & analisis teknikal, penyelidikan & pembangunan saintifik, pengiklanan & penyelidikan pasaran, profesional lain, aktiviti saintifik & teknikal dan veterinar;

- 6.5.11 Perkhidmatan pentadbiran & khidmat sokongan** termasuk pelbagai aktiviti yang menyokong operasi am perniagaan meliputi aktiviti sewaan & pajakan, aktiviti pekerjaan, agensi pengembaraan, operator pelancongan & aktiviti perkhidmatan penempahan lain, aktiviti keselamatan & penyiasatan, aktiviti perkhidmatan bangunan & lanskap dan aktiviti pengurusan pejabat, sokongan pejabat & perniagaan lain;
- 6.5.12 Perkhidmatan pendidikan swasta** merujuk kepada pertubuhan yang berdaftar dengan Kementerian Pendidikan Malaysia dan Kementerian Pengajian Tinggi yang menyediakan perkhidmatan pelajaran akademik, vokasional dan perdagangan. Aktiviti yang diliputi dalam kumpulan ini ialah pendidikan pra sekolah & pendidikan rendah, pendidikan menengah, pendidikan tinggi, pendidikan lain dan perkhidmatan sokongan lain;
- 6.5.13 Perkhidmatan kesihatan swasta & kerja sosial** meliputi aktiviti hospital, aktiviti amalan perubatan & pergigian, aktiviti kesihatan dan kemanusiaan lain, aktiviti rumah penjagaan, dan aktiviti kerja sosial tanpa penginapan;
- 6.5.14 Perkhidmatan kesenian, hiburan & rekreasi** termasuk pelbagai aktiviti bagi memenuhi minat orang awam dalam aktiviti kebudayaan, hiburan dan rekreasi meliputi persembahan secara langsung, operasi muzium, perjudian, sukan dan aktiviti rekreasi; dan
- 6.5.15 Perkhidmatan persendirian & lain-lain aktiviti** termasuk aktiviti keahlian organisasi, aktiviti organisasi keahlian perniagaan, majikan & profesional, aktiviti kesatuan buruh, aktiviti keahlian organisasi lain, pembaikan komputer & barangan persendirian dan isi rumah dan aktiviti perkhidmatan seperti basuhan dan cucian kering tekstil dan produk berbulu; dandanan rambut dan penjagaan kecantikan lain; dan pengebumian dan aktiviti perkhidmatan lain.

7. TAHUN BANGCI

Merujuk kepada tahun pelaksanaan bancian dijalankan.

8. TAHUN RUJUKAN

Tahun rujukan bagi penerbitan ini adalah tahun takwim 2022. 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.

9. KAEDAH PENGUMPULAN

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

9.1 Kaedah atas talian melalui portal e-BE

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

9.2 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.

9.3 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.

10. UNIT PELAPOR

Unit pelapor bagi Banci Ekonomi 2023 adalah pertubuhan. Sesebuah pertubuhan secara ideal ditakrifkan sebagai "satu unit ekonomi yang bergiat di bawah satu hak milik atau penguasaan tunggal, iaitu di bawah satu entiti yang sah. Ia menjalankan satu jenis subsektor ekonomi utama di satu tempat/ lokasi fizikal". Setiap pertubuhan diberikan klasifikasi industri berdasarkan aktiviti utamanya dan bukannya mengikut aktiviti syarikat induk.

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

11. DEFINISI ICT

Bedasarkan *Organisation for Economic Co-operation and Development* (OECD) 2015:

(a) Komputer

Termasuk komputer peribadi, komputer mudah alih (cth. komputer riba), tablet dan peranti mudah alih yang lain seperti *telefon pintar.

(b) Intranet

Merujuk kepada rangkaian komunikasi dalaman menggunakan protokol internet dan membolehkan komunikasi dalam organisasi.

(c) Extranet

Merujuk kepada rangkaian tertutup yang menggunakan protokol internet dengan selamat dalam perkongsian maklumat perniagaan dengan pembekal, *vendor*, pelanggan atau rakan kongsi perniagaan lain. Ia juga boleh menjadi sebahagian daripada laman web peribadi perniagaan, yang mana rakan perniagaan boleh melayari selepas disahkan dalam halaman log masuk.

(d) Rangkaian kawasan setempat (LAN)

Rangkaian yang menghubungkan komputer dan peranti yang berkaitan di dalam kawasan setempat seperti bangunan persendirian, jabatan atau tapak; ia juga mungkin tanpa wayar.

Nota.

* Malaysia termasuk telefon pintar

(e) Rangkaian kawasan setempat tanpa wayar (WLAN)

Rangkaian kawasan setempat yang menggunakan gelombang radio frekuensi tinggi dan bukannya wayar untuk berkomunikasi antara peranti yang dibolehkan oleh rangkaian. WLAN membolehkan pengguna bergerak di sekitar kawasan kecil dalam radius 20 hingga 91 meter.

(f) Rangkaian kawasan luas (WAN)

Rangkaian yang menghubungkan komputer dan peranti yang berkaitan dalam kawasan geografi yang luas, seperti rantau atau negara.

(g) Jalur lebar tetap

Merujuk kepada teknologi dengan kelajuan sekurang-kurangnya 256 kbit/s dalam satu atau kedua-dua arah. Ia terdiri daripada jalur lebar tetap berwayar dan jalur lebar tetap tanpa wayar.

Akses internet melalui jalur lebar tetap berwayar yang paling banyak digunakan untuk menghantar/ menerima maklumat adalah melalui kabel/ gentian optik (ADSL, SDSL, VDSL), teknologi fiber optik/ teknologi kabel.

(h) Jalur lebar mudah alih

Merujuk kepada teknologi pada kelajuan tidak kurang daripada 256 kbit/s dalam satu atau kedua-dua arah. Ia meliputi teknologi seperti 3G/ LTE/ 4G, UMTS, CDMA2000 dan teknologi masa hadapan termasuk kedua-dua langganan data standard dan khusus. Kebiasaannya digunakan untuk peranti mudah alih (cth. komputer riba, tablet, modem tanpa wayar USB, telefon pintar dan peranti mudah alih lain).

Sambungan jalur lebar mudah alih ke internet merujuk kepada akses melalui *WIFI hotspot (tethering)* dan bukannya melalui *router* (cth. *USB dongle/ modem/ surfstick* seperti *YES dongle* dsb.).

(i) Laman sesawang

Laman web adalah koleksi sumber web rangkaian yang berkaitan seperti laman sesawang, kandungan multimedia yang biasanya dikenal pasti dengan nama domain umum dan diterbitkan oleh sekurang-kurangnya satu pelayan sesawang. Laman sesawang boleh diakses menerusi rangkaian *Internet Protocol (IP)* awam seperti Internet atau rangkaian kawasan setempat peribadi (LAN) oleh URL yang mengenal pasti tapak tersebut. Sebuah laman sesawang boleh menjadi laman sesawang peribadi, laman sesawang korporat untuk sebuah syarikat, laman sesawang kerajaan, laman sesawang organisasi dan sebagainya.

(j) Media sosial

Merujuk kepada mereka yang mempunyai profil pengguna, akaun atau lesen pengguna bergantung kepada keperluan dan jenis media sosial. Jenis media sosial adalah rangkaian sosial (cth. *Facebook* dan *Instagram*), *Enterprise blogs* dan *microblogs Enterprise* (cth. *Twitter*) dan laman sesawang perkongsian kandungan multimedia (cth. *YouTube*).

(k) Internet mudah alih dan teknologi

Internet mudah alih dan teknologi adalah produk yang tidak dapat dielakkan dalam pembangunan internet PC. Ia menggabungkan komunikasi mudah alih dan internet menjadi satu. Ini adalah istilah umum untuk aktiviti di mana teknologi, platform, model perniagaan dan aplikasi internet digabungkan dengan teknologi komunikasi mudah alih (cth. peralatan *mobile IT*, peralatan *Global Positioning System (GPS)*, *wireless debit/ credit card payment terminals*).

(l) Pengkomputeran awan

Pengkomputeran awan merujuk kepada perkhidmatan ICT yang digunakan melalui internet untuk mengakses perisian, kuasa pengkomputeran, kapasiti penyimpanan, dll. (cth. *HUAWEI Cloud Server*, *AVM Cloud*).

(m) Analitik data

Analitik data ialah satu proses atau upaya pengolahan data menjadi sebuah informasi baru agar ciri-ciri data tersebut menjadi lebih mudah difahami dan berguna untuk penyelesaian suatu permasalahan khususnya yang berhubung dengan kajian (cth. *Tableau*, *Big Data Analytics*, *Mobile Business Intelligence*).

(n) Perisian Pengurusan

Perisian pengurusan ialah perisian aplikasi yang membantu pengguna semasa melakukan aktiviti pengurusan (cth. *Enterprise Resource Planning*, dll.).

(o) Platform kolaborasi dalam talian

Merujuk kepada perkongsian ekonomi (cth. Lazada, Shoppe, Grab dll.).

12. DEFINISI E-DAGANG

Berdasarkan (OECD) 2015, transaksi e-dagang adalah penjualan atau pembelian bagi barangan atau perkhidmatan, melalui rangkaian komputer yang telah direka untuk tujuan berkenaan. Transaksi e-dagang boleh berlaku di antara enterpris, isi rumah, individu, kerajaan dan organisasi awam atau swasta yang lain.

Barangan atau perkhidmatan yang telah dipesan melalui kaedah e-dagang, namun pembayaran atau penerimaan barangan atau perkhidmatan berkenaan boleh diterima sama ada melalui *online* atau *offline*.

Transaksi e-dagang termasuk pesanan yang dibuat di laman sesawang, extranet atau *electronic data interchange* (EDI). Walau bagaimanapun, transaksi yang dibuat melalui panggilan telefon, faksimili, emel (emel yang ditaip manual) dan seumpamanya tidak dikategorikan sebagai urusan e-dagang.

(a) Pendapatan e-dagang bermaksud jumlah pendapatan yang diperolehi oleh pertubuhan daripada transaksi e-dagang. Pendapatan untuk pertubuhan perdagangan borong dan runcit merujuk kepada nilai jualan barangan dan perkhidmatan. Nilai jualan bermaksud nilai semua barang di mana hak milik atau hak mutlak untuk penggunaan telah dipindahkan kepada orang lain dengan tujuan barang itu akan dibeli akhirnya.

(b) Perbelanjaan e-dagang bermaksud jumlah perbelanjaan bagi pertubuhan yang mempunyai transaksi e-dagang.

(c) E-dagang mengikut jenis pasaran

(i) Tempatan bermaksud urusan e-dagang pendapatan/ perbelanjaan e-dagang yang melibatkan transaksi dalam negara Malaysia.

- (ii) **Antarabangsa** bermaksud urusanniaga pendapatan/ perbelanjaan e-dagang yang melibatkan transaksi luar negara.

(d) E-dagang mengikut kategori pelanggan

(i) Perniagaan lain

Perniagaan ke Perniagaan (B2B) adalah transaksi e-dagang antara perniagaan yang menjual/ membeli produk atau perkhidmatan kepada/ daripada perniagaan lain. Sebagai contoh, pengeluar boleh menjual kepada pemborong atau pemborong boleh menjual kepada peruncit.

(ii) Pengguna individu

Perniagaan kepada Pengguna (B2C) merupakan transaksi e-dagang di antara perniagaan dan pengguna, sama ada jualan, pembelian atau perkhidmatan. Sebagai contoh perniagaan menjual produk pakaian kepada pengguna (pendapatan) atau perniagaan memberikan kupon diskaun kepada pengguna melalui platform e-dagang (perbelanjaan).

(iii) Kerajaan dan organisasi bukan perniagaan lain

Perniagaan kepada Kerajaan (B2G) adalah model perniagaan yang merujuk kepada perniagaan yang menjual/ membayar bagi produk, perkhidmatan atau maklumat pihak kerajaan atau agensi kerajaan. Rangkaian atau model B2G menyediakan cara bagi perniagaan untuk membida projek atau produk kerajaan yang mungkin dibeli atau diperlukan oleh kerajaan untuk organisasi mereka. Ini boleh merangkumi organisasi sektor awam yang mencadangkan tawaran. Kegiatan B2G semakin dilakukan melalui internet melalui penawaran *real-time*. B2G juga dirujuk sebagai pemasaran sektor awam.

13. DEFINISI PERUSAHAAN MIKRO, KECIL DAN SEDERHANA (PMKS)

Definisi PMKS yang digunakan adalah berdasarkan definisi baru yang berkuatkuasa pada 1 Januari 2014 seperti di **Jadual 2**.

Jadual 2 : Definisi PMKS

Sektor	Saiz PMKS	Hasil Tahunan	Bilangan Pekerja Sepenuh Masa
Pembuatan	Mikro	Kurang daripada RM300,000	Kurang daripada 5 pekerja
	Kecil	Antara RM300,000 hingga kurang daripada RM15 juta	Dari 5 hingga kurang daripada 75 pekerja
	Sederhana	Antara RM15 juta hingga tidak melebihi RM50 juta	Dari 75 hingga tidak melebihi 200 pekerja
Pertanian, Perlombongan & Pengkuarian, Pembinaan dan Perkhidmatan	Mikro	Kurang daripada RM300,000	Kurang daripada 5 pekerja
	Kecil	Antara RM300,000 hingga kurang daripada RM3 juta	Dari 5 hingga kurang daripada 30 pekerja
	Sederhana	Antara RM3 juta hingga tidak melebihi RM20 juta	Dari 30 hingga tidak melebihi 75 pekerja

Sumber: Garis Panduan bagi Definisi Baharu PMKS, SME Corp. Malaysia, Oktober 2013

14. PENGIRAAN PERATUS PENGGUNAAN ICT

(a) Penggunaan Komputer, Internet dan *Web Presence*

- (i) Peratus penggunaan komputer

$$= \frac{\text{Bilangan pertubuhan yang menggunakan komputer}}{\text{Jumlah pertubuhan yang beroperasi}} \times 100$$

- (ii) Peratus penggunaan internet

$$= \frac{\text{Bilangan pertubuhan yang menggunakan internet}}{\text{Jumlah pertubuhan yang beroperasi}} \times 100$$

- (iii) Peratus pemilikan *web presence*

$$= \frac{\text{Bilangan pertubuhan yang mempunyai } web \text{ presence}}{\text{Jumlah pertubuhan yang beroperasi}} \times 100$$

(b) Penggunaan Komputer, Internet dan *Web Presence* mengikut Negeri

- (i) Peratus penggunaan komputer mengikut negeri

$$= \frac{\text{Bilangan pertubuhan yang menggunakan komputer mengikut negeri}}{\text{Jumlah pertubuhan yang beroperasi mengikut negeri}} \times 100$$

- (ii) Peratus penggunaan internet mengikut negeri

$$= \frac{\text{Bilangan pertubuhan yang menggunakan internet mengikut negeri}}{\text{Jumlah pertubuhan yang beroperasi mengikut negeri}} \times 100$$

- (iii) Peratus penggunaan *web presence* mengikut negeri

$$= \frac{\text{Bilangan pertubuhan yang mempunyai } web \text{ presence mengikut negeri}}{\text{Jumlah pertubuhan yang beroperasi mengikut negeri}} \times 100$$

(c) Jenis Web Presence yang Dimiliki

- (i) Peratus laman web kepunyaan sendiri

$$= \frac{\text{Bilangan pertubuhan yang mempunyai laman web kepunyaan sendiri}}{\text{Jumlah pertubuhan yang mempunyai web presence}} \times 100$$

- (ii) Peratus laman web di entiti lain

$$= \frac{\text{Bilangan pertubuhan yang mempunyai laman web di entiti lain}}{\text{Jumlah pertubuhan yang mempunyai web presence}} \times 100$$

- (iii) Peratus media sosial

$$= \frac{\text{Bilangan pertubuhan yang mempunyai media sosial}}{\text{Jumlah pertubuhan yang menggunakan web presence}} \times 100$$

- (iv) Peratus e-pasaran

$$= \frac{\text{Bilangan pertubuhan yang mempunyai e – pasaran}}{\text{Jumlah pertubuhan yang menggunakan web presence}} \times 100$$

(d) Jenis Rangkaian Komputer yang Digunakan

- (i) Peratus intranet

$$= \frac{\text{Bilangan pertubuhan yang mempunyai intranet}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (ii) Peratus extranet

$$= \frac{\text{Bilangan pertubuhan yang mempunyai extranet}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (iii) Peratus rangkaian kawasan setempat (LAN)

$$= \frac{\text{Bilangan pertubuhan yang mempunyai LAN}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (iv) Peratus rangkaian kawasan setempat tanpa wayar (WLAN)

$$= \frac{\text{Bilangan pertubuhan yang mempunyai WLAN}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (v) Peratus rangkaian kawasan luas (WAN)

$$= \frac{\text{Bilangan pertubuhan yang mempunyai WAN}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (vi) Peratus rangkaian komputer lain

$$= \frac{\text{Bilangan pertubuhan yang mempunyai rangkaian infrastruktur lain}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(e) Jenis Capaian Internet

- (i) Peratus penggunaan jalur lebar tetap

$$= \frac{\text{Bilangan pertubuhan yang mempunyai jalur lebar tetap}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (ii) Peratus penggunaan jalur lebar mudah alih

$$= \frac{\text{Bilangan pertubuhan yang mempunyai jalur lebar mudah alih}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (iii) Peratus penggunaan kedua-dua jalur lebar

$$= \frac{\text{Bilangan pertubuhan yang mempunyai kedua-dua jalur lebar}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(f) Tujuan Penggunaan Internet

- (i) Peratus menghantar atau menerima emel

$$= \frac{\text{Bilangan pertubuhan yang menghantar atau menerima emel}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(ii) Peratus penggunaan telefon melalui internet

$$= \frac{\text{Bilangan pertubuhan yang menggunakan telefon melalui internet}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(iii) Peratus menghantar informasi atau pesanan dengan segera

$$= \frac{\text{Bilangan pertubuhan yang menghantar informasi atau pesanan segera}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(iv) Peratus mendapatkan maklumat barangan atau perkhidmatan

$$= \frac{\text{Bilangan pertubuhan yang mendapatkan maklumat barangan atau perkhidmatan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(v) Peratus mendapatkan maklumat dari organisasi kerajaan

$$= \frac{\text{Bilangan pertubuhan yang mendapatkan maklumat dari organisasi kerajaan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(vi) Peratus penggunaan berhubung dengan organisasi kerajaan

$$= \frac{\text{Bilangan pertubuhan yang berhubung dengan organisasi kerajaan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(vii) Peratus penggunaan perbankan internet

$$= \frac{\text{Bilangan pertubuhan yang menggunakan perbankan internet}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(viii) Peratus mengakses perkhidmatan kewangan yang lain

$$= \frac{\text{Bilangan pertubuhan yang mengakses perkhidmatan kewangan lain}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(ix) Peratus penyediaan perkhidmatan pelanggan

$$= \frac{\text{Bilangan pertubuhan yang menyediakan perkhidmatan pelanggan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (x) Peratus penggunaan penghantaran produk secara atas talian

$$= \frac{\text{Bilangan pertubuhan yang menghantar produk secara atas talian}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (xi) Peratus penggunaan pemberitahuan jawatan kosong dalaman atau luaran

$$= \frac{\text{Bilangan pertubuhan yang memberitahu jawatan kosong dalaman atau luaran}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (xii) Peratus penggunaan untuk latihan kakitangan (aplikasi e-pembelajaran)

$$= \frac{\text{Bilangan pertubuhan yang membuat latihan kakitangan aplikasi (e - pembelajaran)}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (xiii) Peratus penggunaan internet untuk lain-lain

$$= \frac{\text{Bilangan pertubuhan yang menggunakan internet untuk lain - lain tujuan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(g) Penggunaan Teknologi Digital

- (i) Peratus penggunaan laman web

$$= \frac{\text{Bilangan pertubuhan yang menggunakan laman web}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (ii) Peratus penggunaan media sosial

$$= \frac{\text{Bilangan pertubuhan yang menggunakan media sosial}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

- (iii) Peratus penggunaan internet mudah alih dan teknologi

$$= \frac{\text{Bilangan pertubuhan yang menggunakan internet mudah alih dan teknologi}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(iv) Peratus penggunaan pengkomputeran awam

$$= \frac{\text{Bilangan pertubuhan yang menggunakan pengkomputeran awam}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(v) Peratus penggunaan analitik data

$$= \frac{\text{Bilangan pertubuhan yang menggunakan analitik data}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(vi) Peratus penggunaan perisian pengurusan

$$= \frac{\text{Bilangan pertubuhan yang menggunakan perisian pengurusan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(vii) Peratus penggunaan platform kolaborasi atas talian

$$= \frac{\text{Bilangan pertubuhan yang menggunakan kolaborasi atas talian}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(viii) Peratus penggunaan teknologi digital untuk lain-lain

$$= \frac{\text{Bilangan pertubuhan yang menggunakan teknologi digital untuk lain – lain tujuan}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

(ix) Peratus tiada penggunaan teknologi digital

$$= \frac{\text{Bilangan pertubuhan yang tiada menggunakan teknologi digital}}{\text{Jumlah pertubuhan yang menggunakan internet}} \times 100$$

15. PEMBUNDARAN

Jumlah bagi komponen mungkin berbeza dengan sub-jumlah atau jumlah besar dalam jadual penerbitan disebabkan oleh pembundaran angka.

16. NEGERI SUPRA

Berdasarkan Sistem Akaun Negara (SNA) 2008, kategori unit institusi berdasarkan kepentingan ekonomi dan kedudukan geografi seperti berikut; (1) kebanyakan aktiviti adalah di dalam lingkungan satu wilayah; (2) unit pelbagai wilayah dengan pusat kepentingannya di beberapa wilayah tetapi tidak beroperasi pada skala nasional; dan (3) unit yang beroperasi pada peringkat nasional, dengan pusat kepentingannya tidak boleh dikaitkan dengan kedudukan geografi (contoh: Negeri Supra). Negeri Supra pada peringkat negeri adalah bersamaan dengan organisasi luar wilayah pada peringkat nasional. Di Malaysia, Negeri Supra merangkumi aktiviti pengeluaran yang melangkaui pusat kepentingan ekonomi utama bagi mana-mana negeri.

17. KADAR PERTUMBUHAN TAHUNAN DIKOMPAUN (CAGR)

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

$$y_t = y_0 (1 + r)^t$$

Penyelesaian bagi r,

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

di mana,

y_t = Nilai pada tahun semasa

y_0 = Nilai pada tahun sebelum

t = Bilangan tahun, $y_t - y_0$

r = Kadar pertumbuhan tahunan

18. PINDAAN

Pindaan dibuat kepada angka yang telah diterbitkan berdasarkan banci terkini.

19. SIMBOL DAN SINGKATAN

-	:	data tidak tersedia
&	:	dan
%	:	peratus
b	:	bilion
cth	:	contoh
dll.	:	dan lain-lain
CAGR	:	Kadar pertumbuhan tahunan dikompaun
RM	:	Ringgit Malaysia
ISIC	:	<i>International Standard Industrial Classification</i>
MSIC	:	Piawaian Klasifikasi Industri Malaysia
t.t.t.l.	:	tidak terkelas di tempat lain
Ver.	:	Versi
W.P.	:	Wilayah Persekutuan

TECHNICAL NOTES

1. INTRODUCTION

This report provides information on usage of ICT and e-commerce by establishment for reference year 2022. The data were collected and compiled from Economic Census conducted in 2023.

The ICT indicators has been developed by the World Summit on the Information Society (WSIS) and was launched in June 2004. The purpose of the core list as a guidance/ input to countries that are conducting ICT surveys. The core list also assists in produce quality and internationally comparable ICT data.

There are 48 ICT indicators in six groups as follows:

- | | |
|--|------------------------|
| • <i>ICT infrastructure and access</i> | - <i>10 indicators</i> |
| • <i>Usage and access of ICT by households and individuals</i> | - <i>13 indicators</i> |
| • <i>Usage of ICT by businesses</i> | - <i>12 indicators</i> |
| • <i>ICT sector (producing)</i> | - <i>2 indicators</i> |
| • <i>International trade in ICT goods</i> | - <i>2 indicators</i> |
| • <i>ICT in education</i> | - <i>9 indicators</i> |

2. LEGAL AUTHORITY

*The Economic Census 2023 was conducted under the **Statistics Act 1965 (Revised 1989)**. **Section 5** under this Act requires any establishment operating in Malaysia to provide actual or best estimate information to the Department. According to the Act, the contents of the questionnaire are **confidential** and only aggregate figures are published.*

3. SCOPE AND COVERAGE

*This publication used data from Economic Census 2023 (reference year 2022). The census collected information from registered establishments in Agriculture, Mining & quarrying, Manufacturing, Construction and Services sectors. The classifications for industries were referring to Malaysia Standard Industrial Classification (MSIC) 2008 Version 1.0, which is in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4 United Nations. The coverage for all sectors encompasses 1,200 categories of industries as shown in **Table 1**.*

Table 1: Category of industries by sector

Sector	Category of Industries
Agriculture*	142
Mining & quarrying	56
Manufacturing	259
Construction	72
Services	645
Total	1,174

Note: (*) Entrepreneurs in the Agriculture sector which registered with relevant government agencies for the purpose of receiving aid were **NOT** covered except palm oil's entrepreneurs.

4. SOURCE OF FRAME

The main source for the establishment statistics frame is from the Malaysia Statistical Business Register (MSBR), while for the Accommodation sub-sector, includes unregistered homestay. 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 (LA) 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, the Inland Revenue Board (IRB), Social Security Organisation (SOCSO), LA and professional bodies. The frame is updated by taking into account new establishments and any changes in the status of the establishments such as closed down, not in operation, change in activity and location/ correspondence address so as to ensure that the frame is at the most current status.

5. 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 accordance with the Malaysia Standard Industrial Classification (MSIC), 2008 Ver. 1.0. The MSIC 2008 conforms to the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, published by United Nations Statistics Division, with modifications to suit local conditions.

6. CONCEPT AND DEFINITIONS

The industries are categorised into five main sectors namely Agriculture, Mining & quarrying, Manufacturing, Construction and Services. The sectoral definitions include the following activities:

6.1 Agriculture

Agriculture comprising the activities of growing, breeding and rearing of animals and production of animal products, felling of trees and other plants, as well as capture fishery and aquaculture includes the use/ utilisation of plants/ vegetal and animals natural resources. There are four subsectors:

6.1.1 Crops refer to production of crops products including organic farming. Crops also include the growing of non-perennial and perennial crops for the purpose of seed production;

6.1.2 Livestocks refer to animals or bird that are preserved for commercial and breeding purposes. Livestock production includes raising (farming) and breeding of all animals, also production of livestock products such as eggs, milk, honey, etc;

6.1.3 Forestry and logging includes the production of round wood for the forest based manufacturing industries as well as the extraction and gathering of wild growing non-wood forest product. Besides the production of timber, forestry activities which produce the product through the minimum process, such as fire wood, charcoal, wood chips and round wood used in unprocessed form are also included. These activities can be carried out in natural or forests plantation. This also includes part of the forestry operation based on fee or contract basis; and

6.1.4 Fisheries comprise of fishing and aquaculture, covering the use of fishery resources from marine, brackish or freshwater, with the purpose of capturing or gathering fish, crustaceans, molluscs and other marine organisms and products. Aquaculture refers to the production process involving the culturing or farming (including harvesting) of aquatic organisms using techniques designed to increase the production of the organisms beyond the natural capacity of the environment.

6.2 Mining & Quarrying

Mining and quarrying include the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas). Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining, etc. However, the sub-sector of mineral mining and quarrying was not covered in this publication.

6.3 Manufacturing

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 classification of eight (8) sub-sectors by division are as follows:

Division	Description
Food products	
10	Manufacture of food products
Beverages and tobacco products	
11	Manufacture of beverages
12	Manufacture of tobacco products
Textiles, wearing apparel and leather products	
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products

Division	Description
Wood products, furniture, paper products and printing	
16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
31	Manufacture of furniture
Petroleum, chemical, rubber and plastic products	
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical, medicinal chemical and botanical products
22	Manufacture of rubber and plastics products
Non-metallic mineral products, basic metal & fabricated metal products	
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
Electrical, electronic and optical products	
26	Manufacture of computer, electronics and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
Transport equipment, other manufacturing and repair	
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
32	Other manufacturing
33	Repair and installation of machinery and equipment

6.4 Construction

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

6.5 Services

Services related to Electricity, gas, steam & air conditioning supply; Water supply, sewerage, waste management & remediation activities, Wholesale & retail trade; Transportation & storage; Information & communication; Accommodation; Food & beverage; Finance; Real estate; Professional, scientific & technical; Administrative & support services; Private education; Private health & social work; Art, entertainment & recreation and Personal services & other activities.

6.5.1 Electricity, gas, steam & air conditioning are defined as an activity of providing electric power, natural gas, steam, hot water and the like through a permanent infrastructure (network) of lines, mains and pipes. The dimensions of the network is not decisive; also included are the distribution of electricity, gas, steam, hot water and the like in industrial parks or residential buildings. This section therefore includes the operation of electric gas utilities, which generate, control and distribute electric power or gas. Also included is the provision of steam & air-conditioning supply;

6.5.2 Water supply; sewerage, waste management & remediation activities comprised of activities related to waste management includes collection, treatment & disposal such as scheduled waste, solid waste and waste water from industrial and household, including recovery materials & contaminated sites. The waste from the treatment process can be disposed of or used as input for other production process. Related activities in water treatment and supply are also included in this sector;

6.5.3 Wholesale & retail trade encompasses of wholesale and retail trades, sales and repair of motor vehicles & motorcycles;

- 6.5.4 Transportation & storage** includes all establishments provided land transport, freight transport by road, other land transport, water transport, warehousing & supporting activities such as storage & warehousing, terminal operations, car parking services, highway operations, port operations, cargo handling/stevedoring, shipping agencies & forwarding of freight and other supporting activities for transportation services;
- 6.5.5 Information & communication** comprises activities of publishing, motion picture, video & television programme production, sound recording & music publishing, programming & broadcasting, telecommunication services, computer programming, consultancy & related activities and information services;
- 6.5.6 Accommodation services** refer to the provision on a fee of short-term lodging, whether open to the general public or restricted to members of a particular organization. It excludes rental of long term furnished accommodation which is classified in Real Estate;
- 6.5.7 Food & beverages** services include food and beverage serving activities providing complete meals or drinks fit for immediate consumption, whether in traditional restaurants, self-service or take-away restaurants, whether as permanent or temporary stands with or without seating;
- 6.5.8 Financial services** include monetary intermediation activities; other financial service activities and activities auxiliary to financial services; insurance/ takaful, reinsurance/ retakaful and pension & provident funding activities; and activities auxiliary to insurance/ takaful and pension funding;
- 6.5.9 Real estate services** include acting as lessors, agents and/or brokers in one or more of the following: selling or buying real estate, renting real estate, providing other real estate services such as appraising real estate, property management or acting as real estate escrow agents. Activities in this division may be carried out on own or leased property and may be done on a fee or contract basis. Also included is the building of structures, combined with maintaining ownership of leasing of such structures;

- 6.5.10 Professional, scientific & technical** includes specialised professional, scientific & technical activities which require a high degree of expertise and training, and specialised knowledge and skills available to users. Activities performed include legal & accounting activities, activities of head offices, management consultancy activities, architecture & engineering activities, technical testing & analysis, scientific research & development, advertising & market research, other professional, scientific & technical activities and veterinary activities;
- 6.5.11 Administrative & support services** includes a variety of activities that support general business operations, including rental & leasing activities, employment activities, travel agency, tour operator & other reservation service activities, security & investigation activities, services to buildings and landscape activities & office administrative, office support & other business support activities;
- 6.5.12 Private educational services** refer to establishments registered with the Ministry of Education, Malaysia and the Ministry of Higher Education that provides academic, pre-primary & primary education, secondary education, higher education, other education and educational support activities;
- 6.5.13 Private health & social work services** include hospital services, medical & dental practice activities, other human health activities, residential care activities and social work activities without accommodation;
- 6.5.14 Arts, entertainment & recreation services** include a wide range of activities to meet varied cultural, entertainment & recreational interests of the general public, including live performances, operation of museum sites, gambling, sport and recreation activities; and
- 6.5.15 Personal services & other activities** includes activities of membership organisations, activities of business, employers and professional membership organisations, activities of trade unions, activities of others membership organisations, repair of computers and personal & household goods and other personal services activities such as washing and dry-cleaning of textiles and fur products; hairdressing and other beauty treatment and funeral and other services activities.

7. CENSUS YEAR

Refers to the year in which a census was conducted.

8. REFERENCE YEAR

The reference year of the census was the calendar year 2022. 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.

9. METHOD OF COLLECTION

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

9.1 Online method through the e-BE portal

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

9.2 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.

9.3 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.

10. REPORTING UNIT

The reporting unit used in the Economic Census 2023 was the establishment. An 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 is assigned an industry classification based on its principal activity and not according to the activities of the parent company.

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

11. ICT DEFINITION

Based on Organisation for Economic Co-operation and Development (OECD) 2015 definition:

(a) Computer

*Computer includes personal computer, portable computer (e.g. laptop), tablet and other devices such as *smartphone.*

(b) Intranet

Refers to the internal communications network using internet protocols and allowing communication within the organisation.

(c) Extranet

Refers to a closed network that uses internet protocols to secure the sharing of business information with suppliers, vendors, customers or other business partners. It also can be part of a personal website business, where business partners can navigate after being confirmed in the login page.

(d) Local area network (LAN)

A network connecting computers and associated devices within a localized area such as a single building, department or site; it may be wireless.

(e) Wireless local area network (WLAN)

Local area network using high frequency radio waves instead of wires to communicate between networks-enabled devices. WLAN allows users to move around a small area within a radius of 20 to 91 meters.

Note.

* Malaysia including smartphone

(f) Wide area network (WAN)

A network that connects computers and associated devices within a wide geographic area, such as a region or country.

(g) Fixed broadband

Refers to a technology with a speed of at least 256 kbit/s in one or both directions. It consists of wired fixed broadband and fixed wireless broadband.

Wired fixed broadband internet access most commonly used to send/ receive information via cable/ fiber optic (ADSL, SDSL, VDSL), fiber optic technology/ cable technology.

(h) Mobile broadband

Refers to technology at speeds of not less than 256 kbit/s in one or both directions. It covers technologies such as 3G/ LTE/ 4G, UMTS, CDMA2000 and future technologies including both standard and dedicated data subscriptions. Typically used by mobile devices (e.g. laptops, tablets, USB wireless modems, smart phones and other mobile device.

Mobile broadband connection to the internet refers to access via WIFI hotspot (tethering) and not through a router (e.g. USB dongle/ modem/ surfstick such as YES dongle etc.).

(i) Website

A website is a collection of network-related web resources such as a website, multimedia content that is usually identified by a common domain name and published by at least one web server. Websites can be accessed through public Internet Protocol (IP) networks such as the Internet or private local area network (LAN) by the URL that identifies the site. A website can be a personal website, a corporate website for a company, a government website, an organization website and so on.

(j) Social media

Refers to those who have a user profile, account or user license depending on the needs and types of social media. Types of social media are social networks (e.g. Facebook and Instagram), enterprise blogs or enterprise microblogs (e.g. Twitter) and multimedia content sharing websites (e.g. YouTube).

(k) Mobile internet and technologies

Refers to an inevitable product in the development of the PC internet. It combines mobile and internet communications into one. This is a general term for activities where technology, platforms, business models and internet applications are combined with mobile communication technology (e.g. mobile IT equipment, Global Positioning System (GPS) equipment, wireless debit/ credit card payment terminals).

(l) Cloud computing

Cloud computing refers to ICT services used over the internet to access software, computing power, storage capacity, etc. (e.g. HUAWEI Cloud Server, AVM Cloud).

(m) Data analytic

Data analytic is a process or effort to process data into new information so that the characteristics of the data become easier to understand and useful for solving problems, especially those related to research (e.g. Tableau, Big Data Analytics, Mobile Business Intelligence).

(n) Management software

Management software is application software that helps users while performing management activities (e.g. Enterprise Resource Planning, etc.).

(o) Collaborative online platforms

Refers to economic partnerships (e.g. Lazada, Shopee, Grab, etc.).

12. E-COMMERCE DEFINITION

Based on (OECD) 2015, e-commerce transaction is defined as sale or purchase of goods or services, through a network of computers that have been designed for this purpose. E-commerce transactions can occur between enterprises, households, individuals, governments and public or private organisation to another.

Goods or services that have been ordered through e-commerce methods, but the payment or receipt of goods or services can be received either through online or offline.

E-commerce transaction, includes orders placed on websites, extranet or Electronic Data Interchange (EDI). However, the transactions made by telephone, fax, e-mail (mail that is typed manually) and the similar transactions are not categorised as e-commerce transactions.

- (a) **E-commerce income** means the total income of establishments with e-commerce transactions. Income for wholesale and retail trade establishments refers to the value of sales of goods and services. Sales value means the value of all items for which ownership or effective right to use with a view to ultimate purchase, has been transferred to others.
- (b) **E-commerce expenditure** means the amount of expenses for establishments that have e-commerce transactions.
- (c) **E-commerce by type of market**
- (i) **Domestic** means e-commerce transactions sales/ purchase that conducted in Malaysia.
 - (ii) **International** means e-commerce transactions sales/ purchase that conducted which involves international transaction.
- (d) **E-commerce by type of customers**
- (i) **Other business**
Business to Business (B2B) is related to e-commerce transaction between businesses which sell/ buy products or services to/ from another business. For example, a manufacturer can sell to a wholesaler or a wholesaler can sell to a retailer.
 - (ii) **Individual consumers**
Business to Consumer (B2C) is related to e-commerce transaction between businesses and consumers which sell/ buy products or services. For example, business sells garment to consumer (income) or business provide discount coupon to consumers through e-commerce platform (expenditure).
 - (iii) **Government and other non-business organisations**
Business to Government (B2G) is a business model that refers to businesses selling/ paying for products, services or information governments or government agencies. B2G networks or models provide a way for businesses to bid on government projects or products that governments might purchase or need for their organisations. This can encompass public sector organisations that propose the bids. B2G activities are increasingly being conducted via the internet through real-time bidding. B2G is also referred to as public sector marketing.

13. MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs)

The definition of MSMEs used is based on the new definition that came into effect on 1 January 2014 as shown in **Table 2**.

Table 2 : MSMEs Definition

Sector	MSMEs Size	Annual Turnover	Number of Full-Time Employees
Manufacturing	<i>Micro</i>	<i>Less than RM300,000</i>	<i>Less than 5 employees</i>
	<i>Small</i>	<i>Between RM300,000 to less than RM15 million</i>	<i>From 5 to less than 75 employees</i>
	<i>Medium</i>	<i>Between RM15 million to not exceeding RM50 million</i>	<i>From 75 to not exceeding 200 employees</i>
Agriculture, Mining and Quarrying, Construction and Services	<i>Micro</i>	<i>Less than RM300,000</i>	<i>Less than 5 employees</i>
	<i>Small</i>	<i>Between RM300,000 to less than RM3 million</i>	<i>From 5 to less than 30 employees</i>
	<i>Medium</i>	<i>Between RM3 million to not exceeding RM20 million</i>	<i>From 30 to not exceeding 75 employees</i>

Source: Guideline for New MSMEs Definition, SME Corp. Malaysia, October 2013

14. USAGE OF ICT PERCENTAGE CALCULATION

(a) Usage of Computer, Internet and Web Presence

(i) Percentage of computer usage

$$= \frac{\text{Number of establishment used computer}}{\text{Number of establishment operating}} \times 100$$

(ii) Percentage of internet usage

$$= \frac{\text{Number of establishment used internet}}{\text{Number of establishment operating}} \times 100$$

(iii) Percentage of business having web presence

$$= \frac{\text{Number of establishment having web presence}}{\text{Number of establishment operating}} \times 100$$

(b) Usage of Computer, Internet and Web Presence by State

(i) Percentage of computer usage by state

$$= \frac{\text{Number of establishment used computer by state}}{\text{Number of establishment operating by state}} \times 100$$

(ii) Percentage of internet usage by state

$$= \frac{\text{Number of establishment used internet by state}}{\text{Number of establishment operating by state}} \times 100$$

(iii) Percentage of businesses web presence by state

$$= \frac{\text{Number of establishment having web presence by state}}{\text{Number of establishment operating by state}} \times 100$$

(c) Type of Web Presence Owned

(i) *Percentage of owned website*

$$= \frac{\text{Number of establishment with owned website}}{\text{Number of establishment operating having web presence}} \times 100$$

(ii) *Percentage of presence on another entity's website*

$$= \frac{\text{Number of establishment with web presence on another entity's website}}{\text{Number of establishment operating having web presence}} \times 100$$

(iii) *Percentage of social media*

$$= \frac{\text{Number of establishment with social media}}{\text{Number of establishment operating having web presence}} \times 100$$

(iv) *Percentage of e-marketplace*

$$= \frac{\text{Number of establishment with e – marketplace}}{\text{Number of establishment operating having web presence}} \times 100$$

(d) Type of Computer Network Infrastructure Used

(i) *Percentage of intranet*

$$= \frac{\text{Number of establishment owned intranet}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) *Percentage of extranet*

$$= \frac{\text{Number of establishment owned extranet}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) *Percentage of Local Area Network (LAN)*

$$= \frac{\text{Number of establishment owned LAN}}{\text{Number of establishment operating using internet}} \times 100$$

(iv) Percentage of wireless local area network (WLAN)

$$= \frac{\text{Number of establishment owned WLAN}}{\text{Number of establishment operating using internet}} \times 100$$

(v) Percentage of wide area network (WAN)

$$= \frac{\text{Number of establishment owned WAN}}{\text{Number of establishment operating using internet}} \times 100$$

(vi) Percentage of others area network

$$= \frac{\text{Number of establishment owned others infrastructure network}}{\text{Number of establishment operating using internet}} \times 100$$

(e) Type of Internet Access*(i) Percentage of fixed broadband usage*

$$= \frac{\text{Number of establishment owned fixed broadband}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) Percentage of mobile broadband usage

$$= \frac{\text{Number of establishment owned mobile broadband}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) Percentage of both types of broadband usage

$$= \frac{\text{Number of establishment owned both types of broadband}}{\text{Number of establishment operating using internet}} \times 100$$

(f) Purpose of Internet Usage*(i) Percentage of sending or receiving email*

$$= \frac{\text{Number of establishment used for sending or receiving email}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) *Percentage of telephoning over the internet usage*

$$= \frac{\text{Number of establishment used telephoning over the internet}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) *Percentage of posting information or instant messaging*

$$= \frac{\text{Number of establishment posting information or instant messaging}}{\text{Number of establishment operating using internet}} \times 100$$

(iv) *Percentage of getting information about goods or services*

$$= \frac{\text{Number of establishment getting information about goods or services}}{\text{Number of establishment operating using internet}} \times 100$$

(v) *Percentage of getting information from government organisations*

$$= \frac{\text{Number of establishment getting information from gov. organisations}}{\text{Number of establishment operating using internet}} \times 100$$

(vi) *Percentage of interacting with government organisations usage*

$$= \frac{\text{Number of establishment interacting with government organisations}}{\text{Number of establishment operating using internet}} \times 100$$

(vii) *Percentage of internet banking usage*

$$= \frac{\text{Number of establishment used internet banking}}{\text{Number of establishment operating using internet}} \times 100$$

(viii) *Percentage of accessing other financial services*

$$= \frac{\text{Number of establishment accesing other financial services}}{\text{Number of establishment operating using internet}} \times 100$$

(ix) *Percentage of providing customer service*

$$= \frac{\text{Number of establishment providing customer service}}{\text{Number of establishment operating using internet}} \times 100$$

(x) Percentage of delivering products online

$$= \frac{\text{Number of establishment delivering product online}}{\text{Number of establishment operating using internet}} \times 100$$

(xi) Percentage of internal or external recruitment

$$= \frac{\text{Number of establishment used internal or external recruitment}}{\text{Number of establishment operating using internet}} \times 100$$

(xii) Percentage of staff training usage (e-learning applications)

$$= \frac{\text{Number of establishment used for staff (e – learning)}}{\text{Number of establishment operating using internet}} \times 100$$

(xiii) Percentage of internet usage for others

$$= \frac{\text{Number of establishment used for others}}{\text{Number of establishment operating using internet}} \times 100$$

(g) Usage of Digital Technology**(i) Percentage of website usage**

$$= \frac{\text{Number of establishment used for website}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) Percentage of social media usage

$$= \frac{\text{Number of establishment used for social media}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) Percentage of mobile internet and technologies usage

$$= \frac{\text{Number of establishment used for mobile internet and technologies}}{\text{Number of establishment operating using internet}} \times 100$$

(iv) *Percentage of cloud computing usage*

$$= \frac{\text{Number of establishment used for cloud computing}}{\text{Number of establishment operating using internet}} \times 100$$

(v) *Percentage of data analytics usage*

$$= \frac{\text{Number of establishment used for data analytics}}{\text{Number of establishment operating using internet}} \times 100$$

(vi) *Percentage of managements software usage*

$$= \frac{\text{Number of establishment used for management software}}{\text{Number of establishment operating using internet}} \times 100$$

(vii) *Percentage of online collaborative platforms usage*

$$= \frac{\text{Number of establishment used for online collaborative platforms}}{\text{Number of establishment operating using internet}} \times 100$$

(viii) *Percentage of digital technology usage for other purposes*

$$= \frac{\text{Number of establishment used for other purposes}}{\text{Number of establishment operating using internet}} \times 100$$

(ix) *Percentage of not using digital technologies*

$$= \frac{\text{Number of establishment not using digital technologies}}{\text{Number of establishment operating using internet}} \times 100$$

15. **ROUNDING**

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

16. SUPRA STATE

Based on the System of National Accounts (SNA) 2008, categorisation of institutional units based on their economic interest and geographical activities can be as follows; (1) most activities are within a single region; (2) multi-provincial units with centers of interest in multiple provinces or regions but do not operate on a nationwide scale; and (3) units operating at the national level, with their centre of interests not confined to any specific geographical position (e.g. Supra State). Supra State at the state level is equivalent to an overseas organisation at the national level. In Malaysia, Supra State covers production activities beyond the centre for the key economic interest of any state.

17. COMPOUND ANNUAL GROWTH RATE (CAGR)

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

$$y_t = y_0 (1 + r)^t$$

Solving for r ,

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

where,

y_t = Value at current year

y_0 = Value at previous year

t = Value at previous year, $y_t - y_0$

r = Annual growth rate

18. REVISION

Revision will be made to the published figures based on the latest census.

19. SYMBOLS AND ABBREVIATIONS

-	: data not available
&	: and
%	: per cent
b	: billion
etc.	: et cetera
e.g.	: example
CAGR	: Compound annual growth rate
RM	: Ringgit Malaysia
ISIC	: International Standard Industrial Classification
MSIC	: Malaysian Standard Industry Classification
n.e.c.	: not elsewhere classified
Ver.	: Version
W.P.	: Federal Territory

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