



ISSN 2289-778X



KEMENTERIAN EKONOMI  
JABATAN PERANGKAAN MALAYSIA

# AKAUN SATELIT TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

*INFORMATION AND COMMUNICATION  
TECHNOLOGY SATELLITE ACCOUNT*

# 2022



JABATAN PERANGKAAN MALAYSIA  
DEPARTMENT OF STATISTICS MALAYSIA





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## **Pemakluman**

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

Kerajaan Malaysia telah mengisytiharkan Hari Statistik Negara (MyStats Day) pada 20 Oktober setiap tahun. Tema sambutan MyStats Day adalah "Statistik Nadi Kehidupan".

## **Announcement**

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

*The Government of Malaysia has declared National Statistics Day (MyStats Day) on October 20 each year. MyStats Day theme is "Statistics is the Essence of Life".*

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

Diterbitkan dan dicetak oleh / *Published and printed by:*

**Jabatan Perangkaan Malaysia**

***Department of Statistics Malaysia***

Blok C6 & C7, Kompleks C,

Pusat Pentadbiran Kerajaan Persekutuan,

62514 Putrajaya,

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Harga / *Price* : RM35.00

Diterbitkan pada Oktober 2023 / *Published on October 2023*

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**ISSN 2289-778X**



# KATA PENGANTAR

Akaun Satelit Teknologi Maklumat dan Komunikasi 2022 adalah satu kerangka statistik untuk mengukur perkembangan industri Teknologi Maklumat dan Komunikasi (TMK) termasuk e-dagang dan sumbangannya kepada Keluaran Dalam Negeri Kasar (KDNK). Penyusunan statistik ini dilaksanakan berdasarkan rangka kerja *System of National Accounts 2008*, *OECD Guide to Measuring the Information Society 2011* dan *OECD Internet Economy Outlook 2012*. Statistik tahunan ini merangkumi penyusunan produk dan industri berkaitan dengan teknologi maklumat dan komunikasi.

Penerbitan ini dibahagikan kepada tiga bahagian utama. Bahagian pertama memaparkan penemuan utama, ringkasan penemuan dan rencana, manakala jadual statistik di bahagian kedua. Aspek teknikal berkaitan konsep, definisi, metodologi, sumber data serta kod & klasifikasi yang digunakan dalam penerbitan ini diterangkan di bahagian ketiga bagi memudahkan pengguna memahami statistik yang diterbitkan.

Statistik ini boleh membantu agensi kerajaan, ahli ekonomi, ahli akademik dan individu bagi tujuan membuat perancangan dan penggubalan dasar, analisis ekonomi dan unjuran serta dapat membantu merancang pembangunan perniagaan.

Jabatan Perangkaan Malaysia (DOSM) merakamkan penghargaan atas kerjasama semua pihak dalam membekalkan data yang diperlukan dan menyumbang kepada kejayaan penerbitan ini. Sebarang maklum balas dan cadangan untuk penambahbaikan penerbitan ini pada masa akan datang amatlah dihargai.

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

Ketua Perangkawan Malaysia

**Oktober 2023**

# **PREFACE**



*Information and Communication Technology Satellite Account 2022 is a statistical framework to gauge the performance of the Information and Communication Technology (ICT) industry, including e-commerce and its contribution to the Gross Domestic Product (GDP). The compilation of these statistics is in accordance with the framework of the System of National Accounts 2008, OECD Guide to Measuring the Information Society 2011 and the OECD Internet Economy Outlook 2012. These annual statistics consist of a compilation of products and industries related to information and communication technology.*

*This publication is divided into three main parts. The first part displays the main findings, summary of findings and article, while the statistical tables are in the second part. Technical aspects related to concepts, definitions, methodology, data sources and codes & classifications used in this publication are described in the third part to assist users in understanding the published statistics.*

*These statistics could assist government agencies, economists, academicians and individuals in the planning and formulation of policies, economic analysis and projections, as well as in business development planning.*

*The Department of Statistics Malaysia (DOSM) acknowledges the cooperation of all parties that have provided the required data and contributed to the success of this publication. Any feedback and suggestions towards improving the future publication are highly appreciated.*

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

*Chief Statistician Malaysia*

**October 2023**



# SINGKATAN ABBREVIATIONS

ASTMK	: Akaun Satelit Teknologi Maklumat dan Komunikasi
b	: bilion / <i>billion</i>
BPM6	: <i>Balance of Payments and International Investment Position Manual Sixth Edition</i>
CPC	: <i>Central Products Classification</i>
DOSM	: Jabatan Perangkaan Malaysia / <i>Department of Statistics, Malaysia</i>
etc	: <i>et cetera / and other things</i>
GDP	: <i>Gross Domestic Product</i>
GVAICT	: <i>Gross Value Added of Information and Communication Technology industry</i>
i.e.	: <i>Latin expression meaning "that is; in other words"</i>
ICT	: <i>Information and Communication Technology</i>
ICTSA	: <i>Information and Communication Technology Satellite Account</i>
ISIC	: <i>International Standard Industrial Classification of All Economic Activities</i>
j	: juta
HS	: <i>Harmonized Commodity Description and Coding Systems</i>
KDNK	: Keluaran Dalam Negeri Kasar
m	: <i>million</i>
MCPA	: <i>Malaysian Classification of Products by Activity</i>
MSIC	: Piawain Klasifikasi Industri Malaysia / <i>Malaysia Standard Industrial Classification</i>
n.e.c	: <i>not elsewhere classified</i>
NDKTMK	: Nilai Ditambah Kasar Industri Teknologi Maklumat dan Komunikasi
OECD	: <i>Organisation for Economic Co-operation and Development</i>
RM	: Ringgit Malaysia
SNA	: <i>System of National Accounts</i>
SUT	: Jadual Penawaran dan Penggunaan / <i>Supply and Use Table</i>
t.t.t.l.	: tidak terkelas di tempat lain
TMK	: Teknologi Maklumat dan Komunikasi

## Nota / Note

Penjumlahan angka komponen mungkin tidak bersamaan dengan angka jumlah kecil atau jumlah besar disebabkan pembundaran.

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

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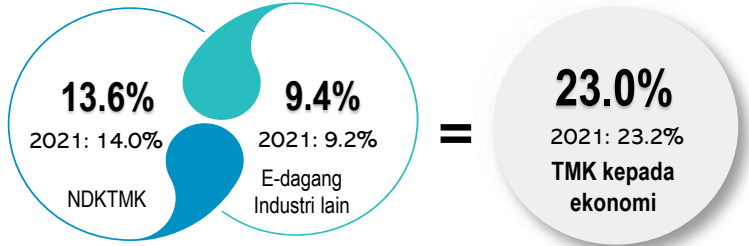
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## AKAUN SATELIT TEKNOLOGI MAKLUMAT DAN KOMUNIKASI 2022

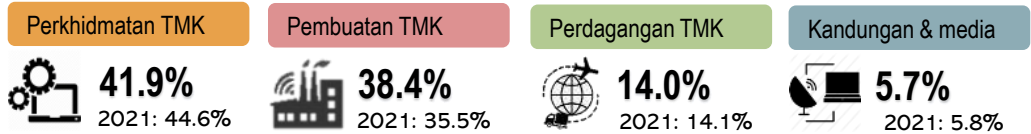
Teknologi Maklumat dan Komunikasi (TMK) menyumbang **23.0%** kepada KDNK dengan pertumbuhan sebanyak **14.8%**

**RM412.3b**  
2021: RM359.3b

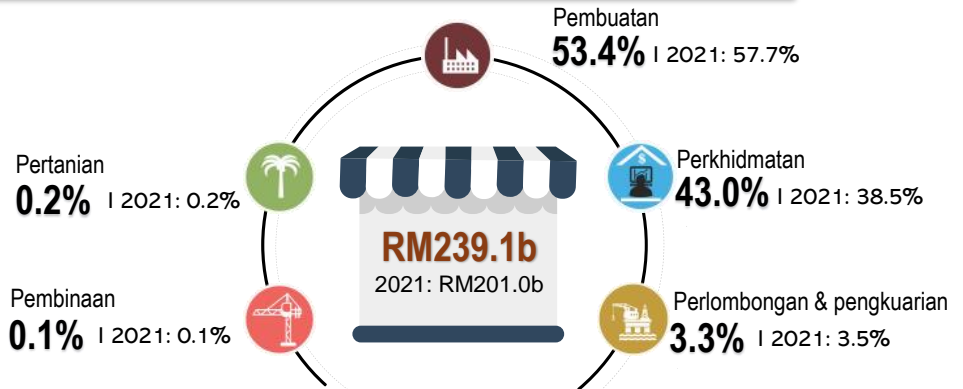
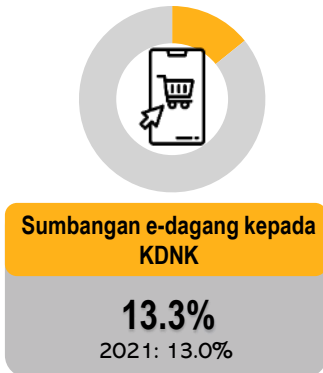


### NILAI DITAMBAH KASAR INDUSTRI TMK (NDKTMK)

**RM243.7b**  
2021: RM216.8b



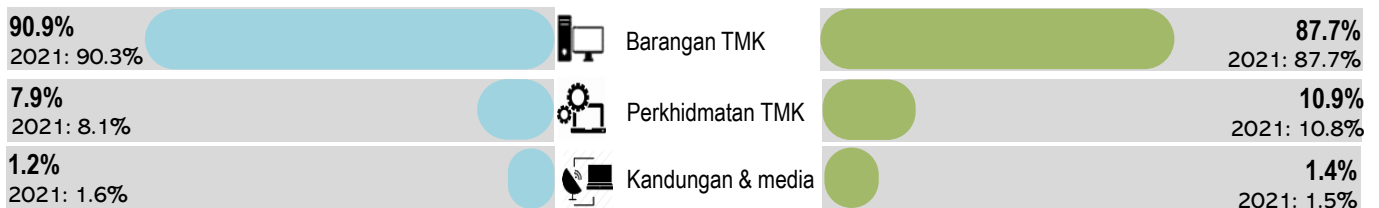
### NILAI DITAMBAH KASAR E-DAGANG



### EKSPORT & IMPORT PRODUK TMK

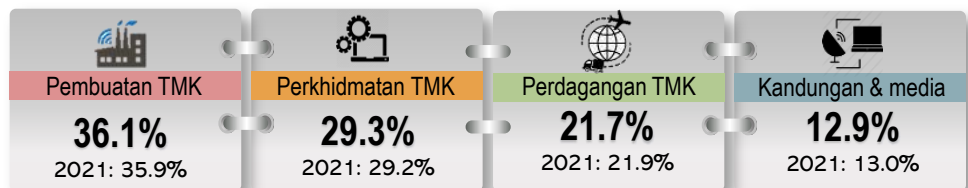
**Eksport**  
**RM444.5b**  
2021: RM356.0b

**Import**  
**RM308.8b**  
2021: RM260.7b



### GUNA TENAGA INDUSTRI TMK

**1.22 juta** orang  
Guna tenaga dalam industri TMK



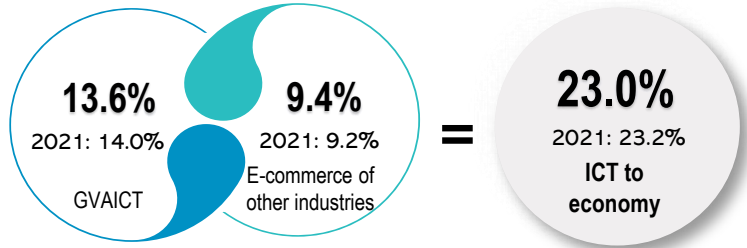
\*Sumbangan (%)

Sumber: Akaun Satelit Teknologi Maklumat dan Komunikasi 2022, Jabatan Perangkaan Malaysia (DOSM)

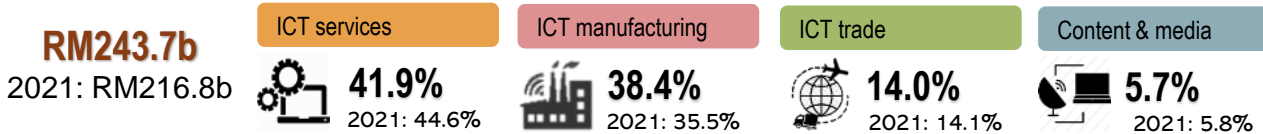
## INFORMATION AND COMMUNICATION TECHNOLOGY SATELLITE ACCOUNT 2022

The Information and Communication Technology (ICT) contributed **23.0%** to the GDP with a growth of **14.8%**

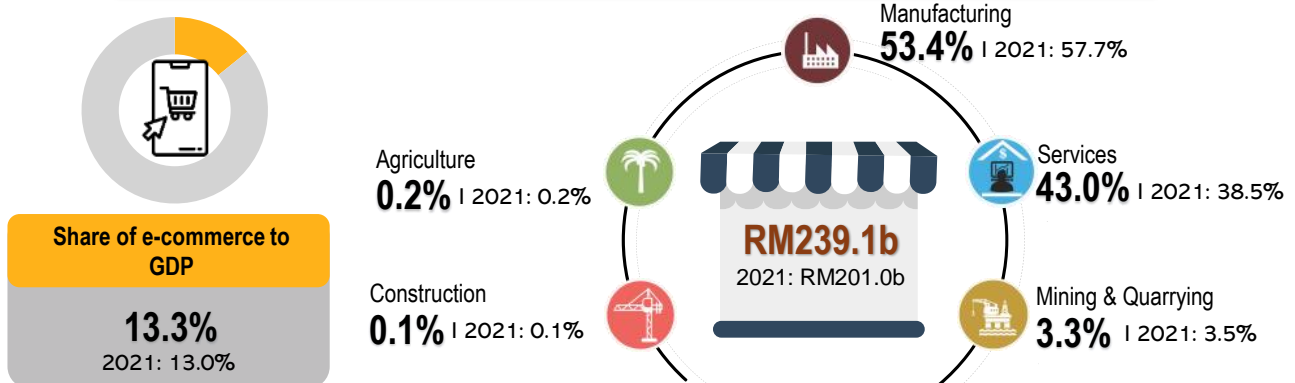
**RM412.3b**  
2021: RM359.3b



### GROSS VALUE ADDED ICT INDUSTRY (GVAICT)

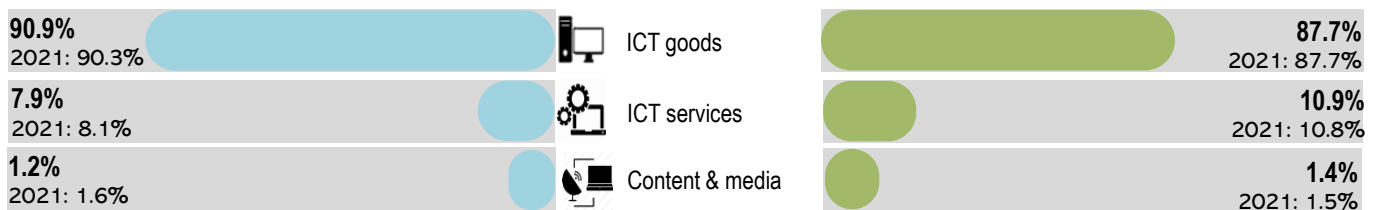


### GROSS VALUE ADDED OF E-COMMERCE



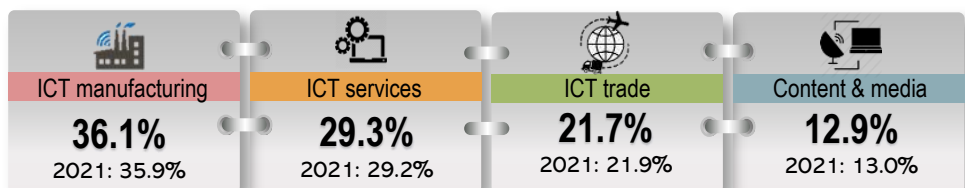
### EXPORTS & IMPORTS OF ICT PRODUCTS

**Exports** **RM444.5b** 2021: RM356.0b      **Imports** **RM308.8b** 2021: RM260.7b



### EMPLOYMENT OF ICT INDUSTRY

**1.22 million** persons  
Employment in the ICT industry



\*Share (%)

Source: Information and Communication Technology Satellite Account 2022, Department of Statistics Malaysia (DOSM)



# RINGKASAN PENEMUAN

## PENGENALAN

Statistik Akaun Satelit Teknologi Maklumat dan Komunikasi (ASTMK) Malaysia bagi tahun 2022 menyediakan maklumat terdiri daripada akaun satelit dan komponen bagi ekonomi digital. Akaun satelit menyediakan statistik mengenai industri Teknologi Maklumat dan Komunikasi (TMK) dan industri lain yang mengeluarkan produk TMK, penawaran dan penggunaan produk TMK, eksport & import produk TMK, komponen pendapatan dan guna tenaga dalam industri TMK. Sementara itu, Nilai Ditambah Kasar industri TMK (NDKTMK), e-dagang dan sumbangan TMK kepada ekonomi merupakan komponen bagi ekonomi digital turut disertakan dalam penerbitan ini. Statistik ini dibentangkan mengikut industri dan produk berkaitan TMK pada harga semasa.

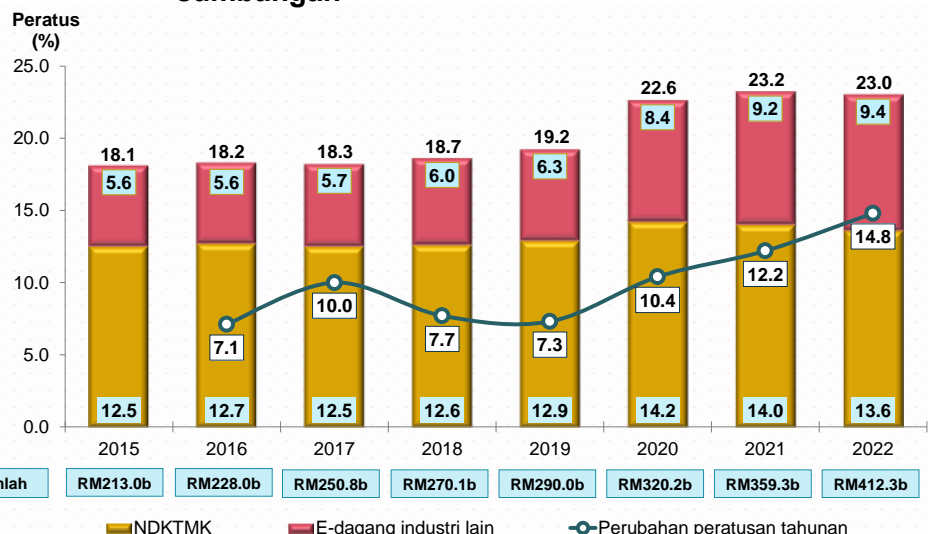


## SUMBANGAN TMK KEPADA EKONOMI

Sumbangan TMK dan e-dagang kepada ekonomi negara merekodkan 23.0 peratus dengan nilai RM412.3 bilion. Prestasi ini disumbangkan oleh NDKTMK sebanyak 13.6 peratus dan e-dagang bagi industri lain sebanyak 9.4 peratus. TMK dan e-dagang mencatatkan peningkatan 14.8 peratus berbanding 12.2 peratus pada tahun sebelumnya, seperti ditunjukkan di **Paparan 1**.

### Paparan 1

**Sumbangan TMK kepada ekonomi:  
Nilai, perubahan peratusan tahunan dan peratus sumbangan**



## PRESTASI INDUSTRI TMK



NDKTMK merekodkan RM243.7 bilion dengan pertumbuhan 12.4 peratus berbanding 7.8 peratus pada tahun sebelumnya. Pertumbuhan ini disokong oleh industri pembuatan TMK yang bertumbuh lebih baik sebanyak 21.3 peratus berbanding 11.0 peratus pada tahun 2021 seperti ditunjukkan dalam **Paparan 2**.

Komponen & papan elektronik, peralatan komunikasi dan elektronik pengguna kekal sebagai penyumbang utama kepada industri pembuatan TMK sebanyak 35.7 peratus.

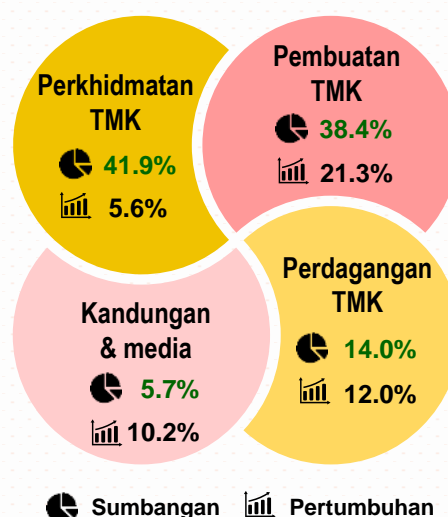
### Paparan 2

#### Nilai Ditambah Kasar industri TMK: Nilai, perubahan peratusan tahunan dan peratus sumbangan

**NDKTMK**  
**RM243.7b**  
2021: RM216.8b

**Perubahan peratusan tahunan**  
**12.4%** 2021: 7.8%

**Sumbangan kepada KDNK**  
**13.6%** 2021: 14.0%



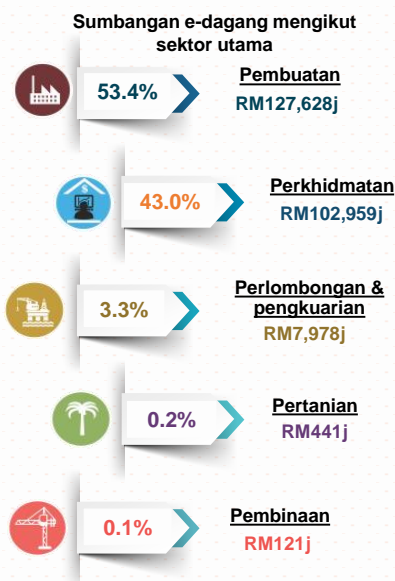
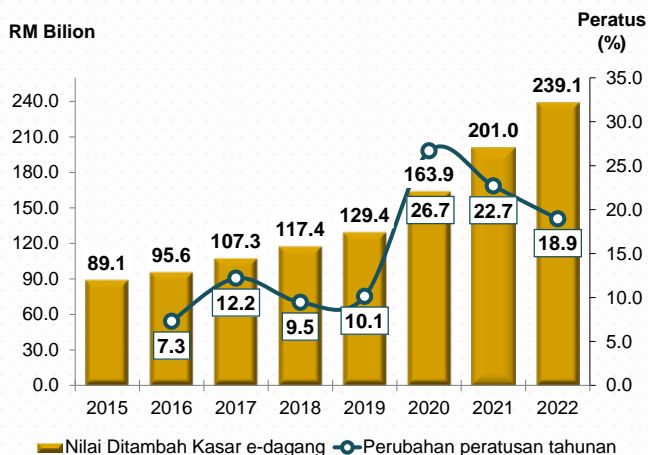
## NILAI DITAMBAH KASAR E-DAGANG

Nilai Ditambah Kasar e-dagang mencatatkan RM239.1 bilion dengan pertumbuhan 18.9 peratus pada tahun 2022 berbanding 22.7 peratus pada tahun sebelumnya. Sumbangan e-dagang kepada KDNK adalah 13.3 peratus merangkumi e-dagang bagi industri TMK 3.9 peratus dan e-dagang industri lain, 9.4 peratus. Sektor Pembuatan kekal sebagai penyumbang utama dalam Nilai Ditambah Kasar e-dagang dengan sumbangan 53.4 peratus diikuti oleh sektor Perkhidmatan, 43.0 peratus (**Paparan 3**).



### Paparan 3

## Nilai Ditambah Kasar e-dagang kepada KDNK: Nilai, perubahan peratusan tahunan dan peratus sumbangan



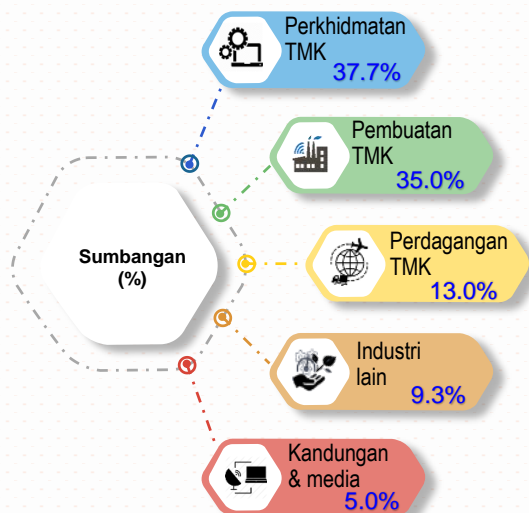
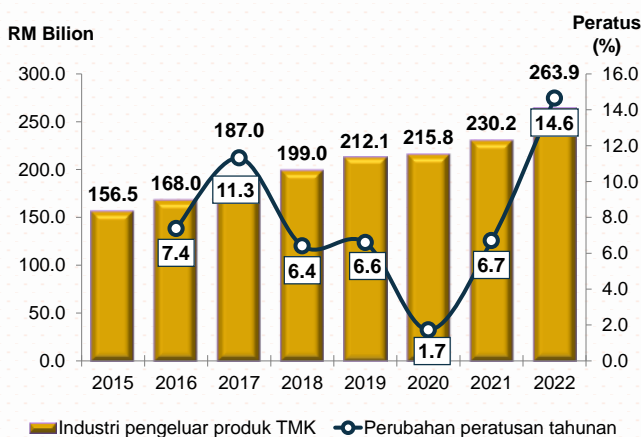
### PENGELUARAN PRODUK TMK MENGIKUT INDUSTRI

Industri yang mengeluarkan produk TMK berkembang 14.6 peratus (2021: 6.7%) dengan nilai RM263.9 bilion pada tahun 2022. Pertumbuhan ini didorong oleh prestasi yang lebih baik dalam industri pembuatan TMK (24.8%) dan perdagangan TMK (12.0%). Pengeluaran produk TMK didominasi oleh perkhidmatan TMK dengan sumbangan 37.7 peratus, diikuti oleh pembuatan TMK (35.0%) dan perdagangan TMK (13.0%) seperti ditunjukkan dalam Paparan 4.



### Paparan 4

## Industri TMK dan industri lain yang mengeluarkan produk TMK: Nilai, perubahan peratusan tahunan dan peratus sumbangan

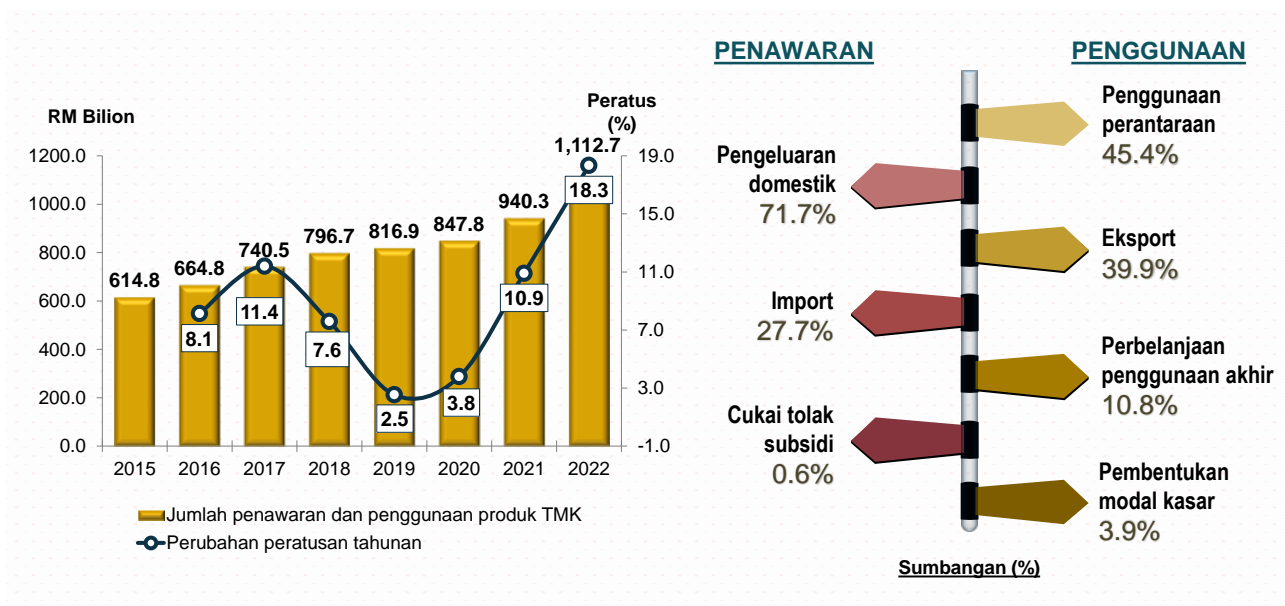


## PENAWARAN DAN PENGGUNAAN PRODUK TMK

Penawaran dan penggunaan produk TMK meningkat kepada RM1.1 trilion dengan pertumbuhan 18.3 peratus pada tahun 2022. Pengeluaran domestik menerajui jumlah penawaran produk TMK dengan sumbangan 71.7 peratus diikuti oleh import produk TMK (27.7%). Sementara itu, sumbangan penggunaan perantaraan produk TMK mencatatkan 45.4 peratus dan eksport 39.9 peratus kepada jumlah penggunaan (**Paparan 5**).

### Paparan 5

#### Penawaran dan penggunaan produk TMK: Nilai, perubahan peratusan tahunan dan peratus sumbangan



## EKSPORT DAN IMPORT PRODUK TMK

Eksport produk TMK meningkat kepada RM444.5 bilion dengan pertumbuhan 24.9 peratus pada tahun 2022 berbanding 13.1 peratus pada tahun sebelumnya. Eksport barangan (90.9%) telah memberi kesan ketara kepada prestasi keseluruhan eksport produk TMK. Eksport TMK menyumbang 32.2 peratus kepada jumlah eksport negara.



Import produk TMK berjumlah RM308.8 bilion dengan pertumbuhan 18.5 peratus didorong oleh pertumbuhan perkhidmatan TMK (19.5%). Import bagi produk TMK menyumbang 24.7 peratus kepada keseluruhan import pada tahun 2022 seperti di **Paparan 6**.

Justeru, eksport bersih produk TMK menunjukkan prestasi yang memberangsangkan dengan nilai RM135.7 bilion pada tahun 2022.



## Paparan 6

### Eksport dan import produk TMK: Nilai, perubahan peratusan tahunan dan peratus sumbangan

PRODUK TMK	EKSPORT				IMPORT			
	RM Bilion		Perubahan peratusan tahunan (%)		RM Bilion		Perubahan peratusan tahunan (%)	
	2021	2022	2021	2022	2021	2022	2021	2022
Barangan TMK	321.5	404.1	13.8	25.7	228.6	271.0	20.9	18.5
Perkhidmatan TMK	28.7	35.2	12.3	22.8	28.1	33.6	24.0	19.5
Kandungan & media	5.8	5.2	-12.4	-10.6	4.0	4.2	-1.9	7.1
<b>JUMLAH</b>	<b>356.0</b>	<b>444.5</b>	<b>13.1</b>	<b>24.9</b>	<b>260.7</b>	<b>308.8</b>	<b>20.8</b>	<b>18.5</b>
<b>Sumbangan (%)</b>								
	32.5	32.2			26.5	24.7		

Eksport bersih 2022  
RM135.7b

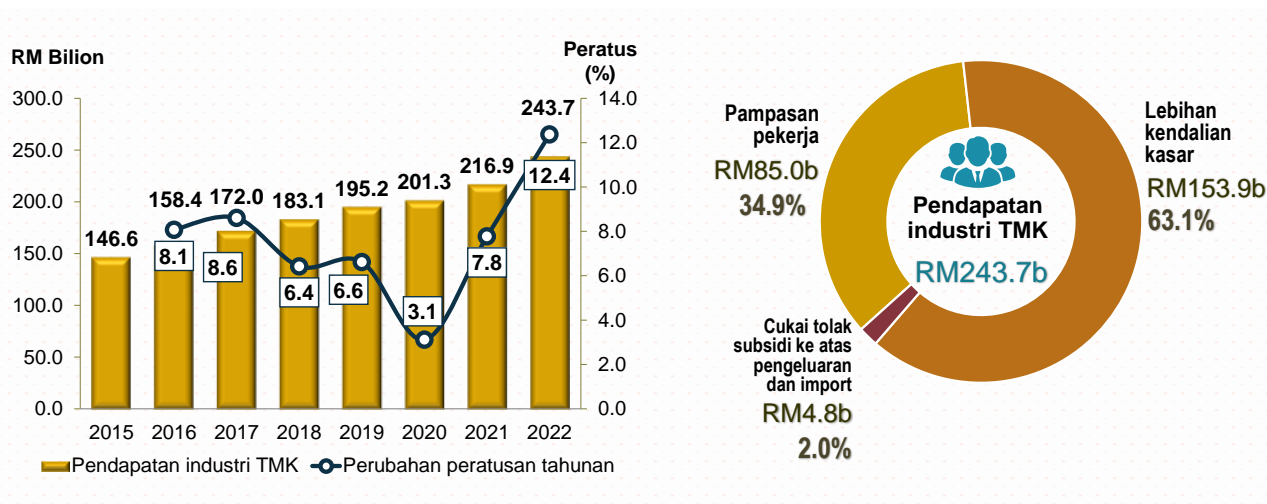
## KOMPONEN PENDAPATAN INDUSTRI TMK

Jumlah pendapatan industri TMK merekodkan nilai RM243.7 bilion dengan pertumbuhan dua digit 12.4 peratus pada tahun 2022 (2021: 7.8%). Pampasan pekerja mencatatkan nilai sebanyak RM85.0 bilion dengan sumbangan 34.9 peratus kepada jumlah pendapatan TMK. Manakala, lebih kendalian kasar menyumbang sebanyak 63.1 peratus dan cukai tolak subsidi ke atas pengeluaran dan import sebanyak 2.0 peratus seperti di **Paparan 7**.



## Paparan 7

### Komponen pendapatan industri TMK: Nilai, perubahan peratusan tahunan dan peratus sumbangan



## GUNA TENAGA DALAM INDUSTRI TMK

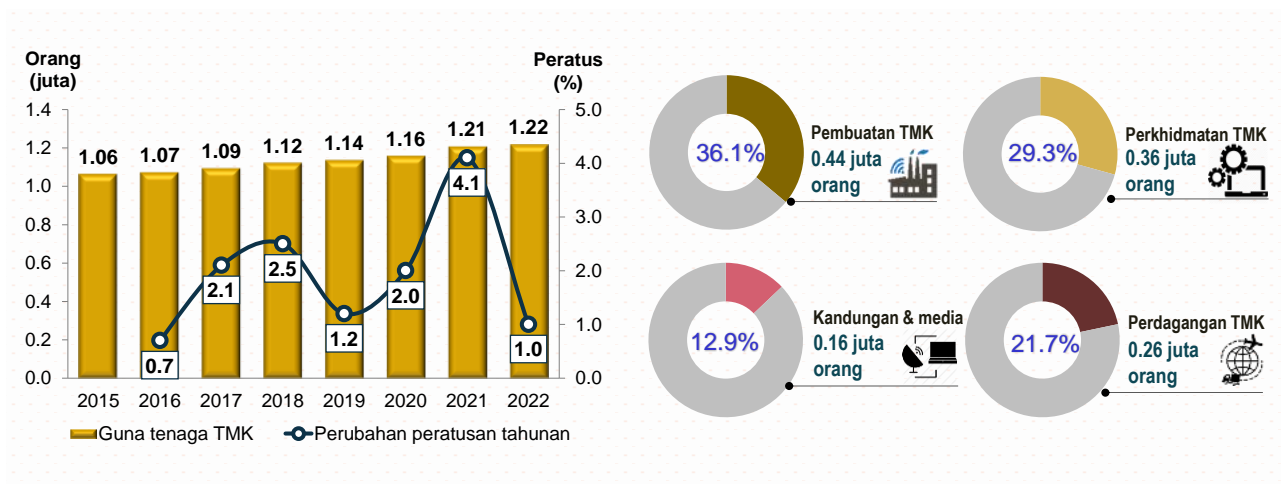


Guna tenaga dalam industri TMK bertumbuh 1.0 peratus kepada 1.22 juta orang pada tahun 2022 dengan sumbangan sebanyak 7.9 peratus kepada keseluruhan guna tenaga. Sumbangan ini diterajui oleh sektor pembuatan TMK sebanyak 36.1 peratus, diikuti oleh sektor perkhidmatan TMK (29.3%) dan sektor perdagangan TMK (21.7%) seperti di **Paparan 8**.

### Paparan 8

#### Guna tenaga dalam industri TMK:

Nilai, perubahan peratusan tahunan dan peratus sumbangan



# SUMMARY OF FINDINGS

## INTRODUCTION

Statistics of Information and Communication Technology Satellite Account (ICTSA) in Malaysia for the year 2022 provides information that encompasses satellite accounts and components for the digital economy. Satellite accounts provide statistics about the Information and Communication Technology (ICT) industry and other industries that produce the ICT products, supply and use of ICT products, exports & imports of ICT products, income components and employment in the ICT industry. Meanwhile, the Gross Value Added of the ICT industry (GVAICT), e-commerce, and the contribution of the ICT to the economy, which are the components of the digital economy are also included in this publication. These statistics are presented by ICT related industries and products at current prices.

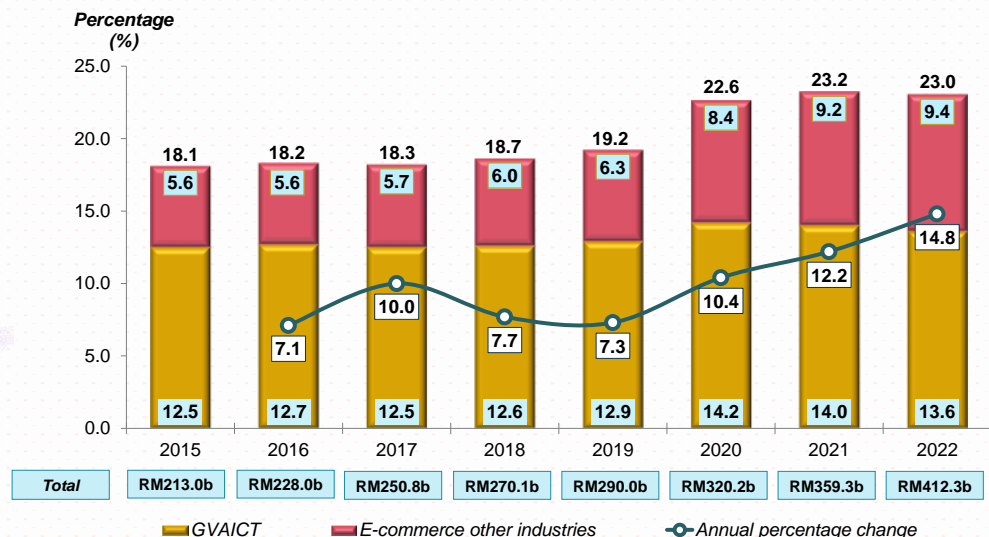
The ICT Industry shows positive growth

## CONTRIBUTION OF ICT TO THE ECONOMY

The contribution of ICT and e-commerce to the national economy was recorded at 23.0 per cent with a value of RM412.3 billion. The performance was contributed by GVAICT at 13.6 per cent and the e-commerce of other industries at 9.4 per cent. ICT and e-commerce showed an increase of 14.8 per cent compared to 12.2 per cent in the previous year, as shown in **Exhibit 1**.

**Exhibit 1**

**ICT contribution to the economy:  
Value, annual percentage change and percentage share**



ICT contribution to the economy 23.0%

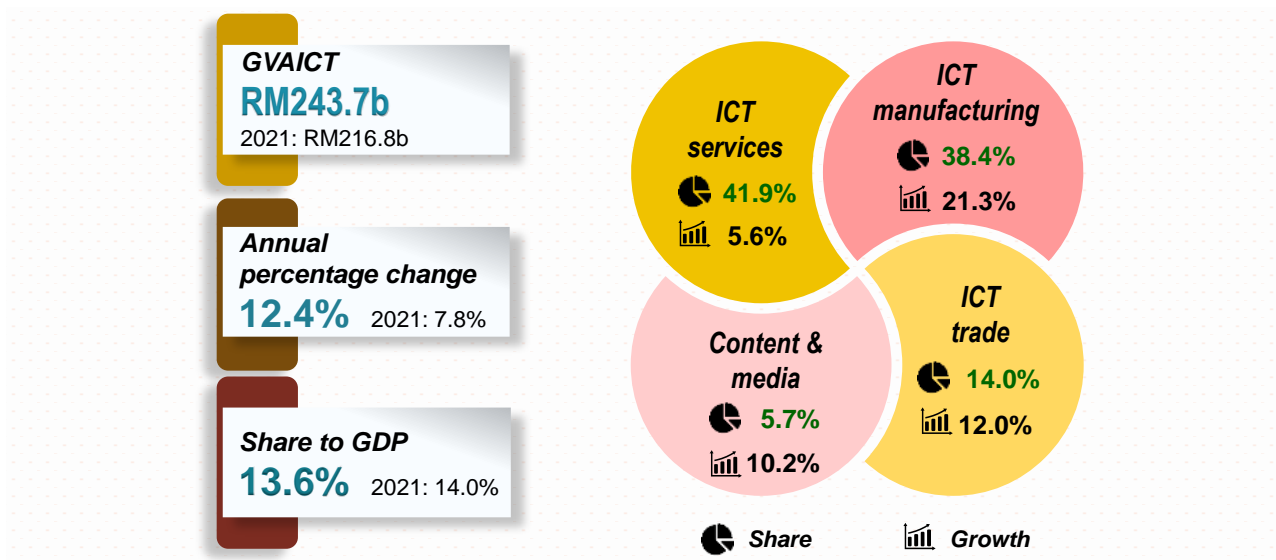
## PERFORMANCE OF ICT INDUSTRY



GVAICT recorded RM243.7 billion with a growth of 12.4 per cent compared to 7.8 per cent in the previous year. This growth was supported by the ICT manufacturing industry with a better growth of 21.3 per cent compared to 11.0 per cent in 2021, as shown in **Exhibit 2**.

Components & electronic boards, communication equipment and consumer electronics remained the main contributors to ICT manufacturing by 35.7 per cent.

**Exhibit 2** Gross Value Added of ICT industry: Value, annual percentage change and percentage share



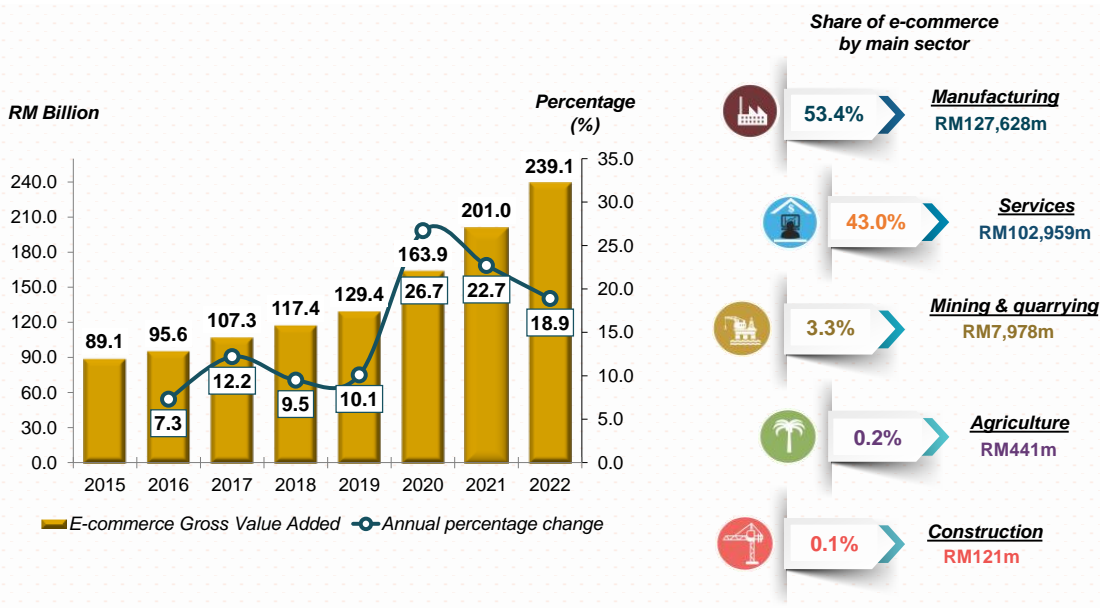
## GROSS VALUE ADDED OF E-COMMERCE

Gross Value Added of e-commerce registered RM239.1 billion with a growth of 18.9 per cent in 2022 compared to 22.7 per cent in the previous year. The contribution of e-commerce to GDP was 13.3 per cent comprising e-commerce in ICT industries at 3.9 per cent and e-commerce of other industries at 9.4 per cent. The Manufacturing sector remained the major contributor to Gross Value Added of e-commerce with a contribution of 53.4 per cent followed by the Services sector at 43.0 per cent (**Exhibit 3**).



**Exhibit 3**

**Gross Value Added of e-commerce to GDP:  
Value, annual percentage change and percentage share**



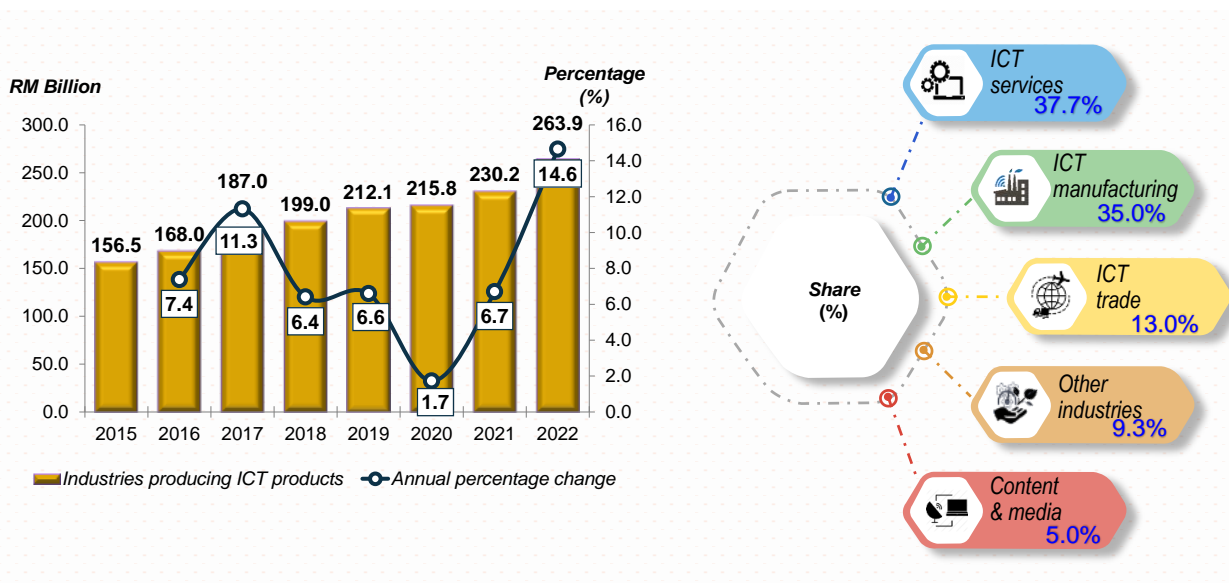
**PRODUCTION OF ICT PRODUCTS BY INDUSTRY**

The production of ICT products expanded by 14.6 per cent (2021: 6.7%) with a value of RM263.9 billion in 2022. The growth was impelled by a favourable performance in the ICT manufacturing industry (24.8%) and ICT trade (12.0%). The production of ICT products was dominated by ICT services with a share of 37.7 per cent followed by ICT manufacturing (35.0%) and ICT trade (13.0%) as shown in **Exhibit 4**.



**Exhibit 4**

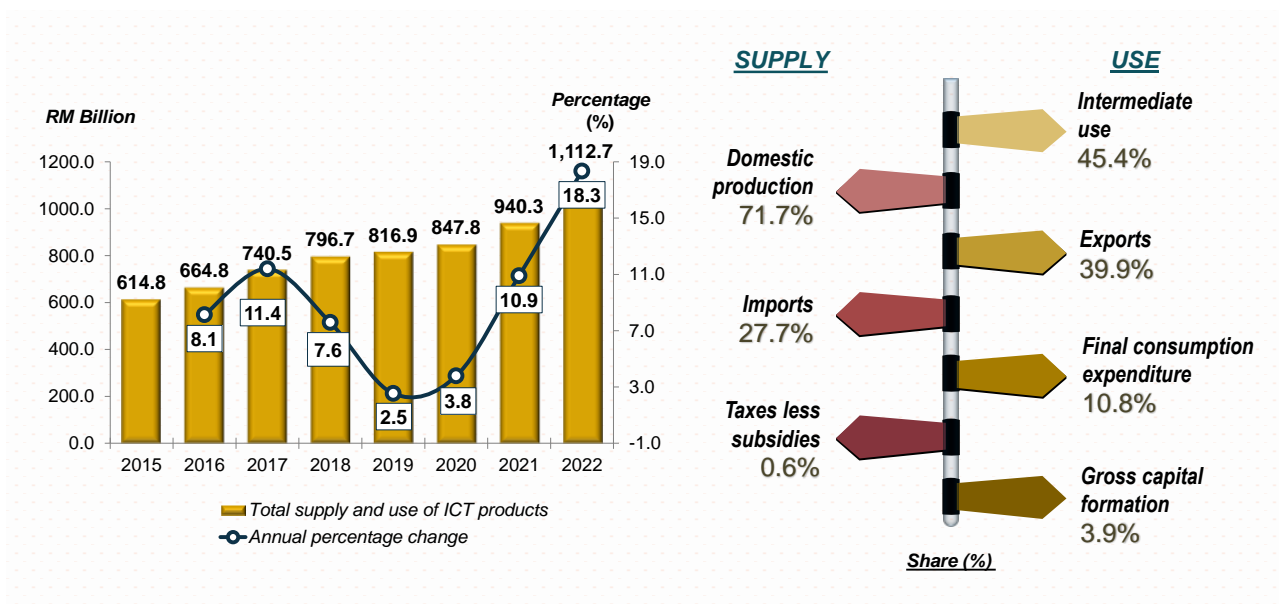
**ICT industry and other industries that produce ICT products:  
Value, annual percentage change and percentage share**



## SUPPLY AND USE OF ICT PRODUCTS

Supply and use of ICT products increased to RM1.1 trillion with a growth of 18.3 per cent in 2022. The domestic production dominated the total supply of ICT products with a share of 71.7 per cent followed by imports of ICT product (27.7%). Meanwhile, the contribution of intermediate use to ICT products accounted for 45.4 per cent and exports at 39.9 per cent of the total use (Exhibit 5).

**Exhibit 5** Supply and use of ICT products: Value, annual percentage change and percentage share



## EXPORTS AND IMPORTS OF ICT PRODUCTS

Exports of ICT products increased to RM444.5 billion with a growth of 24.9 per cent in 2022 compared to 13.1 per cent in the previous year. The ICT goods (90.9%) influenced the overall exports performance of ICT products. Exports of ICT products constituted 32.2 per cent of total national exports.

Imports of ICT products amounted to RM308.8 billion with a growth of 18.5 per cent driven by the growth of ICT services (19.5%). Imports of ICT products contributed 24.7 per cent of total import in 2022 as in Exhibit 6.

Hence, net exports of ICT products showed a robust performance with a value of RM135.7 billion in 2022.



**Exhibit 6**

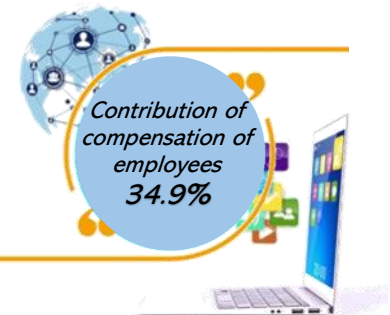
**Exports and imports of ICT products:  
Value, annual percentage change and percentage share**

ICT PRODUCTS	EXPORTS				IMPORTS			
	RM Billion		Annual percentage change (%)		RM Billion		Annual percentage change (%)	
	2021	2022	2021	2022	2021	2022	2021	2022
ICT goods	321.5	404.1	13.8	25.7	228.6	271.0	20.9	18.5
ICT services	28.7	35.2	12.3	22.8	28.1	33.6	24.0	19.5
Content & media	5.8	5.2	-12.4	-10.6	4.0	4.2	-1.9	7.1
<b>TOTAL</b>	<b>356.0</b>	<b>444.5</b>	<b>13.1</b>	<b>24.9</b>	<b>260.7</b>	<b>308.8</b>	<b>20.8</b>	<b>18.5</b>
<b>Share (%)</b>								
	32.5	32.2			26.5	24.7		

**Net Exports 2022  
RM135.7b**

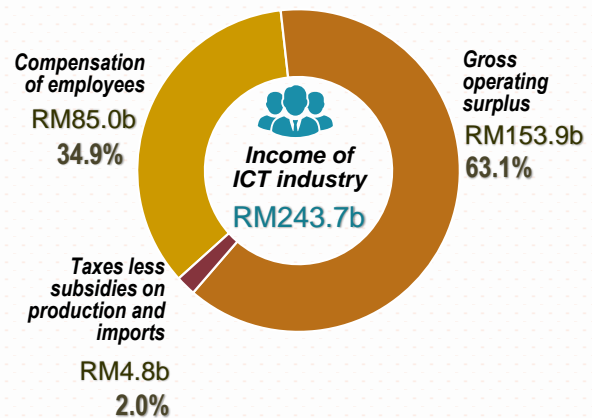
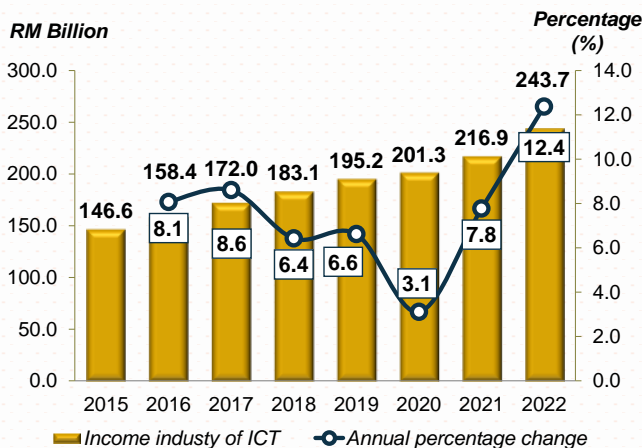
**INCOME COMPONENTS OF ICT INDUSTRY**

Total income of the ICT industry recorded RM243.7 billion with a double-digit increased by 12.4 per cent in 2022 (2021: 7.8%). The compensation of employees registered a value of RM85.0 billion with a contribution of 34.9 per cent to the total ICT income. Meanwhile, gross operating surplus contributed 63.1 per cent and taxes less subsidies on production and imports accounted for 2.0 per cent as in **Exhibit 7**.

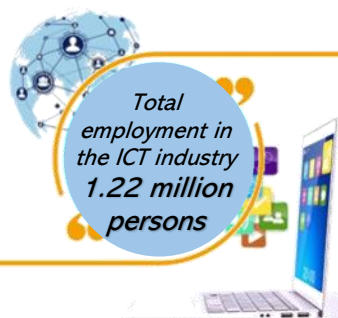


**Exhibit 7**

**Income components of ICT industry:  
Value, annual percentage change and percentage share**



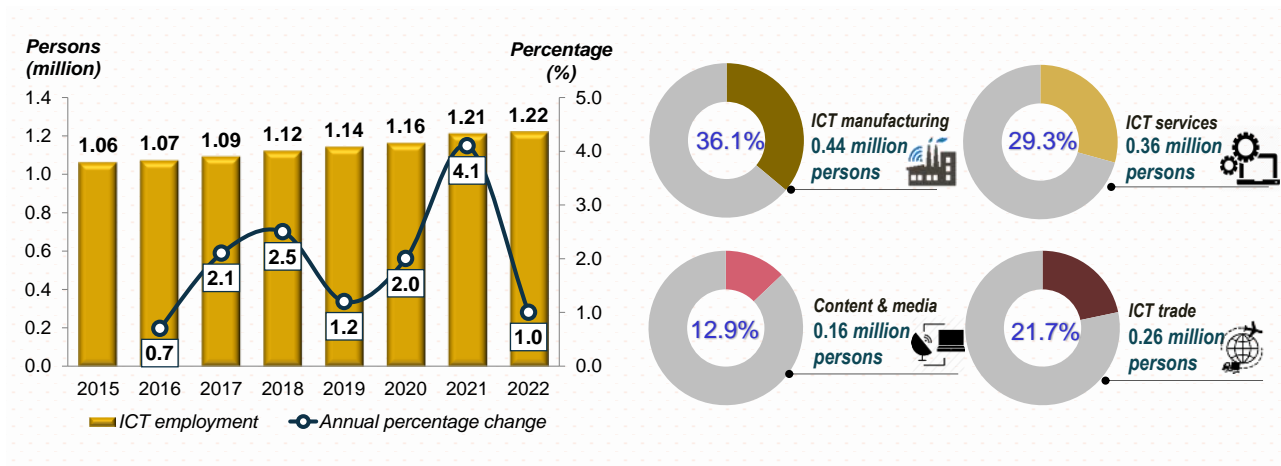
## EMPLOYMENT IN THE ICT INDUSTRY



Employment in the ICT industry has increased 1.0 per cent to 1.22 million persons in 2022, with a contribution of 7.9 per cent to total employment. The contribution was dominated by ICT manufacturing at 36.1 per cent, followed by ICT services (29.3%) and ICT trade (21.7%) as in **Exhibit 8**.

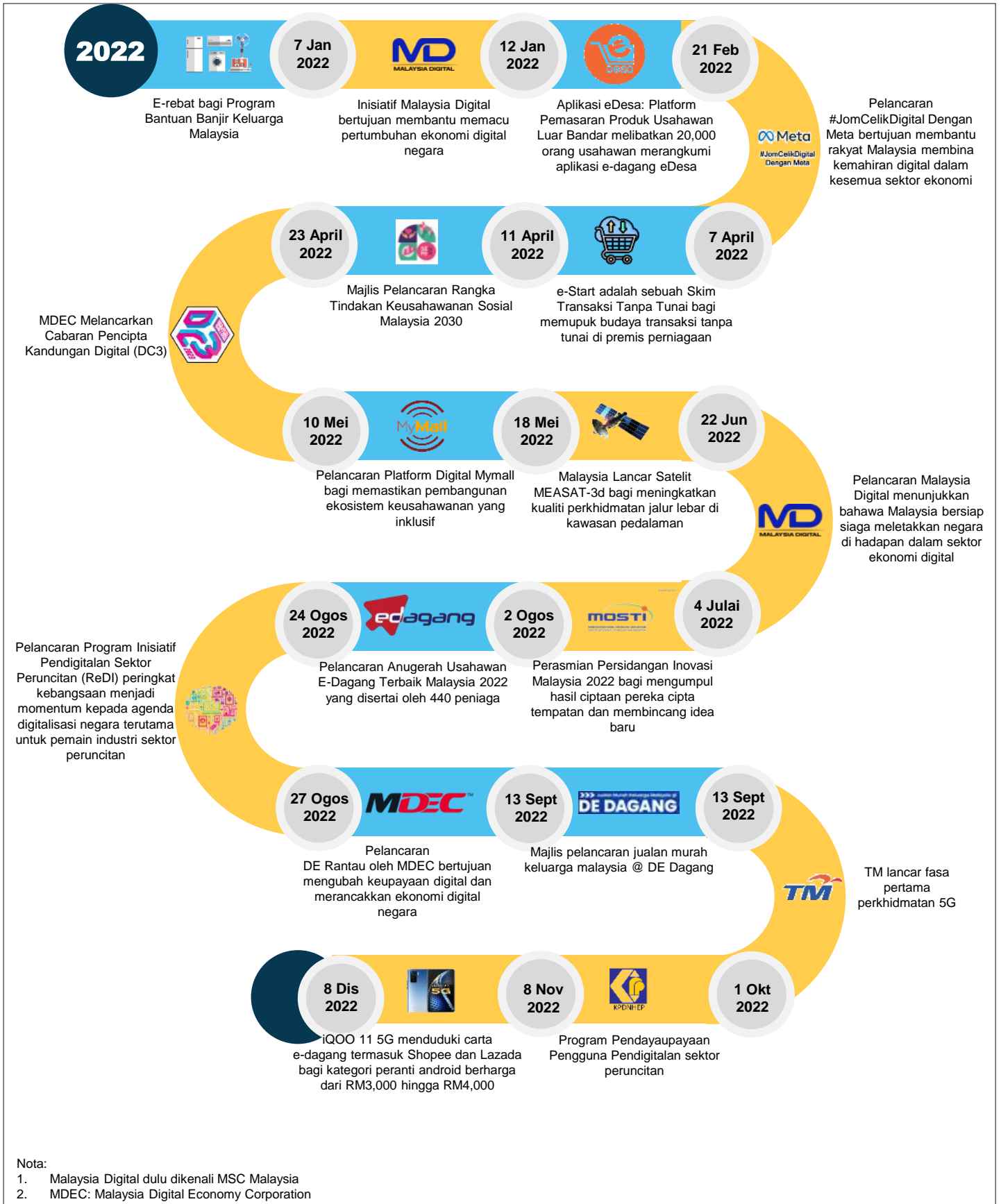
**Exhibit 8**

**Employment in the ICT industry:  
Value, annual percentage change and percentage share**

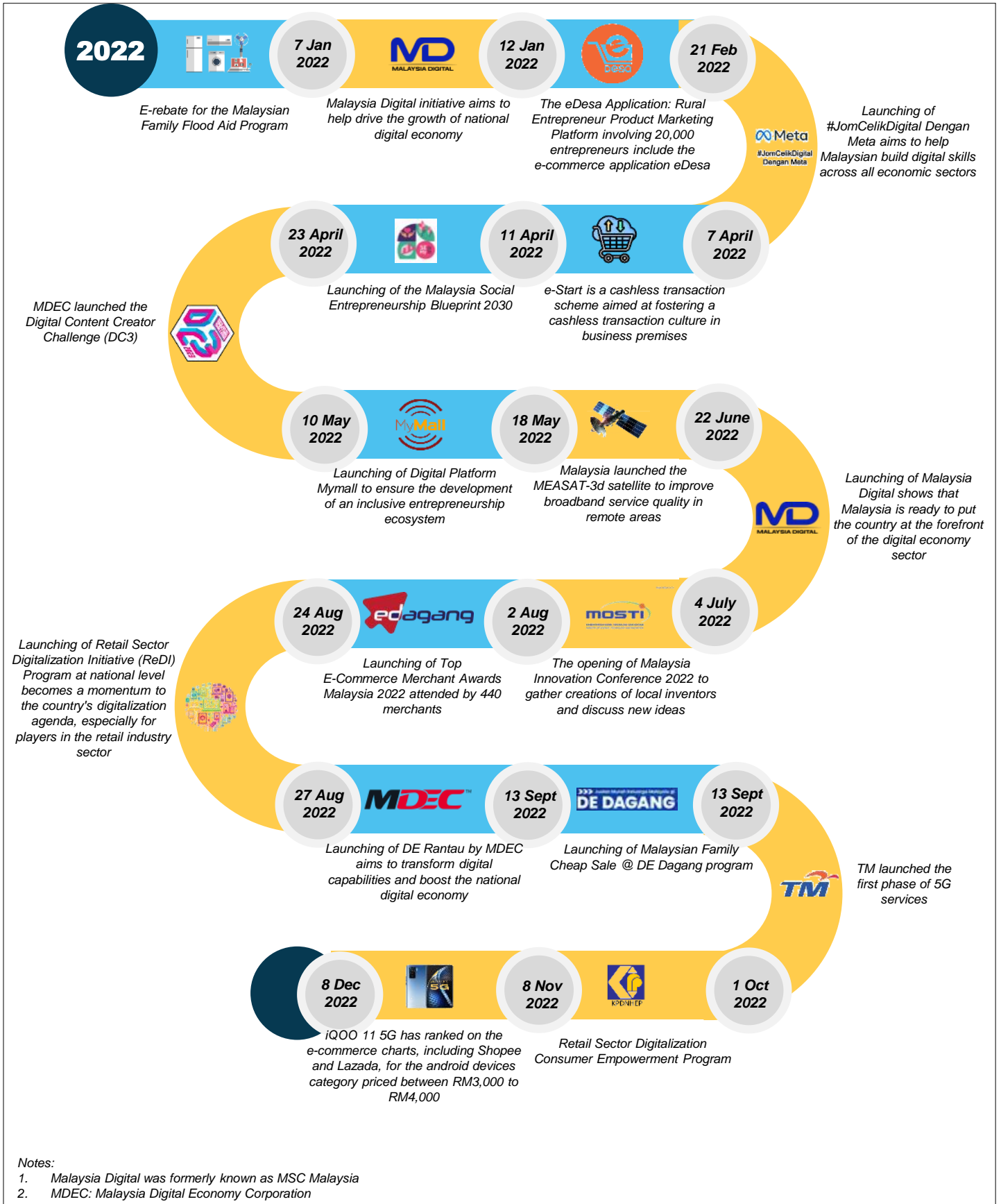




# SOROTAN TEKNOLOGI MAKLUMAT & KOMUNIKASI DAN E-DAGANG



# HIGHLIGHTS OF INFORMATION TECHNOLOGY & COMMUNICATION AND E-COMMERCE





**RENCANA**  
*ARTICLE*

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## TEKNOLOGI MAKLUMAT PEMANGKIN DALAM *AFFILIATE MARKETING* DI MALAYSIA

Syamaizar Razali, Farhana Ja'afar,  
Nur Athirah Mohd Aluwi, Siti Norhafiza Mohd Noor  
Bahagian Perangkaan Akaun Negara, Jabatan Perangkaan Malaysia

### 1. Pengenalan

Pelbagai usaha telah dilaksanakan untuk melonjakkan pendigitalan dan teknologi termaju. Kepantasan perkembangan teknologi ini telah memberi pelbagai implikasi ke atas gaya hidup masyarakat ke arah digital. Satu pelan inisiatif MyDigital telah dilancarkan pada 19 Februari 2021, menggariskan rancangan halatuju transformasi digital dari segi ekonomi dan teknologi melalui Rangka Tindakan (Blueprint) Ekonomi Digital Malaysia. Rangka tindakan ini adalah untuk memantapkan kelancaran dan kecekapan operasi dalam sektor perniagaan digital serta menjadikan Malaysia sebagai sebuah negara berdaya saing. *Affiliate marketing* adalah antara salah satu sektor perniagaan digital yang semakin meluas dimana melibatkan aktiviti mempromosikan produk atau perkhidmatan melalui platform atas talian. Ia merupakan sebuah strategi yang menawarkan pendapatan sampingan dengan risiko yang rendah terutamanya bagi perniagaan baru.

Internet merupakan antara satu bentuk inovasi utama dalam memajukan perniagaan digital melalui platform *affiliate marketing*. Kebanyakan organisasi mengambil langkah inovasi ini untuk memaksimumkan penggunaan internet dalam melaksanakan urusan perniagaan masing-masing. Antara manfaat internet yang diperolehi adalah jaringan komunikasi yang pantas & tanpa had, memudahkan kolaborasi perniagaan, pencarian maklumat lebih mudah & cekap, pemasaran lebih meluas serta meningkatkan produktiviti kerja & perniagaan. Justeru, artikel ini akan menerangkan berkenaan konsep serta cabaran penggunaan *affiliate marketing* sebagai salah satu komponen pemasaran digital.

### 2. Konsep *Affiliate Marketing*

*Affiliate marketing* adalah salah satu kaedah untuk menjana pendapatan dengan risiko yang rendah. Singh (2017) menyatakan bahawa penulis blog dan pemilik laman web boleh menjana pendapatan melalui *affiliate marketing*, yang merupakan satu kaedah mempromosikan produk, perkhidmatan dan jenama seterusnya berpotensi untuk menjana pendapatan. Selain itu, kaedah ini juga dapat mewujudkan peluang untuk menjana

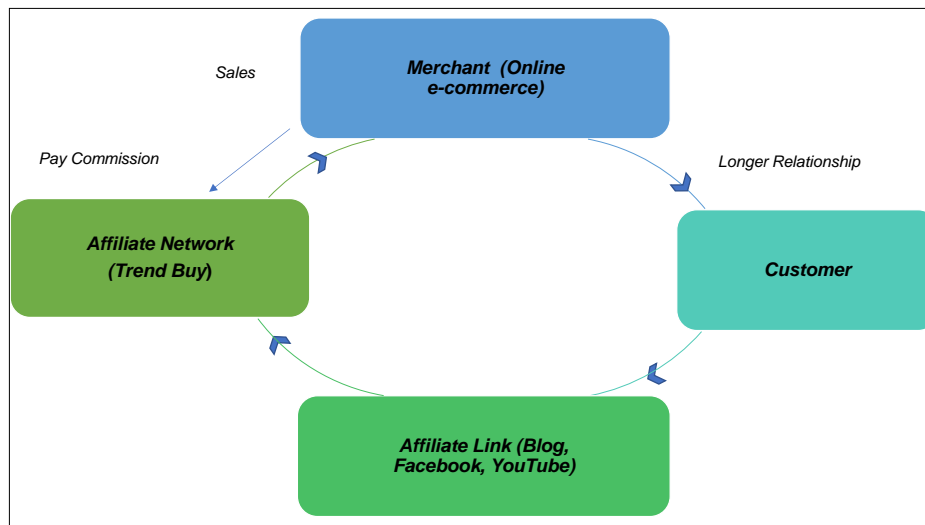
pendapatan tanpa perlu melabur dalam inventori dan infrastruktur. Menurut Dwivedi (2017), peningkatan dalam rangkaian *affiliate* dipengaruhi oleh peningkatan yang aktif dalam laman web pengiklanan dan pelbagai program yang berasaskan *affiliate*.

Di Malaysia, terdapat beberapa kajian yang membincangkan *affiliate marketing* dari pelbagai perspektif. Menurut Khin et al. (2016), faktor yang mempengaruhi strategi pemasaran dalam talian ialah kemudahan pemprosesan dalam talian & kerumitan pembelian dalam talian, kesan terhadap budaya siber dan kepuasan keperluan seperti umur, jantina, pengalaman dan budaya. Kajian juga mendapati komitmen produk dan kehomogenan produk mempunyai hubungan yang signifikan dengan kadar klik pautan yang tinggi. Patrick dan Hee (2021) pula mendefinisikan *affiliate marketing* adalah pasaran gabungan yang mempromosikan produk atau perkhidmatan melalui platform atas talian daripada pihak ketiga. Teknologi, pematuhan dan pengaruh sosial adalah penentu penting untuk menggunakan *affiliate marketing*.

*Affiliate marketing* ini juga dikenali sebagai sistem berasaskan komisen. Menurut kajian oleh Duffy (2010), *affiliate marketing* adalah salah satu program yang efektif untuk mendapatkan pulangan yang besar dalam waktu singkat dan bertahan lebih lama. Kenyataan ini disokong oleh V et al. (2018) yang menyatakan bahawa *affiliate marketing* adalah sistem yang berasaskan komisen ke atas setiap produk terjual. Menurut Prabhu & Satpathy (2015), TripAdvisor.com. memberikan komisen sehingga 50.0 peratus kepada *affiliate marketer* yang terlibat dalam pengiklanan tersebut.

Pemasaran mempengaruhi pula adalah salah satu cabang dalam *affiliate marketing* yang terkenal di kalangan kebanyakan organisasi. Merujuk kepada Van Houtte (2021), platform media sosial yang paling terkenal untuk pemasaran mempengaruhi ialah *Instagram*, *Facebook*, *YouTube* dan *TikTok*. *International Journal of Engineering and Technology (IJET)* (2018) menyatakan *affiliate marketing* merujuk kepada perkongsian maklumat produk atau perkhidmatan di platform media sosial, podcast atau laman web. Sebagai contoh, individu yang mempromosikan pautan *affiliate* akan mendapat komisen setiap kali pengguna membuat pembelian melalui pautan tersebut.

## Rajah 1: Rangka Kerja Pemasaran Gabungan Perspektif Pengguna untuk E-Perniagaan



Sumber: *International Journal of Engineering and Technology (IJET)*, 2018

**Rajah 1** menunjukkan rangka kerja *affiliate marketing* dari perspektif e-perniagaan. E-dagang merupakan satu platform yang bertanggungjawab untuk menjual produk dalam pemasaran digital seperti *affiliate marketing*. Platform ini akan menyediakan tawaran, diskaun dan baucar untuk menarik perhatian pembeli supaya tertarik dengan produk-produk sesebuah perniagaan. Pautan *affiliate* yang diletakkan di *Blog, Facebook* dan *YouTube* akan membantu dalam mengekalkan hubungan antara *affiliate marketer* dan pembeli. Komisen akan dibayar terus kepada *affiliate marketer* sekiranya pembeli membuat pesanan melalui pautan yang disertakan oleh *affiliate marketer*. Pautan ini merupakan *Uniform Resource Locator (URL)* yang mengandungi *Identity (ID) affiliate*. ID ini digunakan untuk mengenal pasti *affiliate marketer* yang mempromosikan dan menerima pesanan yang dibuat oleh pelanggan *affiliate marketer*.

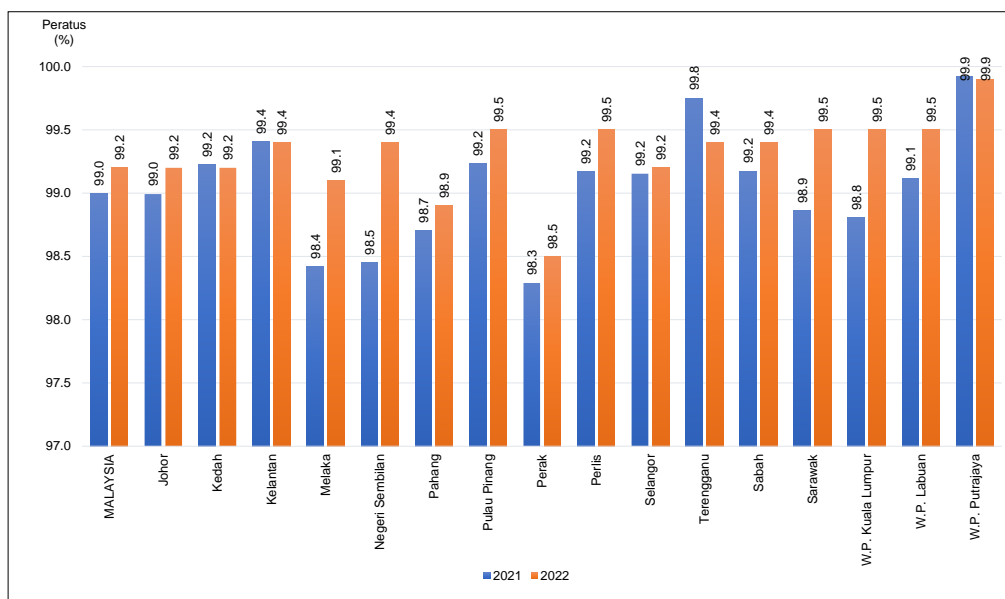
Merujuk Chua et al. (2018), faktor utama yang mendorong pengguna dalam pembelian secara atas talian adalah masa, lokasi dan proses pembelian yang lebih cepat serta tawaran harga yang kompetitif dan lebih murah berbanding tradisional. Persaingan dari kedai dalam talian antara sebab peniaga menawarkan kadar yang lebih rendah. Selain itu, perniagaan atas talian ini dapat mengurangkan kos operasi serta pemrosesan maklumat.

Pengumpulan maklumat serta perbandingan produk dari segi fungsi dan harga merupakan salah satu faktor yang mempengaruhi pengguna untuk membeli-belah dalam talian. Hal ini lebih memudahkan mereka dalam membuat perbandingan mengenai produk secara lebih berkesan. Antara contoh laman web perbandingan membeli-belah yang terkenal adalah *ActivShopper, BizRate* dan *MySimon*.

### 3. Pengguna Internet Menyertai Rangkaian Sosial

Merujuk kepada hasil laporan dari Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah (ICTHS) 2022, penggunaan internet oleh individu yang menyertai rangkaian sosial mencatatkan peningkatan sebanyak 99.2 peratus pada tahun 2022 (2021: 99.0%) seperti dipaparkan di **Carta 1**. Analisis mengikut negeri menunjukkan bahawa W.P. Putrajaya mencatatkan peratusan tertinggi (99.9%) individu dalam menyertai rangkaian sosial pada tahun 2022.

**Carta 1: Peratusan Individu yang Menggunakan Internet untuk Menyertai Rangkaian Sosial Mengikut Negeri, 2020-2021**



Sumber: ICTHS 2022, Jabatan Perangkaan Malaysia

Menurut *Digital 2022 Global Overview Report*, pengguna internet di Malaysia secara purata menggunakan tujuh rangkaian sosial (*WhatsApp, Facebook, Instagram, Telegram, TikTok, Facebook Messenger & Twitter*). Mereka meluangkan masa selama 2 jam 47 minit dengan menggunakan rangkaian sosial tersebut setiap hari.

*International Telecommunication Union (ITU)* menunjukkan bahawa penggunaan internet telah melonjak semasa pandemik sebanyak 782 juta pada tahun 2021 untuk mencapai 4.9 bilion orang dan menyumbang 63% daripada populasi berbanding 4.1 bilion orang pada 2019 (54.0% populasi dunia).

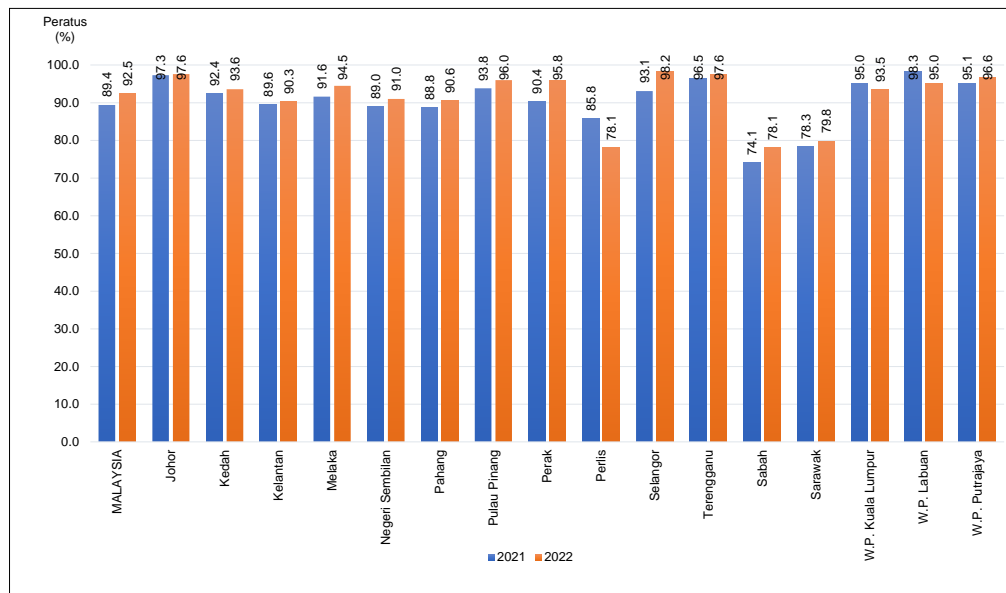
### 4. Pengguna Internet Mencari Maklumat Barangan & Perkhidmatan

Merujuk kepada ICTHS 2022, jumlah peratusan penduduk Malaysia yang menggunakan internet untuk mendapatkan maklumat barangan atau perkhidmatan pada 2021 merekodkan



sebanyak 89.4 peratus. Walaubagaimanapun, ia telah meningkat kepada 92.5 peratus pada 2022 seperti di **Carta 2**. Selangor mencatatkan peratusan tertinggi dengan 98.2 peratus, diikuti oleh Johor dan Terengganu masing-masing merekodkan 97.6 peratus.

**Carta 2: Peratusan Individu yang Menggunakan Internet untuk Mendapatkan Maklumat Barangan atau Perkhidmatan Mengikut Negeri, 2020-2021**



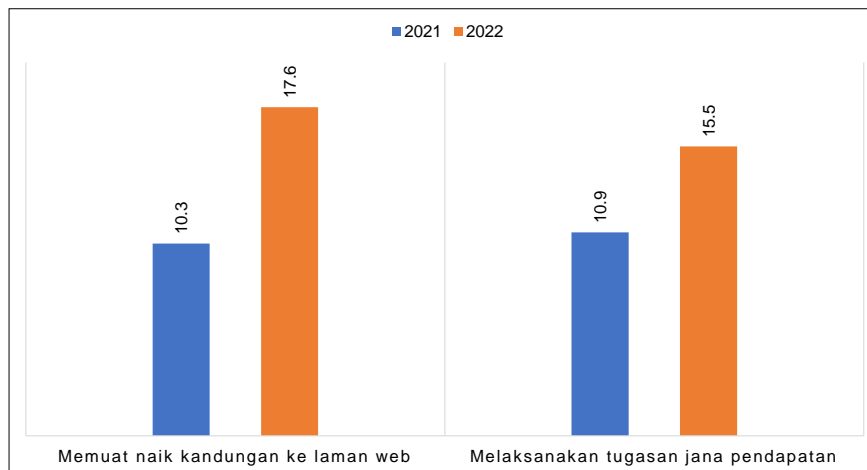
Sumber: ICTHS 2022, Jabatan Perangkaan Malaysia

Menurut Suruhanjaya Komunikasi dan Multimedia Malaysia (SKMM), pada tahun 2021 sebanyak 94.2 peratus pengguna internet di Malaysia menggunakan internet untuk mencari maklumat termasuk maklumat mengenai produk dan perkhidmatan.

### 5. Pengguna Internet Memuat Naik Kandungan ke Laman Web dan Menjana Pendapatan

Berdasarkan **Carta 3**, memuat naik kandungan ke laman web telah mencatatkan 17.6 peratus pada tahun 2022, meningkat 7.3 peratus pada tahun sebelumnya. Aktiviti melaksanakan tugas jana pendapatan masing-masing merekodkan 10.9 peratus dan 15.5 peratus pada tahun 2021 dan 2022.

### Carta 3: Peratusan Individu yang Menggunakan Internet untuk Memuat Naik Kandungan ke Laman Web dan Melaksanakan Tugas Jana Pendapatan, 2021-2022



Sumber: ICTHS 2022, Jabatan Perangkaan Malaysia

Penemuan ini adalah selari dengan kajian daripada SKMM (2020), di mana sebanyak 12.0 peratus rakyat Malaysia telah menggunakan teknologi Internet untuk menjana pendapatan serta meningkatkan potensi mereka dalam perniagaan.

Menurut Wee (2021), berdasarkan 50 platform yang paling popular seperti *Facebook*, *YouTube*, *WhatsApp* dan *Instagram*, bilangan *content creator* meningkat sebanyak 48.0 peratus pada 2021 berbanding tahun sebelumnya. Negara yang mempunyai pertumbuhan terpantas dalam bilangan *content creator* ialah Republik Czech (270.0%), Romania (215.0%) dan Brazil (171.0%).

Walaupun penyelidikan secara terperinci mengenai *affiliate marketing* di Malaysia masih di peringkat awal, namun terdapat sejumlah besar penyelidikan yang menghubungkan e-dagang dengan *affiliate marketing*. Sebagai contoh, kajian oleh Ghosal et al. (2020) menyatakan bahawa *affiliate marketing* telah muncul sebagai strategi e-dagang yang penting untuk meningkatkan jualan. Kenyataan ini juga disokong oleh Patrick dan Hee (2019) yang mendapati bahawa *affiliate marketing* merupakan salah satu strategi pemasaran dalam talian dan e-dagang yang paling pesat berkembang dalam meningkatkan hasil jualan.

## 6. Cabaran Dalam *Affiliate Marketing*

Terdapat beberapa cabaran yang dihadapi oleh pengguna yang membeli barangan dan perkhidmatan melalui *affiliate marketing*. Kajian oleh Chattopadhyay (2021) menjelaskan bahawa cabaran utama yang dihadapi oleh pengguna dalam *affiliate marketing* adalah masalah integriti berkaitan komunikasi pemasaran bersepadu. Keselamatan dan privasi juga merupakan cabaran yang dihadapi oleh pengguna yang mana mereka lebih suka berinteraksi secara bersemuka di kedai fizikal, menyentuh produk berkaitan dengan tangan mereka dan

bersosial dengan pelanggan lain. Ini menunjukkan kurangnya kepercayaan kepada penjual dan produk yang dijual melalui *affiliate marketing*.

Persaingan antara *affiliate marketer* merupakan cabaran yang paling ketara terutamanya pada yang baru menceburi bidang ini. Menurut Mondal (2021), cabaran paling besar adalah persaingan dengan beribu-ribu *affiliate marketer* yang mempunyai banyak pengalaman dalam bidang ini. *Affiliate marketer* harus bersaing dengan produk jualan yang sama kerana masing-masing tidak berkongsi maklumat produk jualan. Kesannya, produk yang dijual akan mudah untuk ditiru oleh pihak yang tidak sepatutnya.

Kandungan yang lebih kreatif juga memainkan peranan dalam menarik lebih ramai pelanggan. Antara ciri-ciri yang perlu diterapkan ialah kandungan yang membuatkan pelanggan percaya tentang produk, sasaran pelanggan yang bersesuaian dengan kandungan yang segar mengikut peredaran zaman. Menurut Mondal (2021), kandungan yang menarik perhatian memerlukan tahap kemahiran dan kepakaran yang tinggi sekaligus dapat menarik perhatian pembeli terhadap produk yang diiklankan. Beliau juga menyatakan bahawa pemilihan segmentasi pasaran yang tepat juga merupakan cabaran yang dihadapi oleh *affiliate marketer*. Pengetahuan yang luas tentang penggunaan alat elektronik seperti Kamera *Digital Single Lens Reflex (DSLR)*, komputer riba dan telefon bimbit memberi kesan kepada penghasilan kandungan yang lebih kreatif.

## 7. Rumusan

Senario perniagaan di Malaysia pada masa kini semakin bersedia ke arah mengaplikasi *affiliate marketing* dalam urusan pemasaran perniagaan secara digital. Pelbagai konsep dapat didefinisikan apabila dikaitkan dengan *affiliate marketing* mengikut keperluan individu atau sesebuah organisasi. Kaedah ini dapat digunakan sebagai inisiatif sama ada dalam menjana pendapatan, menawarkan peluang pekerjaan ataupun sebagai strategi pemasaran.

Terdapat tiga indikator utama seperti pengguna rangkaian media sosial, pengguna internet mencari maklumat barangan & perkhidmatan dan pengguna internet memuat naik kandungan ke laman web & menjana pendapatan yang telah dibincangkan dalam artikel ini. Walau bagaimanapun, Malaysia masih kekurangan kajian atau survei yang menjurus kepada keberkesanan *affiliate marketing* dalam perniagaan disebabkan oleh kekurangan input yang boleh digunakan untuk tujuan analisis. Justeru itu, kolaborasi antara penyelidik dan agensi awam atau swasta sebagai salah satu inisiatif amat diperlukan dalam mengkaji kaedah perniagaan melalui *affiliate marketing* dengan lebih mendalam.

Secara keseluruhannya, *affiliate marketing* dapat meneroka peluang perniagaan yang baru dengan lebih meluas dan sudah pasti dapat mengembangkan perniagaan sedia ada sehingga ke peringkat yang lebih makro berbanding dengan pasaran sebelumnya.

## **8. Penafian**

Rencana ini adalah pandangan penulis dan tidak mencerminkan pandangan Jabatan Perangkaan Malaysia (DOSM).

## Rujukan

- Chattopadhyay, P. (2021). *The role of Affiliate Marketing in Digital Space: A Conceptual Approach*. May 2020. <https://doi.org/10.46501/IJMTST060509>
- Chua, A., Harn, P., Khatibi, A., Ismail, H., Chua, A., Harn, P., Khatibi, A., & Ismail, H. (2018). *E-Commerce: A Study on Online Shopping in Malaysia*. 8923(January). <https://doi.org/10.1080/09718923.2006.11892554>
- Duffy, D. L. (2010). *Case study Affiliate marketing and its impact on e-commerce*. <https://doi.org/10.1108/07363760510595986>
- Dwivedi, R. (2017). *Analyzing Impact of Affiliate Marketing on Consumer Behavior with M-Commerce Perspective*. III(2), 55–69.
- Ghosal, D. I., Prasad, B., & Behera, M. (2020, June 30). *Impact of Affiliate Marketing on E-Buying Behavior of Millennial – A TAM Based Approach With Text Analysis*. Papers.ssrn.com. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3638929](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3638929)
- Jabatan Perangkaan Malaysia. (2021). *Laporan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah 2020*. Putrajaya: Jabatan Perangkaan Malaysia.
- Jabatan Perangkaan Malaysia. (2022). *Laporan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah 2021*. Putrajaya: Jabatan Perangkaan Malaysia.
- Khin, A., Chau, W., Chuan, C., & Tong, L. (2016). *Factors Affecting for Online Marketing Strategy of Business Development in Malaysia*. *British Journal of Economics, Management & Trade*, 11(2), 1–17. <https://doi.org/10.9734/bjemt/2016/17671>
- Mondal, G (2021). *A Study On Opportunities And Challenges Of Affiliate Marketing For The Youth Of India*. *An International Open Access, Peer Reviewed, Referred Journal* 9(8), 411-415.
- Patrick, Z., & Hee, O. C. (2019). *Factors Influencing the Intention to Use Affiliate Marketing: A Conceptual Analysis*. *International Journal of Academic Research in Business and Social Sciences*, 9(2). <https://doi.org/10.6007/ijarv9-i2/5608>
- Patrick, Z., & Hee, O. C. (2021). *Affiliate Marketing in SMEs: The Moderating Effect of Developmental Culture*. *Pertanika Journal of Social Sciences and Humanities*, 29(2). <https://doi.org/10.47836/pjssh.29.2.27>
- Prabhu, S., & Satpathy, T. (2015). *Affiliate Marketing's Future in India*. 8(February), 278–282. <https://doi.org/10.17485/ijst/2015/v8i>
- Singh, S. (2017). *Affiliate marketing and customer satisfaction. Driving Traffic and Customer Activity Through Affiliate Marketing*, 1–10. <https://doi.org/10.4018/978-1-5225-2656-8.ch001>
- Van Houtte, C. (2021). *TikTok as a marketing channel for influencer marketing: A comparison between Instagram, YouTube & TikTok*. LIT Verlag Münster.
- V, S., M, V. S., K, M., & Priya, A. R. S. (2018). *A study on impact of an affiliate marketing in e-business for consumers' perspective*. *International Journal of Engineering and Technology*, 10(2), 471–475. <https://doi.org/10.21817/ijet/2018/v10i2/181002050>
- Wee, E. (2021, October 21). *Indexing the creator economy*. Stripe.com. <https://stripe.com/blog/creator-economy>



## **INFORMATION TECHNOLOGY AS A DRIVER IN AFFILIATE MARKETING IN MALAYSIA**

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### **1. Introduction**

*Various efforts have been implemented to boost digitalization and advanced technology. The rapid development of this technology has had various implications for society's digital lifestyle. A MyDigital initiative plan was launched on 19 February 2021, which outlines the roadmap for digital transformation in terms of economy and technology through the Malaysian Digital Economy Blueprint. This action plan is to strengthen the efficiency and effectiveness of digital business operations, positioning Malaysia as a competitive country. Affiliate marketing is one of the growing digital business sectors, involving activities to promote a product or service through online platforms. This strategy offers side income with low risk, especially for a new business.*

*The internet is one of the main forms of innovation in advancing digital business through affiliate marketing platforms. Most organizations have taken innovative steps to maximize their use of the internet to conduct their business operations. The internet offers several benefits, including a fast and unlimited communication network, facilitating business collaborations, efficient information retrieval, broader marketing reach, and increased work and business productivity. Therefore, this article will explain the concept and challenges of using affiliate marketing as one of the components of digital marketing.*

### **2. Concept of Affiliate Marketing**

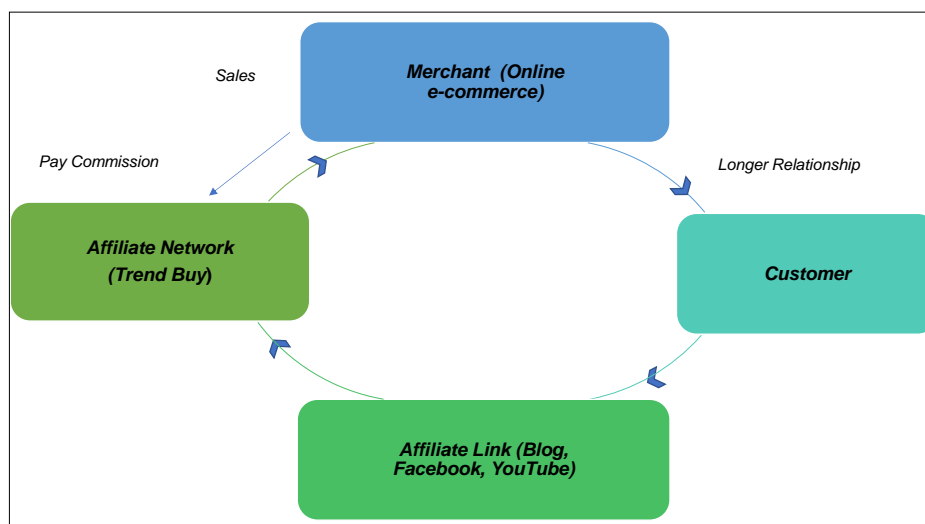
*Affiliate marketing is one method to generate income with low risk. Singh (2017) stated that bloggers and website owners can generate income through affiliate marketing, which is a method of promoting products, services, and brands with the potential to generate income. In addition, this method can also create opportunities to earn income without having to invest in inventory and infrastructure. According to Dwivedi (2017), the growth of the affiliate network is influenced by the active increase in advertising websites and various affiliate-based programmes.*

In Malaysia, there are several studies that discuss various perspectives on affiliate marketing. According to Khin et al. (2016), factors that influence online marketing strategies are the ease of online processing, the complexity of online purchases, the impact on cyberculture, and the satisfaction of needs such as age, gender, experience, and culture. The study also found that product commitment and product homogeneity have a significant relationship with high link click rates. Patrick and Hee (2021) define affiliate marketing as a combined market that promotes products or services through online third-party platforms. Technology, compliance, and social influence are important determinants for using affiliate marketing.

Affiliate marketing is also known as a commission-based system. According to a study by Duffy (2010), affiliate marketing is one of the most effective programs to get big returns in a short time and last longer. This statement is supported by V et al. (2018), who state that affiliate marketing is a commission-based system for each product sold. According to Prabhu & Satpathy (2015), affiliates involved in advertising on TripAdvisor.com can earn commissions of up to 50.0 percent.

Influencer marketing is a well-known branch of affiliate marketing. Referring to Van Houtte (2021), the most popular social media platforms for influencer marketing are Instagram, Facebook, YouTube and TikTok. The International Journal of Engineering and Technology (IJET) (2018) defines affiliate marketing as sharing product or service information on social media platforms, podcasts, or websites. For example, individuals who promote affiliate links will earn a commission for each time a user makes a purchase through those links.

**Figure 1: Framework of Affiliate Marketing of Consumers' Perspective for E-Business**



Sources: International Journal of Engineering and Technology (IJET), 2018

**Figure 1** shows the affiliate marketing framework from a through business perspective. E-commerce is a platform responsible for selling products in digital marketing, such as affiliate marketing. This platform provides offers, discounts, and vouchers to attract the attention of buyers towards a business's products. Affiliate links placed on blogs, Facebook and YouTube help maintain the relationship between affiliate marketers and buyers. The commission will be paid directly to the affiliate marketer if the buyer places an order through the link provided by the affiliate marketer. This link is a Uniform Resource Locator (URL) that contains the Affiliate's Identity (ID). This ID is used to identify affiliate marketers who promote and receive orders made by affiliate marketer customers.

According to Chua et al. (2018), the main factors that encourage users to purchase online are time, location, and a faster purchase process as well as competitive and cheaper price offers compared to traditional methods. Competition from online stores is among the reasons merchants offer lower rates. In addition, this online business can reduce operational costs and information processing.

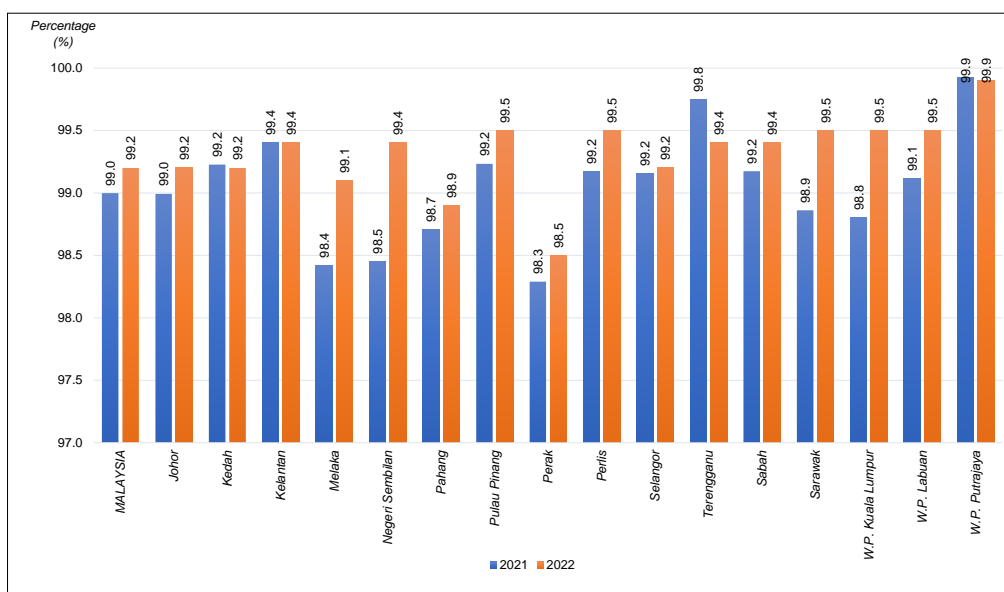
Collecting information and comparing products in terms of functionality and price are factors that influence consumers to shop online. This makes it easier for them to compare products more effectively. Some examples of popular online shopping comparison websites include ActivShopper, BizRate, and MySimon.

### **3. Internet Users Participating in Social Networks**

According to the results of the Individual and Household ICT Usage and Access Survey (ICTHS) 2022 report, the use of the internet by individuals participating in social networks recorded an increase of 99.2 percent in 2022 (2021: 99.0%), as shown in **Chart 1**. Analysis by state shows that W.P. Putrajaya recorded the highest percentage (99.9%) of individuals participating social networks in 2022.



**Chart 1: Percentage of Individuals Using the Internet to Participate in Social Networks by State, 2021-2022**



Source: ICTHS 2022, Department of Statistics Malaysia

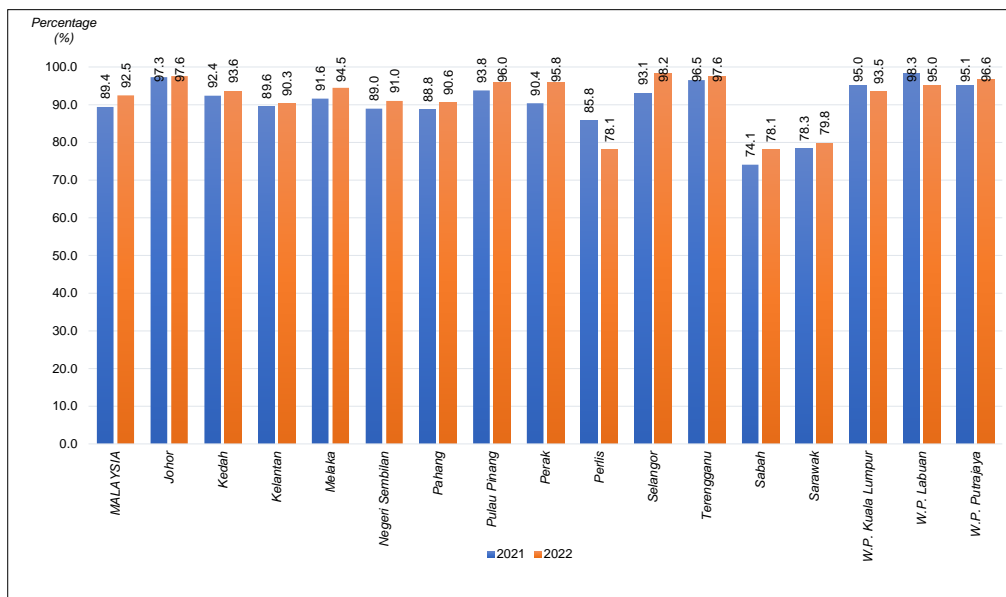
Referring to the Digital 2022 Global Overview Report, internet users in Malaysia, on average, use seven social networks (WhatsApp, Facebook, Instagram, Telegram, TikTok, Facebook Messenger, and Twitter). They spend 2 hours and 47 minutes using these social networks daily.

The International Telecommunication Union (ITU) indicates that internet usage surged during the pandemic by 782 million in 2021 to reach 4.9 billion people and contributed for 63 per cent of the population compared to 4.1 billion people in 2019 (54.0% of the world's population).

#### 4. Internet Users find Information about Goods & Services

Referring to the ICTHS 2022, the total percentage of Malaysian using the internet to find information on goods or services in 2021 recorded 89.4 per cent. However, it has increased to 92.5 per cent in 2022, as shown in **Chart 2**. Selangor recorded the highest percentage with 98.2 per cent, followed by Johor and Terengganu, each at 97.6 per cent.

**Chart 2: Percentage of Individuals Using the Internet finding Information about Goods or Services by Country, 2021-2022**



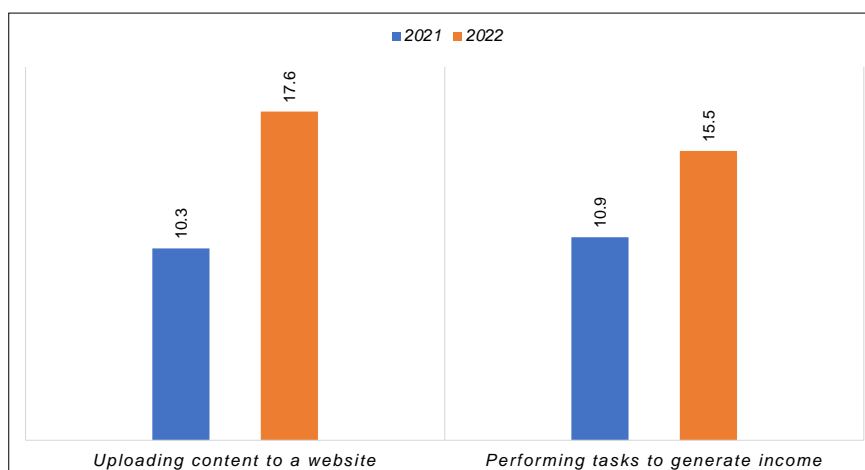
Source: ICTHS 2022, Department of Statistics Malaysia

According to the Malaysian Communications and Multimedia Commission (MCMC), in 2021, 94.2 per cent of Malaysia's internet users used the internet to search for information, including information about products and services.

## 5. Internet Users Upload Content to Websites & Generating Income

Based on **Chart 3**, uploading content to websites recorded 17.6 percent in 2022, an increase of 7.3 percent from the previous year. The activities of performing income-generating tasks recorded 10.9 percent and 15.5 percent in 2021 and 2022, respectively.

**Chart 3: Percentage of Individuals Using the Internet to Upload Content to Websites and Perform Tasks to Generate Income, 2021-2022**



Source: ICTHS 2022, Department of Statistics Malaysia

*This finding is in line with a study by the MCMC (2020), which 12.0 per cent of Malaysian used internet technology to generate income as well as to increase their potential in business.*

*According to Wee (2021), based on the 50 most popular platforms such as Facebook, YouTube, WhatsApp and Instagram, the number of content creators increased by 48.0 percent in 2021 compared to the previous year. The countries with the fastest growth in the number of content creators were the Czech Republic (270.0%), Romania (215.0%), and Brazil (171.0%).*

*Although in-depth research on affiliate marketing in Malaysia is still in its early stages, there is a significant body of research linking e-commerce with affiliate marketing. For example, a study by Ghosal et al. (2020) stated that affiliate marketing has emerged as an important e-commerce strategy for boosting sales. This statement is also supported by Patrick and Hee (2019), who found that affiliate marketing is one of the fastest-growing online marketing and e-commerce strategies for increasing sales.*

## **6. Challenges in Affiliate Marketing**

*There are several challenges faced by consumers when purchasing goods and services through affiliate marketing. Research by Chattopadhyay (2021) highlights that the main challenge faced by consumers in affiliate marketing is integrity issues related to integrated marketing communications. Security and privacy are also challenges faced by consumers who prefer to interact face-to-face with physical stores, touch the products with their hands, and socialize with other customers. This indicates a lack of trust with the sellers and products sold through affiliate marketing.*

*Competition among affiliate marketers is the most significant challenge, especially for those who are new to this field. According to Mondal (2021), the biggest challenge is competition with thousands of experienced affiliate marketers in the industry. Affiliate marketers must compete with similar products as they do not share information about the products they sell. As a result, the products being sold can easily be imitated by unauthorized parties.*

*Creative content also plays a role in attracting many customers. Some features that need to be applied are content that makes customers believe in the product, targeting the right customers with appropriate content, and keeping the content fresh according to current trends. According to Mondal (2021), attention-grabbing content requires a high level of skill and expertise, as well as being able to attract buyers' attention towards the advertised product. He also states that selecting the right market segmentation is also a challenge faced by affiliate marketers. Extensive knowledge about the use of electronic devices such as Digital Single Lens Reflex (DSLR) cameras, laptops, and mobile phones has an impact on the creation of more creative content.*

## **7. Conclusion**

*The business scenario in Malaysia is currently ready for the application of affiliate marketing in digital business operations. Various concepts can be defined when associated with affiliate marketing, depending on individual or organizational needs. This method can be used as an initiative either to generate income, offer job opportunities, or as a marketing strategy.*

*There are three main indicators such as social media network users, internet users' findings for information about goods & services and internet users uploading content to websites & generating income were discussed in this article. However, Malaysia still lacks of studies or surveys that focus on the effectiveness of affiliate marketing in business due to a shortage of input that can be used for analysis purposes. Therefore, collaboration between researchers and public or private agencies as one of the initiatives is highly necessary in studying the business method through affiliate marketing in more depth.*

*Overall, affiliate marketing can explore new business opportunities on a broader scale and undoubtedly expand existing businesses to a more macro level compared to previous markets.*

## **8. Disclaimer**

*This article is an author's view and does not reflect the view of the Department of Statistics, Malaysia (DOSM).*

## References

- Chattopadhyay, P. (2021). *The role of Affiliate Marketing in Digital Space: A Conceptual Approach*. May 2020. <https://doi.org/10.46501/IJMTST060509>
- Chua, A., Harn, P., Khatibi, A., Ismail, H., Chua, A., Harn, P., Khatibi, A., & Ismail, H. (2018). *E-Commerce: A Study on Online Shopping in Malaysia*. 8923(January). <https://doi.org/10.1080/09718923.2006.11892554>
- Department of Statistics Malaysia. (2021). *Laporan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah 2020*. Putrajaya: Department of Statistics Malaysia.
- Department of Statistics Malaysia. (2022). *Laporan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah 2021*. Putrajaya: Department of Statistics Malaysia.
- Duffy, D. L. (2010). *Case study Affiliate marketing and its impact on e-commerce*. <https://doi.org/10.1108/07363760510595986>
- Dwivedi, R. (2017). *Analyzing Impact of Affiliate Marketing on Consumer Behavior with M-Commerce Perspective*. III(2), 55–69.
- Ghosal, D. I., Prasad, B., & Behera, M. (2020, June 30). *Impact of Affiliate Marketing on E-Buying Behavior of Millennial – A TAM Based Approach With Text Analysis*. *Papers.ssrn.com*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3638929](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3638929)
- Khin, A., Chau, W., Chuan, C., & Tong, L. (2016). *Factors Affecting for Online Marketing Strategy of Business Development in Malaysia*. *British Journal of Economics, Management & Trade*, 11(2), 1–17. <https://doi.org/10.9734/bjemt/2016/17671>
- Mondal, G. (2021). *A Study On Opportunities And Challenges Of Affiliate Marketing For The Youth Of India*. *An International Open Access, Peer Reviewed, Referred Journal* 9(8), 411-415.
- Patrick, Z., & Hee, O. C. (2019). *Factors Influencing the Intention to Use Affiliate Marketing: A Conceptual Analysis*. *International Journal of Academic Research in Business and Social Sciences*, 9(2). <https://doi.org/10.6007/ijarbss/v9-i2/5608>
- Patrick, Z., & Hee, O. C. (2021). *Affiliate Marketing in SMEs: The Moderating Effect of Developmental Culture*. *Pertanika Journal of Social Sciences and Humanities*, 29(2). <https://doi.org/10.47836/pjssh.29.2.27>
- Prabhu, S., & Satpathy, T. (2015). *Affiliate Marketing's Future in India*. 8(February), 278–282. <https://doi.org/10.17485/ijst/2015/v8i>
- Singh, S. (2017). *Affiliate marketing and customer satisfaction. Driving Traffic and Customer Activity Through Affiliate Marketing*, 1–10. <https://doi.org/10.4018/978-1-5225-2656-8.ch001>
- Van Houtte, C. (2021). *TikTok as a marketing channel for influencer marketing: A comparison between Instagram, YouTube & TikTok*. LIT Verlag Münster.
- V, S., M, V. S., K, M., & Priya, A. R. S. (2018). *A study on impact of an affiliate marketing in e-business for consumers' perspective*. *International Journal of Engineering and Technology*, 10(2), 471–475. <https://doi.org/10.21817/ijet/2018/v10i2/181002050>
- Wee, E. (2021, October 21). *Indexing the creator economy*. *Stripe.com*. <https://stripe.com/blog/creator-economy>

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**JADUAL STATISTIK**  
***STATISTICAL TABLES***

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**Jadual**  **Industri TMK dan industri lain yang mengeluarkan produk TMK**  
**Table** *ICT industry and other industries that produce ICT products*

Industri/ Industry	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>RM Juta/ RM Million</b>								
<b>Industri TMK/ ICT industry</b>	<b>141,990</b>	<b>153,507</b>	<b>166,607</b>	<b>177,197</b>	<b>191,093</b>	<b>195,079</b>	<b>211,384</b>	<b>239,349</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	49,260	53,231	57,263	58,645	62,417	65,767	74,124	92,473
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	22,430	24,361	26,430	28,189	30,085	28,489	30,521	34,187
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	59,535	64,392	70,574	77,427	84,830	88,682	94,792	99,520
<b>4. Kandungan dan media</b> <i>Content and media</i>	10,765	11,523	12,341	12,936	13,760	12,142	11,947	13,168
<b>Industri lain/ Other industries</b>	<b>14,488</b>	<b>14,510</b>	<b>20,421</b>	<b>21,807</b>	<b>21,024</b>	<b>20,681</b>	<b>18,834</b>	<b>24,574</b>
<b>Jumlah industri yang mengeluarkan produk TMK</b> <i>Total industries that produce ICT products</i>	<b>156,478</b>	<b>168,018</b>	<b>187,027</b>	<b>199,004</b>	<b>212,117</b>	<b>215,760</b>	<b>230,218</b>	<b>263,923</b>
<b>Keluaran Dalam Negeri Kasar</b> <i>Gross Domestic Product</i>	<b>1,176,941</b>	<b>1,249,698</b>	<b>1,372,310</b>	<b>1,447,760</b>	<b>1,512,738</b>	<b>1,418,491</b>	<b>1,548,898</b>	<b>1,791,358</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>Industri TMK/ ICT industry</b>		<b>8.1</b>	<b>8.5</b>	<b>6.4</b>	<b>7.8</b>	<b>2.1</b>	<b>8.4</b>	<b>13.2</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>		8.1	7.6	2.4	6.4	5.4	12.7	24.8
<b>2. Perdagangan TMK</b> <i>ICT trade</i>		8.6	8.5	6.7	6.7	-5.3	7.1	12.0
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>		8.2	9.6	9.7	9.6	4.5	6.9	5.0
<b>4. Kandungan dan media</b> <i>Content and media</i>		7.0	7.1	4.8	6.4	-11.8	-1.6	10.2
<b>Industri lain/ Other industries</b>		<b>0.2</b>	<b>40.7</b>	<b>6.8</b>	<b>-3.6</b>	<b>-1.6</b>	<b>-8.9</b>	<b>30.5</b>
<b>Jumlah industri yang mengeluarkan produk TMK</b> <i>Total industries that produce ICT products</i>		<b>7.4</b>	<b>11.3</b>	<b>6.4</b>	<b>6.6</b>	<b>1.7</b>	<b>6.7</b>	<b>14.6</b>
<b>Keluaran Dalam Negeri Kasar</b> <i>Gross Domestic Product</i>		<b>6.2</b>	<b>9.8</b>	<b>5.5</b>	<b>4.5</b>	<b>-6.2</b>	<b>9.2</b>	<b>15.7</b>
<b>Peratus sumbangan jumlah industri yang mengeluarkan produk TMK/ Percentage share total industries that produce ICT products</b>								
<b>Industri TMK/ ICT industry</b>	<b>90.7</b>	<b>91.4</b>	<b>89.1</b>	<b>89.0</b>	<b>90.1</b>	<b>90.4</b>	<b>91.8</b>	<b>90.7</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	31.5	31.7	30.6	29.4	29.4	30.5	32.2	35.0
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	14.3	14.5	14.1	14.2	14.2	13.2	13.2	13.0
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	38.0	38.3	37.8	38.9	40.0	41.1	41.2	37.7
<b>4. Kandungan dan media</b> <i>Content and media</i>	6.9	6.9	6.6	6.5	6.5	5.6	5.2	5.0
<b>Industri lain/ Other industries</b>	<b>9.3</b>	<b>8.6</b>	<b>10.9</b>	<b>11.0</b>	<b>9.9</b>	<b>9.6</b>	<b>8.2</b>	<b>9.3</b>
<b>Jumlah industri yang mengeluarkan produk TMK</b> <i>Total industries that produce ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan kepada KDNK/ Percentage share to GDP</b>								
<b>Industri TMK/ ICT industry</b>	12.1	12.3	12.1	12.2	12.6	13.8	13.6	13.4
<b>Industri lain/ Other industries</b>	1.2	1.2	1.5	1.5	1.4	1.5	1.2	1.4
<b>Jumlah industri yang mengeluarkan produk TMK</b> <i>Total industries that produce ICT products</i>	<b>13.3</b>	<b>13.4</b>	<b>13.6</b>	<b>13.7</b>	<b>14.0</b>	<b>15.2</b>	<b>14.9</b>	<b>14.7</b>
<b>Keluaran Dalam Negeri Kasar</b> <i>Gross Domestic Product</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 2A: Penawaran dan penggunaan produk TMK - RM Juta**  
**Table 2A: Supply and use of ICT products - RM Million**

2015					2016			
RM Juta/ RM Million								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	278,948	140,156	25,066	<b>444,169</b>	300,874	157,353	27,800	<b>486,028</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	139,893	19,651	4,720	<b>164,264</b>	147,360	20,059	4,722	<b>172,141</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	1,733	3,221	1,413	<b>6,366</b>	1,736	3,414	1,453	<b>6,604</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>420,574</b>	<b>163,027</b>	<b>31,199</b>	<b>614,800</b>	<b>449,971</b>	<b>180,826</b>	<b>33,975</b>	<b>664,772</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantara produk TMK</b> <i>Intermediate use on ICT products</i>	200,382	81,779	15,351	<b>297,513</b>	223,575	92,944	17,468	<b>333,987</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	16,537	45,805	8,742	<b>71,084</b>	18,023	50,125	9,332	<b>77,480</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	17,689	15,438	381	<b>33,508</b>	19,460	16,813	386	<b>36,659</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	185,965	20,005	6,725	<b>212,695</b>	188,913	20,944	6,789	<b>216,647</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>420,574</b>	<b>163,027</b>	<b>31,199</b>	<b>614,800</b>	<b>449,971</b>	<b>180,826</b>	<b>33,975</b>	<b>664,772</b>

**Jadual 2A: Penawaran dan penggunaan produk TMK - RM Juta (Samb.)**  
**Table 2A: Supply and use of ICT products - RM Million (Cont.)**

2017					2018			
RM Juta/ RM Million								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	319,666	173,963	31,887	<b>525,516</b>	349,056	192,503	36,330	<b>577,888</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	184,867	19,452	4,688	<b>209,008</b>	190,852	19,511	4,601	<b>214,964</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	1,821	2,872	1,327	<b>6,020</b>	1,572	1,508	761	<b>3,841</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>506,354</b>	<b>196,287</b>	<b>37,902</b>	<b>740,544</b>	<b>541,480</b>	<b>213,521</b>	<b>41,692</b>	<b>796,693</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantara produk TMK</b> <i>Intermediate use on ICT products</i>	230,812	100,887	20,528	<b>352,227</b>	231,360	110,274	28,000	<b>369,634</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	18,369	56,004	10,016	<b>84,389</b>	19,544	61,468	6,334	<b>87,346</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	20,223	17,967	505	<b>38,694</b>	16,660	19,655	493	<b>36,808</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	236,950	21,429	6,854	<b>265,234</b>	273,915	22,125	6,866	<b>302,905</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>506,354</b>	<b>196,287</b>	<b>37,902</b>	<b>740,544</b>	<b>541,480</b>	<b>213,521</b>	<b>41,692</b>	<b>796,693</b>

**Jadual 2A: Penawaran dan penggunaan produk TMK - RM Juta (Samb.)**  
 Table **2A:** *Supply and use of ICT products - RM Million (Cont.)*

2019					2020			
RM Juta/ RM Million								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	359,244	207,360	39,543	<b>606,147</b>	376,521	214,721	36,303	<b>627,546</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	179,989	20,000	4,619	<b>204,608</b>	189,077	22,671	4,041	<b>215,790</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	2,220	2,925	1,006	<b>6,152</b>	1,285	2,651	560	<b>4,495</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>541,453</b>	<b>230,286</b>	<b>45,169</b>	<b>816,907</b>	<b>566,883</b>	<b>240,043</b>	<b>40,904</b>	<b>847,831</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Penggunaan perantara produk TMK</b> <i>Intermediate use on ICT products</i>	242,564	120,075	30,543	<b>393,182</b>	244,337	124,321	27,848	<b>396,505</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	22,278	66,804	7,255	<b>96,336</b>	23,519	69,901	5,905	<b>99,325</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	10,933	19,900	422	<b>31,255</b>	16,453	20,298	479	<b>37,230</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	265,677	23,507	6,949	<b>296,133</b>	282,575	25,524	6,672	<b>314,771</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>541,453</b>	<b>230,286</b>	<b>45,169</b>	<b>816,907</b>	<b>566,883</b>	<b>240,043</b>	<b>40,904</b>	<b>847,831</b>

**Jadual 2A: Penawaran dan penggunaan produk TMK - RM Juta (Samb.)**  
 Table **2A:** *Supply and use of ICT products - RM Million (Cont.)*

2021 <sup>e</sup>					2022 <sup>p</sup>			
RM Juta/ RM Million								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	409,229	229,556	35,302	<b>674,087</b>	510,714	246,454	40,479	<b>797,647</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	228,610	28,106	3,965	<b>260,682</b>	270,950	33,581	4,248	<b>308,779</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	1,529	3,409	549	<b>5,486</b>	1,832	3,946	456	<b>6,234</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>639,368</b>	<b>261,071</b>	<b>39,816</b>	<b>940,255</b>	<b>783,496</b>	<b>283,981</b>	<b>45,183</b>	<b>1,112,660</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Penggunaan perantara produk TMK</b> <i>Intermediate use on ICT products</i>	274,081	135,636	28,584	<b>438,301</b>	326,971	145,536	32,118	<b>504,625</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	25,764	74,856	4,882	<b>105,502</b>	34,295	78,998	7,264	<b>120,557</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	18,033	21,922	504	<b>40,459</b>	18,160	24,258	576	<b>42,994</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	321,489	28,656	5,846	<b>355,992</b>	404,069	35,189	5,225	<b>444,484</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>639,368</b>	<b>261,071</b>	<b>39,816</b>	<b>940,255</b>	<b>783,496</b>	<b>283,981</b>	<b>45,183</b>	<b>1,112,660</b>

**Jadual 2B: Penawaran dan penggunaan produk TMK - Perubahan peratusan tahunan**  
 Table **2B:** *Supply and use of ICT products - Annual percentage change*

2016					2017			
Perubahan peratusan tahunan/ Annual percentage change								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	7.9	12.3	10.9	<b>9.4</b>	6.2	10.6	14.7	<b>8.1</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	5.3	2.1	0.0	<b>4.8</b>	25.5	-3.0	-0.7	<b>21.4</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	0.2	6.0	2.8	<b>3.7</b>	4.9	-15.9	-8.7	<b>-8.8</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>7.0</b>	<b>10.9</b>	<b>8.9</b>	<b>8.1</b>	<b>12.5</b>	<b>8.6</b>	<b>11.6</b>	<b>11.4</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	11.6	13.7	13.8	<b>12.3</b>	3.2	8.5	17.5	<b>5.5</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	9.0	9.4	6.8	<b>9.0</b>	1.9	11.7	7.3	<b>8.9</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	10.0	8.9	1.3	<b>9.4</b>	3.9	6.9	30.8	<b>5.6</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	1.6	4.7	1.0	<b>1.9</b>	25.4	2.3	1.0	<b>22.4</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>7.0</b>	<b>10.9</b>	<b>8.9</b>	<b>8.1</b>	<b>12.5</b>	<b>8.6</b>	<b>11.6</b>	<b>11.4</b>

**Jadual 2B: Penawaran dan penggunaan produk TMK - Perubahan peratusan tahunan (Samb.)**  
 Table 2B: Supply and use of ICT products - Annual percentage change (Cont.)

2018					2019			
Perubahan peratusan tahunan/ Annual percentage change								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	9.2	10.7	13.9	<b>10.0</b>	2.9	7.7	8.8	<b>4.9</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	3.2	0.3	-1.9	<b>2.9</b>	-5.7	2.5	0.4	<b>-4.8</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	-13.7	-47.5	-42.6	<b>-36.2</b>	41.2	93.9	32.2	<b>60.1</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>6.9</b>	<b>8.8</b>	<b>10.0</b>	<b>7.6</b>	<b>0.0</b>	<b>7.9</b>	<b>8.3</b>	<b>2.5</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	0.2	9.3	36.4	<b>4.9</b>	4.8	8.9	9.1	<b>6.4</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	6.4	9.8	-36.8	<b>3.5</b>	14.0	8.7	14.5	<b>10.3</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	-17.6	9.4	-2.3	<b>-4.9</b>	-34.4	1.2	-14.4	<b>-15.1</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	15.6	3.2	0.2	<b>14.2</b>	-3.0	6.2	1.2	<b>-2.2</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>6.9</b>	<b>8.8</b>	<b>10.0</b>	<b>7.6</b>	<b>0.0</b>	<b>7.9</b>	<b>8.3</b>	<b>2.5</b>

**Jadual 2B: Penawaran dan penggunaan produk TMK - Perubahan peratusan tahunan (Samb.)**  
 Table 2B: Supply and use of ICT products - Annual percentage change (Cont.)

2020					2021 <sup>e</sup>			
Perubahan peratusan tahunan/ Annual percentage change								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	4.8	3.5	-8.2	<b>3.5</b>	8.7	6.9	-2.8	<b>7.4</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	5.0	13.4	-12.5	<b>5.5</b>	20.9	24.0	-1.9	<b>20.8</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	-42.1	-9.4	-44.4	<b>-26.9</b>	19.0	28.6	-2.0	<b>22.0</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>4.7</b>	<b>4.2</b>	<b>-9.4</b>	<b>3.8</b>	<b>12.8</b>	<b>8.8</b>	<b>-2.7</b>	<b>10.9</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	0.7	3.5	-8.8	<b>0.8</b>	12.2	9.1	2.6	<b>10.5</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	5.6	4.6	-18.6	<b>3.1</b>	9.5	7.1	-17.3	<b>6.2</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	50.5	2.0	13.6	<b>19.1</b>	9.6	8.0	5.1	<b>8.7</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	6.4	8.6	-4.0	<b>6.3</b>	13.8	12.3	-12.4	<b>13.1</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>4.7</b>	<b>4.2</b>	<b>-9.4</b>	<b>3.8</b>	<b>12.8</b>	<b>8.8</b>	<b>-2.7</b>	<b>10.9</b>



**Jadual 2B: Penawaran dan penggunaan produk TMK - Perubahan peratusan tahunan (Samb.)**  
 Table **2B:** *Supply and use of ICT products - Annual percentage change (Cont.)*

<b>2022<sup>P</sup></b>				
<b>Perubahan peratusan tahunan/ Annual percentage change</b>				
<b>Penawaran/ Supply</b>				
<b>Komponen</b> <i>Component</i>	<b>Barangan TMK</b>	<b>Perkhidmatan TMK</b>	<b>Produk kandungan dan media</b>	<b>Jumlah</b>
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	24.8	7.4	14.7	<b>18.3</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	18.5	19.5	7.1	<b>18.5</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	19.9	15.8	-16.9	<b>13.6</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>22.5</b>	<b>8.8</b>	<b>13.5</b>	<b>18.3</b>
<b>Penggunaan/ Use</b>				
<b>Komponen</b> <i>Component</i>	<b>Barangan TMK</b>	<b>Perkhidmatan TMK</b>	<b>Produk kandungan dan media</b>	<b>Jumlah</b>
	<i>ICT goods</i>	<i>ICT services</i>	<i>Content and media products</i>	<i>Total</i>
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	19.3	7.3	12.4	<b>15.1</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	33.1	5.5	48.8	<b>14.3</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	0.7	10.7	14.3	<b>6.3</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	25.7	22.8	-10.6	<b>24.9</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>22.5</b>	<b>8.8</b>	<b>13.5</b>	<b>18.3</b>

**Jadual 2C: Penawaran dan penggunaan produk TMK - Peratus sumbangan**  
 Table **2C: Supply and use of ICT products - Percentage share**

2015					2016			
Peratus sumbangan/ Percentage share								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	66.3	86.0	80.4	<b>72.3</b>	66.9	87.0	81.8	<b>73.1</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	33.3	12.0	15.1	<b>26.7</b>	32.7	11.1	13.9	<b>25.9</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	0.4	2.0	4.5	<b>1.0</b>	0.4	1.9	4.3	<b>1.0</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	47.7	50.1	49.2	<b>48.4</b>	49.7	51.4	51.4	<b>50.2</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	3.9	28.1	28.0	<b>11.6</b>	4.0	27.7	27.5	<b>11.7</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	4.2	9.5	1.2	<b>5.4</b>	4.3	9.3	1.1	<b>5.5</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	44.2	12.3	21.6	<b>34.6</b>	42.0	11.6	20.0	<b>32.6</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 2C: Penawaran dan penggunaan produk TMK - Peratus sumbangan (Samb.)**  
 Table 2C: Supply and use of ICT products - Percentage share (Cont.)

2017					2018			
Peratus sumbangan/ Percentage share								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	63.1	88.6	84.1	<b>71.0</b>	64.5	90.2	87.2	<b>72.5</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	36.5	9.9	12.4	<b>28.2</b>	35.2	9.1	11.0	<b>27.0</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	0.4	1.5	3.5	<b>0.8</b>	0.3	0.7	1.8	<b>0.5</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	45.6	51.4	54.2	<b>47.6</b>	42.7	51.6	67.1	<b>46.4</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	3.6	28.5	26.4	<b>11.4</b>	3.6	28.8	15.2	<b>11.0</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	4.0	9.2	1.3	<b>5.2</b>	3.1	9.2	1.2	<b>4.6</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	46.8	10.9	18.1	<b>35.8</b>	50.6	10.4	16.5	<b>38.0</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 2C: Penawaran dan penggunaan produk TMK - Peratus sumbangan (Samb.)**  
 Table 2C: Supply and use of ICT products - Percentage share (Cont.)

2019					2020			
Peratus sumbangan/ Percentage share								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	66.4	90.0	87.6	<b>74.2</b>	66.4	89.5	88.7	<b>74.0</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	33.2	8.7	10.2	<b>25.0</b>	33.4	9.4	9.9	<b>25.5</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	0.4	1.3	2.2	<b>0.8</b>	0.2	1.1	1.4	<b>0.5</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	44.8	52.2	67.6	<b>48.1</b>	43.1	51.8	68.1	<b>46.8</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	4.1	29.0	16.1	<b>11.8</b>	4.2	29.1	14.4	<b>11.7</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	2.0	8.6	0.9	<b>3.8</b>	2.9	8.5	1.2	<b>4.4</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	49.1	10.2	15.4	<b>36.3</b>	49.8	10.6	16.3	<b>37.1</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 2C: Penawaran dan penggunaan produk TMK - Peratus sumbangan (Samb.)**  
 Table 2C: Supply and use of ICT products - Percentage share (Cont.)

2021 <sup>e</sup>					2022 <sup>p</sup>			
Peratus sumbangan/ Percentage share								
Penawaran/ Supply								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Pengeluaran domestik TMK</b> <i>ICT domestic production</i>	64.0	87.9	88.7	<b>71.7</b>	65.2	86.8	89.6	<b>71.7</b>
<b>Import produk TMK</b> <i>Imports of ICT products</i>	35.8	10.8	9.9	<b>27.7</b>	34.6	11.8	9.4	<b>27.7</b>
<b>Cukai tolak subsidi ke atas produk TMK</b> <i>Taxes less subsidies on ICT products</i>	0.2	1.3	1.4	<b>0.6</b>	0.2	1.4	1.0	<b>0.6</b>
<b>Jumlah penawaran produk TMK</b> <i>Total supply of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Penggunaan/ Use								
Komponen Component	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah	Barangan TMK	Perkhidmatan TMK	Produk kandungan dan media	Jumlah
	ICT goods	ICT services	Content and media products	Total	ICT goods	ICT services	Content and media products	Total
<b>Penggunaan perantaraan produk TMK</b> <i>Intermediate use on ICT products</i>	42.9	51.9	71.8	<b>46.6</b>	41.7	51.3	71.1	<b>45.4</b>
<b>Perbelanjaan penggunaan akhir produk TMK</b> <i>Final consumption expenditure on ICT products</i>	4.0	28.7	12.2	<b>11.2</b>	4.4	27.8	16.1	<b>10.8</b>
<b>Pembentukan modal kasar produk TMK</b> <i>Gross capital formation on ICT products</i>	2.8	8.4	1.3	<b>4.3</b>	2.3	8.5	1.3	<b>3.9</b>
<b>Eksport produk TMK</b> <i>Exports of ICT products</i>	50.3	11.0	14.7	<b>37.9</b>	51.6	12.4	11.5	<b>39.9</b>
<b>Jumlah penggunaan produk TMK</b> <i>Total use of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual** 3: **Eksport produk TMK**  
**Table** Exports of ICT products

Produk TMK/ ICT products	2015	2016	2017	2018	2019	2020	2021	2022 <sup>P</sup>
<b>RM Juta/ RM Million</b>								
<b>1. Barangan TMK</b> <i>ICT goods</i>	185,965	188,913	236,950	273,915	265,677	282,575	321,489	404,069
<b>2. Perkhidmatan TMK</b> <i>ICT services</i>	20,005	20,944	21,429	22,125	23,507	25,524	28,656	35,189
<b>3. Produk kandungan dan media</b> <i>Content and media products</i>	6,725	6,789	6,854	6,866	6,949	6,672	5,846	5,225
<b>Jumlah eksport produk TMK</b> <i>Total exports of ICT products</i>	<b>212,695</b>	<b>216,647</b>	<b>265,234</b>	<b>302,905</b>	<b>296,133</b>	<b>314,771</b>	<b>355,992</b>	<b>444,484</b>
<b>Jumlah eksport</b> <i>Total exports</i>	<b>817,370</b>	<b>834,491</b>	<b>960,778</b>	<b>992,511</b>	<b>987,481</b>	<b>873,477</b>	<b>1,093,895</b>	<b>1,378,452</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>1. Barangan TMK</b> <i>ICT goods</i>		1.6	25.4	15.6	-3.0	6.4	13.8	25.7
<b>2. Perkhidmatan TMK</b> <i>ICT services</i>		4.7	2.3	3.2	6.2	8.6	12.3	22.8
<b>3. Produk kandungan dan media</b> <i>Content and media products</i>		1.0	1.0	0.2	1.2	-4.0	-12.4	-10.6
<b>Jumlah eksport produk TMK</b> <i>Total exports of ICT products</i>		<b>1.9</b>	<b>22.4</b>	<b>14.2</b>	<b>-2.2</b>	<b>6.3</b>	<b>13.1</b>	<b>24.9</b>
<b>Jumlah eksport</b> <i>Total exports</i>		<b>2.1</b>	<b>15.1</b>	<b>3.3</b>	<b>-0.5</b>	<b>-11.5</b>	<b>25.2</b>	<b>26.0</b>
<b>Peratus sumbangan jumlah eksport produk TMK/ Percentage share total exports of ICT products</b>								
<b>1. Barangan TMK</b> <i>ICT goods</i>	87.4	87.2	89.3	90.4	89.7	89.8	90.3	90.9
<b>2. Perkhidmatan TMK</b> <i>ICT services</i>	9.4	9.7	8.1	7.3	7.9	8.1	8.1	7.9
<b>3. Produk kandungan dan media</b> <i>Content and media products</i>	3.2	3.1	2.6	2.3	2.4	2.1	1.6	1.2
<b>Jumlah eksport produk TMK</b> <i>Total exports of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan jumlah eksport/ Percentage share total exports</b>								
<b>Jumlah eksport produk TMK</b> <i>Total exports of ICT products</i>	<b>26.0</b>	<b>26.0</b>	<b>27.6</b>	<b>30.5</b>	<b>30.0</b>	<b>36.0</b>	<b>32.5</b>	<b>32.2</b>
<b>Jumlah eksport</b> <i>Total exports</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual** 4.0 **Import produk TMK**  
**Table** Imports of ICT products

Produk TMK/ ICT products	2015	2016	2017	2018	2019	2020	2021	2022 <sup>P</sup>
<b>RM Juta/ RM Million</b>								
<b>1. Barangan TMK</b> <i>ICT goods</i>	139,893	147,360	184,867	190,852	179,989	189,077	228,610	270,950
<b>2. Perkhidmatan TMK</b> <i>ICT services</i>	19,651	20,059	19,452	19,511	20,000	22,671	28,106	33,581
<b>3. Produk kandungan dan media</b> <i>Content and media products</i>	4,720	4,722	4,688	4,601	4,619	4,041	3,965	4,248
<b>Jumlah import produk TMK</b> <i>Total imports of ICT products</i>	<b>164,264</b>	<b>172,141</b>	<b>209,008</b>	<b>214,964</b>	<b>204,608</b>	<b>215,790</b>	<b>260,682</b>	<b>308,779</b>
<b>Jumlah import</b> <i>Total imports</i>	<b>728,778</b>	<b>751,363</b>	<b>866,524</b>	<b>895,405</b>	<b>873,618</b>	<b>783,152</b>	<b>981,922</b>	<b>1,248,820</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>1. Barangan TMK</b> <i>ICT goods</i>		5.3	25.5	3.2	-5.7	5.0	20.9	18.5
<b>2. Perkhidmatan TMK</b> <i>ICT services</i>		2.1	-3.0	0.3	2.5	13.4	24.0	19.5
<b>3. Produk kandungan dan media</b> <i>Content and media products</i>		0.0	-0.7	-1.9	0.4	-12.5	-1.9	7.1
<b>Jumlah import produk TMK</b> <i>Total imports of ICT products</i>		<b>4.8</b>	<b>21.4</b>	<b>2.8</b>	<b>-4.8</b>	<b>5.5</b>	<b>20.8</b>	<b>18.5</b>
<b>Jumlah import</b> <i>Total imports</i>		<b>3.1</b>	<b>15.3</b>	<b>3.3</b>	<b>-2.4</b>	<b>-10.4</b>	<b>25.4</b>	<b>27.2</b>
<b>Peratus sumbangan jumlah import produk TMK/ Percentage share total imports of ICT products</b>								
<b>1. Barangan TMK</b> <i>ICT goods</i>	85.1	85.6	88.5	88.8	88.0	87.6	87.7	87.7
<b>2. Perkhidmatan TMK</b> <i>ICT services</i>	12.0	11.7	9.3	9.1	9.8	10.5	10.8	10.9
<b>3. Produk kandungan dan media</b> <i>Content and media products</i>	2.9	2.7	2.2	2.1	2.2	1.9	1.5	1.4
<b>Jumlah import produk TMK</b> <i>Total imports of ICT products</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan jumlah import/ Percentage share total imports</b>								
<b>Jumlah import produk TMK</b> <i>Total imports of ICT products</i>	<b>22.5</b>	<b>22.9</b>	<b>24.1</b>	<b>24.0</b>	<b>23.4</b>	<b>27.6</b>	<b>26.5</b>	<b>24.7</b>
<b>Jumlah import</b> <i>Total import</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 5: Komponen pendapatan industri TMK**  
 Table 5: Income components of ICT industry

Komponen/ Component	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>RM Juta/ RM Million</b>								
<b>Pampasan pekerja</b> <i>Compensation of employees</i>	56,258	60,600	66,726	70,165	73,415	73,314	78,179	84,971
<b>Lebihan kendalian kasar</b> <i>Gross operating surplus</i>	84,720	91,937	100,060	109,717	116,899	124,813	134,714	153,921
<b>Cukai tolak subsidi ke atas pengeluaran dan import</b> <i>Taxes less subsidies on production and imports</i>	5,594	5,862	5,242	3,196	4,877	3,136	4,012	4,841
<b>Jumlah</b> <i>Total</i>	<b>146,571</b>	<b>158,399</b>	<b>172,029</b>	<b>183,078</b>	<b>195,191</b>	<b>201,263</b>	<b>216,906</b>	<b>243,734</b>

<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>Pampasan pekerja</b> <i>Compensation of employees</i>		7.7	10.1	5.2	4.6	-0.1	6.6	8.7
<b>Lebihan kendalian kasar</b> <i>Gross operating surplus</i>		8.5	8.8	9.7	6.5	6.8	7.9	14.3
<b>Cukai tolak subsidi ke atas pengeluaran dan import</b> <i>Taxes less subsidies on production and imports</i>		4.8	-10.6	-39.0	52.6	-35.7	28.0	20.7
<b>Jumlah</b> <i>Total</i>		<b>8.1</b>	<b>8.6</b>	<b>6.4</b>	<b>6.6</b>	<b>3.1</b>	<b>7.8</b>	<b>12.4</b>

<b>Peratus sumbangan/ Percentage share</b>								
<b>Pampasan pekerja</b> <i>Compensation of employees</i>	38.4	38.3	38.8	38.3	37.6	36.4	36.1	34.9
<b>Lebihan kendalian kasar</b> <i>Gross operating surplus</i>	57.8	58.0	58.2	59.9	59.9	62.0	62.1	63.1
<b>Cukai tolak subsidi ke atas pengeluaran dan import</b> <i>Taxes less subsidies on production and imports</i>	3.8	3.7	3.0	1.8	2.5	1.6	1.8	2.0
<b>Jumlah</b> <i>Total</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>



**Jadual 6: Guna tenaga dalam industri TMK**  
**Table 6: Employment in the ICT industry**

Industri/ Industry	2015	2016	2017	2018	2019	2020	2021	2022
<b>Bilangan orang/ Number of persons ('000)</b>								
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	408	407	412	415	416	409	433	439
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	218	220	224	234	238	252	263	264
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	286	290	302	316	325	341	352	357
<b>4. Kandungan dan media</b> <i>Content and media</i>	152	155	155	156	156	156	157	158
<b>Jumlah guna tenaga dalam industri TMK</b> <i>Total employment in the ICT industry</i>	<b>1,064</b>	<b>1,072</b>	<b>1,094</b>	<b>1,122</b>	<b>1,136</b>	<b>1,158</b>	<b>1,206</b>	<b>1,217</b>
<b>Jumlah guna tenaga</b> <i>Total employment</i>	<b>14,068</b>	<b>14,164</b>	<b>14,477</b>	<b>14,776</b>	<b>15,073</b>	<b>14,957</b>	<b>15,064</b>	<b>15,392</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>		-0.2	1.2	0.7	0.2	-1.6	5.8	1.4
<b>2. Perdagangan TMK</b> <i>ICT trade</i>		0.8	2.2	4.3	1.6	5.8	4.6	0.3
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>		1.2	4.1	5.0	2.8	4.9	3.3	1.2
<b>4. Kandungan dan media</b> <i>Content and media</i>		2.0	0.3	0.3	0.2	-0.1	0.6	0.4
<b>Jumlah guna tenaga dalam industri TMK</b> <i>Total employment in the ICT industry</i>		<b>0.7</b>	<b>2.1</b>	<b>2.5</b>	<b>1.2</b>	<b>2.0</b>	<b>4.1</b>	<b>1.0</b>
<b>Jumlah guna tenaga</b> <i>Total employment</i>		<b>0.7</b>	<b>2.2</b>	<b>2.1</b>	<b>2.0</b>	<b>-0.8</b>	<b>0.7</b>	<b>2.2</b>
<b>Peratus sumbangan jumlah guna tenaga dalam industri TMK/ Percentage share total employment in the ICT industry</b>								
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	38.4	38.0	37.7	37.0	36.6	35.3	35.9	36.1
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	20.5	20.5	20.5	20.9	21.0	21.7	21.9	21.7
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	26.9	27.0	27.6	28.2	28.7	29.5	29.2	29.3
<b>4. Kandungan dan media</b> <i>Content and media</i>	14.3	14.5	14.2	13.9	13.7	13.5	13.0	12.9
<b>Jumlah guna tenaga dalam industri TMK</b> <i>Total employment in the ICT industry</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan jumlah guna tenaga/ Percentage share total employment</b>								
<b>Jumlah guna tenaga dalam industri TMK</b> <i>Total employment in the ICT</i>	<b>7.6</b>	<b>7.6</b>	<b>7.6</b>	<b>7.6</b>	<b>7.5</b>	<b>7.7</b>	<b>8.0</b>	<b>7.9</b>
<b>Jumlah guna tenaga</b> <i>Total employment</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 7A: Nilai Ditambah Kasar industri TMK - RM Juta**  
**Table 7A: Gross Value Added of ICT industry - RM Million**

Industri/ Industry	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
RM Juta/ RM Million								
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	<b>52,060</b>	<b>56,270</b>	<b>60,577</b>	<b>62,048</b>	<b>65,657</b>	<b>69,453</b>	<b>77,080</b>	<b>93,527</b>
1.1 <b>Komputer dan kelengkapan peranti</b> <i>Computers and peripheral equipment</i>	5,338	5,548	5,161	5,246	5,649	6,035	6,561	6,497
1.2 <b>Komponen &amp; papan elektronik, peralatan komunikasi dan elektronik pengguna</b> <i>Electronic components &amp; boards, communication equipment and consumer electronics</i>	46,723	50,722	55,416	56,803	60,008	63,418	70,520	87,031
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	<b>22,430</b>	<b>24,361</b>	<b>26,430</b>	<b>28,189</b>	<b>30,085</b>	<b>28,489</b>	<b>30,521</b>	<b>34,187</b>
2.1 <b>Perdagangan borong</b> <i>Wholesale trade</i>	7,768	8,251	8,740	9,163	9,638	9,215	9,607	10,730
2.2 <b>Perdagangan runcit</b> <i>Retail trade</i>	14,661	16,110	17,690	19,026	20,447	19,274	20,914	23,458
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	<b>60,786</b>	<b>65,663</b>	<b>72,053</b>	<b>79,222</b>	<b>84,942</b>	<b>90,515</b>	<b>96,692</b>	<b>102,137</b>
3.1 <b>Telekomunikasi</b> <i>Telecommunications</i>	40,999	45,077	49,502	53,959	57,793	63,025	68,118	71,235
3.2 <b>Pengaturcaraan komputer, perundingan, maklumat dan aktiviti yang berkaitan</b> <i>Computer programming, consultancy, information and related activities</i>	14,215	15,142	16,317	17,635	18,732	19,437	19,976	21,299
3.3 <b>Perkhidmatan TMK lain</b> <i>Other ICT services</i>	5,572	5,444	6,233	7,629	8,417	8,053	8,598	9,603
<b>4. Kandungan dan media</b> <i>Content and media</i>	<b>11,260</b>	<b>12,068</b>	<b>12,921</b>	<b>13,582</b>	<b>14,439</b>	<b>12,733</b>	<b>12,527</b>	<b>13,799</b>
4.1 <b>Aktiviti penerbitan buku, terbitan berkala dan penerbitan lain</b> <i>Publishing of books, periodicals and other publishing activities</i>	5,444	5,755	6,011	6,120	6,497	5,929	5,853	6,214
4.2 <b>Aktiviti wayang gambar, video, program televisyen, fotografi dan kreatif</b> <i>Motion picture, video, television programme, photographic and creative activities</i>	2,208	2,427	2,672	2,812	3,100	2,209	1,993	2,618
4.3 <b>Kandungan dan media lain</b> <i>Other content and media</i>	3,608	3,885	4,238	4,650	4,842	4,595	4,681	4,967
<b>Nilai Ditambah Kasar industri TMK</b> <i>Gross Value Added of ICT industry</i>	<b>146,537</b>	<b>158,361</b>	<b>171,981</b>	<b>183,042</b>	<b>195,123</b>	<b>201,190</b>	<b>216,820</b>	<b>243,650</b>
<b>Keluaran Dalam Negeri Kasar</b> <i>Gross Domestic Product</i>	<b>1,176,941</b>	<b>1,249,698</b>	<b>1,372,310</b>	<b>1,447,760</b>	<b>1,512,738</b>	<b>1,418,491</b>	<b>1,548,898</b>	<b>1,791,358</b>

**Jadual 7B: Nilai Ditambah Kasar industri TMK - Perubahan peratusan tahunan**  
**Table** **Gross Value Added of ICT industry - Annual percentage change**

Industri/ Industry	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>							
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	<b>8.1</b>	<b>7.7</b>	<b>2.4</b>	<b>5.8</b>	<b>5.8</b>	<b>11.0</b>	<b>21.3</b>
1.1 <b>Komputer dan kelengkapan peranti</b> <i>Computers and peripheral equipment</i>	3.9	-7.0	1.6	7.7	6.8	8.7	-1.0
1.2 <b>Komponen &amp; papan elektronik, peralatan komunikasi dan elektronik pengguna</b> <i>Electronic components &amp; boards, communication equipment and consumer electronics</i>	8.6	9.3	2.5	5.6	5.7	11.2	23.4
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	<b>8.6</b>	<b>8.5</b>	<b>6.7</b>	<b>6.7</b>	<b>-5.3</b>	<b>7.1</b>	<b>12.0</b>
2.1 <b>Perdagangan borong</b> <i>Wholesale trade</i>	6.2	5.9	4.8	5.2	-4.4	4.3	11.7
2.2 <b>Perdagangan runcit</b> <i>Retail trade</i>	9.9	9.8	7.6	7.5	-5.7	8.5	12.2
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	<b>8.0</b>	<b>9.7</b>	<b>10.0</b>	<b>7.2</b>	<b>6.6</b>	<b>6.8</b>	<b>5.6</b>
3.1 <b>Telekomunikasi</b> <i>Telecommunications</i>	9.9	9.8	9.0	7.1	9.1	8.1	4.6
3.2 <b>Pengaturcaraan komputer, perundingan, maklumat dan aktiviti yang berkaitan</b> <i>Computer programming, consultancy, information and related activities</i>	6.5	7.8	8.1	6.2	3.8	2.8	6.6
3.3 <b>Perkhidmatan TMK lain</b> <i>Other ICT services</i>	-2.3	14.5	22.4	10.3	-4.3	6.8	11.7
<b>4. Kandungan dan media</b> <i>Content and media</i>	<b>7.2</b>	<b>7.1</b>	<b>5.1</b>	<b>6.3</b>	<b>-11.8</b>	<b>-1.6</b>	<b>10.2</b>
4.1 <b>Aktiviti penerbitan buku, terbitan berkala dan penerbitan lain</b> <i>Publishing of books, periodicals and other publishing activities</i>	5.7	4.4	1.8	6.2	-8.8	-1.3	6.2
4.2 <b>Aktiviti wayang gambar, video, program televisyen, fotografi dan kreatif</b> <i>Motion picture, video, television programme, photographic and creative activities</i>	9.9	10.1	5.3	10.2	-28.7	-9.8	31.4
4.3 <b>Kandungan dan media lain</b> <i>Other content and media</i>	7.7	9.1	9.7	4.1	-5.1	1.9	6.1
<b>Nilai Ditambah Kasar industri TMK</b> <i>Gross Value Added of ICT industry</i>	<b>8.1</b>	<b>8.6</b>	<b>6.4</b>	<b>6.6</b>	<b>3.1</b>	<b>7.8</b>	<b>12.4</b>
<b>Keluaran Dalam Negeri Kasar</b> <i>Gross Domestic Product</i>	<b>6.2</b>	<b>9.8</b>	<b>5.5</b>	<b>4.5</b>	<b>-6.2</b>	<b>9.2</b>	<b>15.7</b>

**Jadual** 7C: **Nilai Ditambah Kasar industri TMK - Peratus sumbangan**  
**Table** Gross Value Added of ICT industry - Percentage share

Industri/ Industry	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>Peratus sumbangan Nilai Ditambah Kasar industri TMK/ Percentage share Gross Value Added of ICT industry</b>								
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	<b>35.5</b>	<b>35.5</b>	<b>35.2</b>	<b>33.9</b>	<b>33.7</b>	<b>34.5</b>	<b>35.5</b>	<b>38.4</b>
1.1 <b>Komputer dan kelengkapan peranti</b> <i>Computers and peripheral equipment</i>	3.6	3.5	3.0	2.9	2.9	3.0	3.0	2.7
1.2 <b>Komponen &amp; papan elektronik, peralatan komunikasi dan elektronik pengguna</b> <i>Electronic components &amp; boards, communication equipment and consumer electronics</i>	31.9	32.0	32.2	31.0	30.8	31.5	32.5	35.7
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	<b>15.3</b>	<b>15.4</b>	<b>15.4</b>	<b>15.4</b>	<b>15.4</b>	<b>14.2</b>	<b>14.1</b>	<b>14.0</b>
2.1 <b>Perdagangan borong</b> <i>Wholesale trade</i>	5.3	5.2	5.1	5.0	4.9	4.6	4.4	4.4
2.2 <b>Perdagangan runcit</b> <i>Retail trade</i>	10.0	10.2	10.3	10.4	10.5	9.6	9.7	9.6
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	<b>41.5</b>	<b>41.5</b>	<b>41.9</b>	<b>43.3</b>	<b>43.5</b>	<b>45.0</b>	<b>44.6</b>	<b>41.9</b>
3.1 <b>Telekomunikasi</b> <i>Telecommunications</i>	28.0	28.5	28.8	29.5	29.6	31.3	31.4	29.2
3.2 <b>Pengaturcaraan komputer, perundingan, maklumat dan aktiviti yang berkaitan</b> <i>Computer programming, consultancy, information and related activities</i>	9.7	9.6	9.5	9.6	9.6	9.7	9.2	8.7
3.3 <b>Perkhidmatan TMK lain</b> <i>Other ICT services</i>	3.8	3.4	3.6	4.2	4.3	4.0	4.0	3.9
<b>4. Kandungan dan media</b> <i>Content and media</i>	<b>7.7</b>	<b>7.6</b>	<b>7.5</b>	<b>7.4</b>	<b>7.4</b>	<b>6.3</b>	<b>5.8</b>	<b>5.7</b>
4.1 <b>Aktiviti penerbitan buku, terbitan berkala dan penerbitan lain</b> <i>Publishing of books, periodicals and other publishing activities</i>	3.7	3.6	3.5	3.3	3.3	2.9	2.7	2.6
4.2 <b>Aktiviti wayang gambar, video, program televisyen, fotografi dan kreatif</b> <i>Motion picture, video, television programme, photographic and creative activities</i>	1.5	1.5	1.5	1.6	1.6	1.1	0.9	1.1
4.3 <b>Kandungan dan media lain</b> <i>Other content and media</i>	2.5	2.5	2.5	2.5	2.5	2.3	2.2	2.0
<b>Nilai Ditambah Kasar industri TMK</b> <i>Gross Value Added of ICT industry</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan kepada KDNK/ Percentage share to GDP</b>								
<b>Nilai Ditambah Kasar industri TMK</b> <i>Gross Value Added of ICT industry</i>	<b>12.5</b>	<b>12.7</b>	<b>12.5</b>	<b>12.6</b>	<b>12.9</b>	<b>14.2</b>	<b>14.0</b>	<b>13.6</b>
<b>Keluaran Dalam Negeri Kasar</b> <i>Gross Domestic Product</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Jadual 8A: Nilai Ditambah Kasar e-dagang mengikut industri TMK**  
 Table 8A: Gross Value Added of e-commerce by ICT industry

Industri/ Industry	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>RM Juta/ RM Million</b>								
<b>Industri TMK/ ICT industry</b>	<b>22,712</b>	<b>26,013</b>	<b>28,520</b>	<b>30,341</b>	<b>34,507</b>	<b>44,854</b>	<b>58,577</b>	<b>70,475</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	16,319	18,749	20,044	20,504	22,449	27,758	35,527	43,876
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	1,771	2,086	2,805	3,668	4,824	7,433	10,241	12,284
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	3,825	4,156	4,588	5,044	6,033	8,126	11,006	12,260
<b>4. Kandungan dan media</b> <i>Content and media</i>	797	1,022	1,082	1,126	1,201	1,536	1,803	2,055
<b>Industri lain/ Other industries</b>	<b>66,434</b>	<b>69,631</b>	<b>78,783</b>	<b>87,106</b>	<b>94,844</b>	<b>119,007</b>	<b>142,462</b>	<b>168,652</b>
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>	<b>89,145</b>	<b>95,644</b>	<b>107,303</b>	<b>117,448</b>	<b>129,351</b>	<b>163,860</b>	<b>201,040</b>	<b>239,127</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>Industri TMK/ ICT industry</b>		<b>14.5</b>	<b>9.6</b>	<b>6.4</b>	<b>13.7</b>	<b>30.0</b>	<b>30.6</b>	<b>20.3</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>		14.9	6.9	2.3	9.5	23.6	28.0	23.5
<b>2. Perdagangan TMK</b> <i>ICT trade</i>		17.8	34.5	30.8	31.5	54.1	37.8	20.0
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>		8.7	10.4	9.9	19.6	34.7	35.4	11.4
<b>4. Kandungan dan media</b> <i>Content and media</i>		28.3	5.9	4.1	6.6	27.9	17.4	14.0
<b>Industri lain/ Other industries</b>		<b>4.8</b>	<b>13.1</b>	<b>10.6</b>	<b>8.9</b>	<b>25.5</b>	<b>19.7</b>	<b>18.4</b>
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>		<b>7.3</b>	<b>12.2</b>	<b>9.5</b>	<b>10.1</b>	<b>26.7</b>	<b>22.7</b>	<b>18.9</b>
<b>Peratus sumbangan Nilai Ditambah Kasar e-dagang/ Percentage share Gross Value Added of e-commerce</b>								
<b>Industri TMK/ ICT industry</b>	<b>25.5</b>	<b>27.2</b>	<b>26.6</b>	<b>25.8</b>	<b>26.7</b>	<b>27.4</b>	<b>29.1</b>	<b>29.5</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	18.3	19.6	18.7	17.4	17.4	17.0	17.6	18.4
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	2.0	2.2	2.6	3.1	3.7	4.5	5.1	5.1
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	4.3	4.3	4.3	4.3	4.7	5.0	5.5	5.1
<b>4. Kandungan dan media</b> <i>Content and media</i>	0.9	1.1	1.0	1.0	0.9	0.9	0.9	0.9
<b>Industri lain/ Other industries</b>	<b>74.5</b>	<b>72.8</b>	<b>73.4</b>	<b>74.2</b>	<b>73.3</b>	<b>72.6</b>	<b>70.9</b>	<b>70.5</b>
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan kepada KDNK/ Percentage share to GDP</b>								
<b>Industri TMK/ ICT industry</b>	1.9	2.1	2.1	2.1	2.3	3.2	3.8	3.9
<b>Industri lain/ Other industries</b>	5.6	5.6	5.7	6.0	6.3	8.4	9.2	9.4
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>	<b>7.6</b>	<b>7.7</b>	<b>7.8</b>	<b>8.1</b>	<b>8.6</b>	<b>11.6</b>	<b>13.0</b>	<b>13.3</b>

**Jadual 8B: Nilai Ditambah Kasar e-dagang mengikut sektor utama**  
**Table 8B: Gross Value Added of e-commerce by main sector**

Sektor/ Sector	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>RM Juta/ RM Million</b>								
1. Pertanian <i>Agriculture</i>	155	170	276	276	293	347	415	441
2. Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	3,743	3,537	4,160	4,875	4,942	5,577	7,081	7,978
3. Pembuatan <i>Manufacturing</i>	57,855	60,865	66,933	69,382	73,703	89,030	115,928	127,628
4. Pembinaan <i>Construction</i>	64	77	76	76	76	98	101	121
5. Perkhidmatan <i>Services</i>	27,328	30,995	35,858	42,840	50,336	68,808	77,514	102,959
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>	<b>89,145</b>	<b>95,644</b>	<b>107,303</b>	<b>117,448</b>	<b>129,351</b>	<b>163,860</b>	<b>201,040</b>	<b>239,127</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
1. Pertanian <i>Agriculture</i>		9.5	62.7	-0.2	6.4	18.2	19.6	6.4
2. Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>		-5.5	17.6	17.2	1.4	12.8	27.0	12.7
3. Pembuatan <i>Manufacturing</i>		5.2	10.0	3.7	6.2	20.8	30.2	10.1
4. Pembinaan <i>Construction</i>		19.7	-1.0	-0.7	-0.1	30.0	3.0	19.3
5. Perkhidmatan <i>Services</i>		13.4	15.7	19.5	17.5	36.7	12.7	32.8
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>		<b>7.3</b>	<b>12.2</b>	<b>9.5</b>	<b>10.1</b>	<b>26.7</b>	<b>22.7</b>	<b>18.9</b>
<b>Peratus sumbangan Nilai Ditambah Kasar e-dagang/ Percentage share Gross Value Added of e-commerce</b>								
1. Pertanian <i>Agriculture</i>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2. Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	4.2	3.7	3.9	4.1	3.8	3.4	3.5	3.3
3. Pembuatan <i>Manufacturing</i>	64.9	63.6	62.4	59.1	57.0	54.3	57.7	53.4
4. Pembinaan <i>Construction</i>	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5. Perkhidmatan <i>Services</i>	30.7	32.4	33.4	36.5	38.9	42.0	38.5	43.0
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan kepada KDNK/ Percentage share to GDP</b>								
1. Pertanian <i>Agriculture</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Perlombongan dan Pengkuarian <i>Mining and Quarrying</i>	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4
3. Pembuatan <i>Manufacturing</i>	4.9	4.9	4.9	4.8	4.9	6.3	7.5	7.1
4. Pembinaan <i>Construction</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Perkhidmatan <i>Services</i>	2.3	2.5	2.6	3.0	3.3	4.9	5.0	5.7
<b>Nilai Ditambah Kasar e-dagang</b> <i>Gross Value Added of e-commerce</i>	<b>7.6</b>	<b>7.7</b>	<b>7.8</b>	<b>8.1</b>	<b>8.6</b>	<b>11.6</b>	<b>13.0</b>	<b>13.3</b>

**Jadual** 9.0 **Sumbangan TMK kepada ekonomi**  
**Table** 9.0 **ICT contribution to economy**

Industri/ Industry	2015	2016	2017	2018	2019	2020	2021 <sup>e</sup>	2022 <sup>p</sup>
<b>RM Juta/ RM Million</b>								
<b>Industri TMK</b> <i>ICT industry</i>	<b>146,537</b>	<b>158,361</b>	<b>171,981</b>	<b>183,042</b>	<b>195,123</b>	<b>201,190</b>	<b>216,820</b>	<b>243,650</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	52,060	56,270	60,577	62,048	65,657	69,453	77,080	93,527
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	22,430	24,361	26,430	28,189	30,085	28,489	30,521	34,187
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	60,786	65,663	72,053	79,222	84,942	90,515	96,692	102,137
<b>4. Kandungan dan media</b> <i>Content and media</i>	11,260	12,068	12,921	13,582	14,439	12,733	12,527	13,799
<b>E-dagang industri lain</b> <i>E-commerce of other industries</i>	<b>66,434</b>	<b>69,631</b>	<b>78,783</b>	<b>87,106</b>	<b>94,844</b>	<b>119,007</b>	<b>142,462</b>	<b>168,652</b>
<b>Jumlah TMK dan e-dagang</b> <i>Total ICT and e-commerce</i>	<b>212,970</b>	<b>227,992</b>	<b>250,764</b>	<b>270,149</b>	<b>289,967</b>	<b>320,197</b>	<b>359,282</b>	<b>412,302</b>
<b>Perubahan peratusan tahunan/ Annual percentage change</b>								
<b>Industri TMK</b> <i>ICT industry</i>		<b>8.1</b>	<b>8.6</b>	<b>6.4</b>	<b>6.6</b>	<b>3.1</b>	<b>7.8</b>	<b>12.4</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>		8.1	7.7	2.4	5.8	5.8	11.0	21.3
<b>2. Perdagangan TMK</b> <i>ICT trade</i>		8.6	8.5	6.7	6.7	-5.3	7.1	12.0
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>		8.0	9.7	10.0	7.2	6.6	6.8	5.6
<b>4. Kandungan dan media</b> <i>Content and media</i>		7.2	7.1	5.1	6.3	-11.8	-1.6	10.2
<b>E-dagang industri lain</b> <i>E-commerce of other industries</i>		<b>4.8</b>	<b>13.1</b>	<b>10.6</b>	<b>8.9</b>	<b>25.5</b>	<b>19.7</b>	<b>18.4</b>
<b>Jumlah TMK dan e-dagang</b> <i>Total ICT and e-commerce</i>		<b>7.1</b>	<b>10.0</b>	<b>7.7</b>	<b>7.3</b>	<b>10.4</b>	<b>12.2</b>	<b>14.8</b>
<b>Peratus sumbangan jumlah TMK dan e-dagang/ Percentage share of total ICT and e-commerce</b>								
<b>Industri TMK</b> <i>ICT industry</i>	<b>68.8</b>	<b>69.5</b>	<b>68.6</b>	<b>67.8</b>	<b>67.3</b>	<b>62.8</b>	<b>60.3</b>	<b>59.1</b>
<b>1. Pembuatan TMK</b> <i>ICT manufacturing</i>	24.4	24.7	24.2	23.0	22.6	21.7	21.4	22.7
<b>2. Perdagangan TMK</b> <i>ICT trade</i>	10.5	10.7	10.5	10.4	10.4	8.9	8.5	8.3
<b>3. Perkhidmatan TMK</b> <i>ICT services</i>	28.5	28.8	28.7	29.4	29.3	28.2	26.9	24.8
<b>4. Kandungan dan media</b> <i>Content and media</i>	5.3	5.3	5.2	5.0	5.0	4.0	3.5	3.3
<b>E-dagang industri lain</b> <i>E-commerce of other industries</i>	<b>31.2</b>	<b>30.5</b>	<b>31.4</b>	<b>32.2</b>	<b>32.7</b>	<b>37.2</b>	<b>39.7</b>	<b>40.9</b>
<b>Jumlah TMK dan e-dagang</b> <i>Total ICT and e-commerce</i>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Peratus sumbangan kepada KDNK/ Percentage share to GDP</b>								
<b>Industri TMK</b> <i>ICT industry</i>	12.5	12.7	12.5	12.6	12.9	14.2	14.0	13.6
<b>E-dagang industri lain</b> <i>E-commerce of other industries</i>	5.6	5.6	5.7	6.0	6.3	8.4	9.2	9.4
<b>Sumbangan TMK kepada ekonomi</b> <i>ICT contribution to economy</i>	<b>18.1</b>	<b>18.2</b>	<b>18.3</b>	<b>18.7</b>	<b>19.2</b>	<b>22.6</b>	<b>23.2</b>	<b>23.0</b>

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**NOTA TEKNIKAL**  
*TECHNICAL NOTES*

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# NOTA TEKNIKAL

## KONSEP DAN DEFINISI

**A. PENGENALAN** Akaun Satelit Teknologi Maklumat dan Komunikasi (ASTMK) Malaysia 2022 adalah berdasarkan *System of National Accounts 2008*, *OECD Guide to Measuring the Information Society 2011* dan *OECD Internet Economy Outlook 2012*. Konsep dan definisi yang digunakan telah disesuaikan mengikut keperluan Malaysia.

Bahagian ini akan menerangkan konsep dan definisi yang dipraktikkan oleh Malaysia dalam menyusun jadual-jadual ASTMK.

## B. KONSEP DAN DEFINISI TMK

**1. TMK** **Teknologi Maklumat dan Komunikasi (TMK)** merujuk kepada teknologi dan perkhidmatan yang membolehkan maklumat dicapai, disimpan, diproses, diubah, dimanipulasi dan disebar, termasuk penyiaran atau komunikasi melalui suara, gambar dan/atau data melalui pelbagai media penyiaran.

**2. Industri TMK** **Industri TMK** merujuk kepada industri yang menghasilkan produk TMK sebagai aktiviti utama. Perincian industri TMK dinyatakan di Bahagian Klasifikasi. Kategori utama industri TMK yang digunakan di dalam penyusunan ASTMK adalah:

1. Pembuatan TMK
2. Perdagangan TMK
3. Perkhidmatan TMK
4. Kandungan dan media

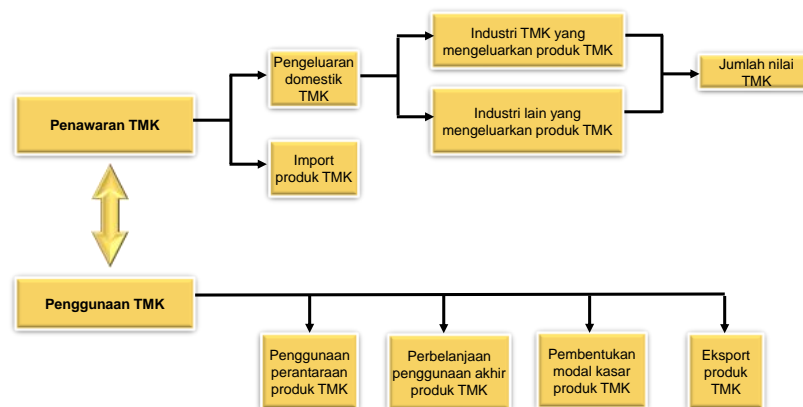
**3. Industri lain** **Industri lain** adalah industri bukan TMK yang mengeluarkan produk TMK.

**4. Produk TMK** Perincian **produk TMK** adalah seperti yang disenaraikan di Bahagian Klasifikasi. Kategori utama produk TMK adalah seperti berikut:

1. Barangan TMK
  - 1.1. Komputer dan kelengkapan peranti
  - 1.2. Kelengkapan komunikasi

- 1.3. Kelengkapan elektronik pengguna
- 1.4. Pelbagai komponen dan barangan TMK
2. Perkhidmatan TMK
  - 2.1. Perkhidmatan pembuatan bagi kelengkapan TMK
  - 2.2. Perkhidmatan perniagaan dan produktiviti perisian dan pelesenan
  - 2.3. Perkhidmatan dan perundingan teknologi Maklumat
  - 2.4. Perkhidmatan telekomunikasi
  - 2.5. Perkhidmatan pajakan atau sewaan kelengkapan TMK
  - 2.6. Perkhidmatan TMK lain
3. Produk kandungan dan media
  - 3.1. Cetakan dan lain-lain kandungan berasaskan teks pada media fizikal dan perkhidmatan berkaitan
  - 3.2. Kandungan wayang gambar, video, televisyen dan radio dan perkhidmatan berkaitan
  - 3.3. Kandungan muzik dan perkhidmatan berkaitan
  - 3.4. Perisian permainan
  - 3.5. Kandungan atas talian dan perkhidmatan berkaitan
  - 3.6. Lain-lain kandungan dan perkhidmatan berkaitan

## 5. Pandangan skematik ASTMK



## 6. E-dagang

Urusniaga **e-dagang** adalah penjualan atau pembelian barangan atau perkhidmatan yang dijalankan melalui rangkaian pengkomputeran/internet dengan kaedah yang direka untuk tujuan menerima atau membuat pesanan (untuk tujuan pembelian atau jualan). Urusniaga ini berlaku sama ada antara perniagaan, isi rumah, individu, kerajaan dan organisasi-organisasi awam atau swasta lain.

Kaedah pembayaran dan penghantaran muktamad barangan atau perkhidmatan urusan e-dagang ini boleh dijalankan melalui atau bukan melalui rangkaian pengkomputeran/internet.

Urusniaga e-dagang termasuk pesanan yang dibuat di laman web, *extranet* atau Pertukaran Data Elektronik (PDE). Walau bagaimanapun, urusan yang dibuat melalui panggilan telefon, faksimili, e-mel (e-mel yang ditaip manual) dan yang seumpamanya tidak dikategorikan sebagai urusan e-dagang.

- 7. E-dagang industri lain**      **E-dagang industri lain** merupakan industri yang tidak dikategorikan di bawah klasifikasi industri TMK.
- 8. TMK kepada ekonomi**      **TMK kepada ekonomi** adalah meliputi industri TMK dan e-dagang bagi industri lain.

### C. AKAUN PENGELUARAN TMK

- 1. Akaun Pengeluaran**      **Akaun Pengeluaran** merekodkan aktiviti pengeluaran barangan dan perkhidmatan berdasarkan *System of National Accounts*. Akaun Pengeluaran menunjukkan output sebagai sumber dan penggunaan perantaraan sebagai penggunaan dan nilai ditambah sebagai item pengimbang.
- 2. Keluaran Dalam Negeri Kasar**      **Keluaran Dalam Negeri Kasar (KDNK)** adalah jumlah nilai barangan dan perkhidmatan yang dikeluarkan dalam tempoh tertentu selepas ditolak kos barangan dan perkhidmatan yang digunakan dalam proses pengeluaran. Nilai ini merupakan nilai sebelum ditolak nilai peruntukan bagi modal tetap; iaitu jumlah nilai ditambah pada harga pengeluar bagi pengeluar residen ditambah dengan duti import. KDNK ini juga bersamaan dengan perbelanjaan ke atas KDNK (pada harga pembeli) iaitu jumlah bagi semua komponen perbelanjaan akhir ke atas barangan dan perkhidmatan tolak dengan import barangan dan perkhidmatan. KDNK boleh diukur dengan menggunakan tiga kaedah iaitu Kaedah Pengeluaran, Perbelanjaan dan Pendapatan.
- 3. Nilai Ditambah**      **Nilai Ditambah** merupakan 'nilai' yang ditambah oleh pengeluar ke atas bahan mentah barangan dan perkhidmatan yang dibeli semasa proses pengeluaran. Justeru, nilai ditambah adalah output ditolak dengan input penggunaan perantaraan.

- 4. Nilai Ditambah Kasar industri TMK** **Nilai Ditambah Kasar industri TMK (NDKTMK)** ialah jumlah Nilai Ditambah Kasar bagi semua pertubuhan yang berada di dalam industri TMK, tanpa mengira sama ada semua output disediakan untuk TMK dan juga peringkat proses pengeluaran.

#### D. AKAUN PENDAPATAN TMK

- 1. Pampasan pekerja** **Pampasan pekerja** termasuk saraan, wang tunai atau bukan berbentuk wang, yang perlu dibayar oleh sesebuah perusahaan kepada pekerja sebagai balasan bagi kerja-kerja yang dilakukan dalam tempoh perakaunan.
- 2. Lebihan Kendalian kasar** **Lebihan kendalian kasar** merujuk kepada lebihan kendalian operasi sebelum ditolak penggunaan modal tetap dan pendapatan campuran.
- 2.1. Lebihan kendalian Lebihan kendalian adalah mengukur lebihan atau defisit terakru daripada proses pengeluaran sebelum ditolak apa-apa caj faedah implisit atau eksplisit, sewa atau pendapatan harta lain yang dibayar ke atas aset kewangan, tanah atau lain-lain sumber semula jadi yang diperlukan untuk menjalankan pengeluaran. Secara definisi, lebihan kendalian operasi hanya boleh diperolehi oleh industri.
- 2.2. Pendapatan campuran Pendapatan campuran meliputi elemen ganjaran yang tidak diketahui bagi kerja yang dijalankan oleh pemilik enterpris atau ahli isi rumah, serta lebihan kendalian hasil daripada pengeluaran.
- 2.3. Penggunaan modal tetap Penggunaan modal tetap didefinisikan sebagai penurunan nilai semasa stok aset tetap yang dimiliki dan digunakan oleh pengeluar dalam tempoh perakaunan disebabkan oleh kerosakan fizikal, keusangan biasa atau kerosakan biasa yang tidak disengajakan.
- 3. Cukai tolak subsidi ke atas pengeluaran dan import** **Cukai tolak subsidi ke atas pengeluaran dan import** merupakan cukai ke atas produk dan cukai lain ke atas pengeluaran ditolak subsidi ke atas produk dan subsidi lain ke atas pengeluaran.
- 3.1. Cukai ke atas produk Cukai yang dibayar bagi satu unit barangan atau perkhidmatan dan biasanya akan dibayar apabila ia dikeluarkan, dihantar, dijual, dipindah atau sebaliknya dilupuskan oleh pihak pengeluar. Cukai tersebut mungkin merupakan satu amaun yang spesifik bagi setiap unit kuantiti barang atau perkhidmatan, atau ia mungkin dikira *ad valorem* sebagai peratusan

spesifik harga satu unit atau nilai barang atau perkhidmatan yang diniagakan. Contohnya, cukai jualan, cukai eksais, duti import, duti eksport dan lain-lain.

3.2. Cukai lain ke atas pengeluaran Cukai lain ke atas pengeluaran meliputi semua cukai kecuali cukai ke atas produk yang ditanggung oleh perusahaan hasil penglibatan dalam pengeluaran seperti bayaran ke atas tanah, aset tetap atau buruh yang digunakan dalam proses pengeluaran atau untuk aktiviti atau transaksi tertentu. Contoh cukai lain ke atas pengeluaran adalah cukai yang dibayar oleh perusahaan bagi lesen perniagaan, cukai gaji, duti setem dan lain-lain.

3.3. Subsidi ke atas produk Subsidi yang dibayar bagi satu unit barang atau perkhidmatan. Subsidi ini mungkin dalam amaun spesifik bagi satu unit kuantiti barang atau perkhidmatan, atau ia mungkin dikira *ad valorem* sebagai peratusan spesifik harga satu unit barang atau perkhidmatan. Subsidi ke atas produk biasanya dibayar apabila barang atau perkhidmatan dikeluarkan, dijual atau diimport, tetapi ia juga dibayar dalam keadaan lain seperti apabila barang dipindah, dipajak, dihantar atau untuk penggunaan sendiri atau pembentukan modal sendiri.

Subsidi mungkin diberikan untuk mempengaruhi tahap pengeluaran perusahaan residen atau harga di mana output mereka dijual.

3.4. Subsidi lain ke atas pengeluaran Subsidi lain ke atas pengeluaran merangkumi subsidi selain daripada subsidi ke atas produk di mana perusahaan residen mungkin menerimanya hasil daripada penglibatan dalam pengeluaran seperti subsidi ke atas gaji atau tenaga kerja. Subsidi mungkin diberikan untuk mempengaruhi saraan bagi unit institusi yang terlibat dalam pengeluaran.

## METODOLOGI DAN SUMBER DATA

**1. Pembangunan ASTMK** Penyusunan ASTMK dapat dilaksanakan berikutan daripada pematuhan *System of National Accounts* yang kukuh di Malaysia. Terma “akaun satelit” digunakan bagi menggambarkan dengan jelas keadaan akaun yang dibangunkan. Ia merupakan “satelit” kepada set utama Akaun Negara yang mana ia memberikan maklumat tambahan di luar daripada maklumat sedia ada di dalam Akaun Negara.

Maklumat satelit memfokuskan kepada aspek ekonomi tertentu sebagai contoh sumbangan TMK kepada negara. Ia juga membolehkan hubung kait yang lebih banyak kepada maklumat tambahan yang spesifik bagi TMK seperti pendapatan, eksport, import dan guna tenaga. TMK terdiri daripada industri seperti pembuatan, perdagangan, perkhidmatan dan kandungan & media.

Pembangunan akaun satelit merupakan pengukuran statistik bersistematis yang mana ia merangkumi konsep, definisi dan klasifikasi berdasarkan piawaian antarabangsa bagi membolehkan perbandingan di antara Negara dilaksanakan. Pelbagai maklumat diperoleh daripada agensi yang berbeza dikumpulkan di dalam akaun ini untuk memberikan gambaran yang lebih baik dan holistik berkenaan impak industri TMK di Malaysia.

**2. Rangka kerja ASTMK** Rangka kerja merupakan asas bagi penyusunan ASTMK di Malaysia adalah rangka kerja jadual penawaran dan penggunaan (SUT). Walau bagaimanapun, ia hanya memfokuskan kepada industri dan produk TMK sahaja. Jadual penawaran mengandungi barangan dan perkhidmatan bagi produk TMK yang dikeluarkan oleh setiap pengeluar. Sementara itu, jadual penggunaan mengandungi penggunaan bagi setiap produk mengikut industri, kerajaan, isi rumah dan eksport.

Penawaran bagi setiap produk (dinilai pada harga pembeli) adalah terdiri daripada:

- Pengeluaran domestik mengikut industri (dinilai pada harga asas);
- Import;
- Pengangkutan, margin perdagangan bagi borong dan runcit; dan
- Cukai tolak subsidi ke atas pengeluaran dan import.

Penggunaan bagi setiap produk (dinilai pada harga pembeli) adalah terdiri daripada:

- Penggunaan perantara mengikut industri (produk yang digunakan



mengikuti industri tersebut diproses semula bagi menghasilkan produk lain); dan

- Penggunaan akhir mengikut jenis perbelanjaan. Penggunaan akhir adalah merujuk kepada produk yang digunakan oleh isi rumah dan kerajaan, perubahan inventori dan eksport.

Jadual berikut menunjukkan struktur asas bagi SUT.

## JADUAL PENAWARAN

Penawaran mengikut produk	Output mengikut industri pada harga asas* (aktiviti ekonomi)				Import (2)	Jumlah penawaran pada harga asas (3) = (1) + (2)	Margin perdagangan dan pengangkutan (4)	Cukai tolak subsidi ke atas produk (5)	Jumlah penawaran pada harga pembeli** (6) = (3) + (4) + (5)
	Industri A	Industri B	Industri ...	Jumlah industri (1)					
Produk TMK A	Output mengikut produk dan industri				Import mengikut produk	Penawaran mengikut produk			
Produk TMK B									
Produk TMK C									
Produk TMK ...									
Jumlah penawaran (produk TMK)	Jumlah output mengikut industri				Jumlah import	Jumlah penawaran mengikut produk			

## JADUAL PENGGUNAAN

Penggunaan mengikut produk	Penggunaan perantaraan mengikut industri (aktiviti ekonomi)				Perbelanjaan penggunaan akhir (2)	Pembentukan modal kasar (3)	Eksport (4)	Jumlah penggunaan pada harga pembeli** (5) = (1) + (2) + (3) + (4)
	Industri A	Industri B	Industri ...	Jumlah penggunaan perantaraan (1)				
Produk TMK A	Penggunaan perantaraan mengikut produk dan industri				(2)	(3)	(4)	(5) = (1) + (2) + (3) + (4)
Produk TMK B								
Produk TMK C								
Produk TMK ...								
Jumlah penggunaan (produk TMK)	Jumlah penggunaan perantaraan mengikut industri				Jumlah penggunaan akhir mengikut produk dan jenis perbelanjaan***			
Pampasan pekerja	Nilai ditambah mengikut komponen dan industri							
Lebihan kendalian kasar								
Cukai tolak subsidi ke atas pengeluaran dan import								
Output industri pada harga asas*								

Nota:

\* Harga asas adalah harga yang diterima oleh pengeluar bagi setiap unit barangan dan perkhidmatan yang dikeluarkan sebagai output, tidak termasuk sebarang cukai yang perlu dibayar, termasuk subsidi yang diterima ke atas setiap produk hasil daripada pengeluaran atau penjualan. Ia juga tidak termasuk sebarang bayaran penghantaran yang dicaj secara berasingan oleh pengeluar.

\*\* Harga pembeli adalah harga yang dibayar oleh pembeli di mana barangan dan perkhidmatan tersebut dihantar pada masa dan tempat yang ditentukan oleh pembeli. Ia termasuk sebarang caj pengangkutan yang dibayar secara berasingan oleh pembeli.

\*\*\* Jenis perbelanjaan adalah merujuk kepada perbelanjaan penggunaan akhir, pembentukan modal kasar dan eksport.

Jadual penggunaan terperinci mengandungi input utama yang dikeluarkan bagi setiap industri iaitu pampasan pekerja, lebih kendalian kasar dan lain-lain cukai tolak subsidi bagi setiap produk dan pengeluaran mengikut industri.

SUT digunakan untuk mengumpul dan mengintegrasikan semua data yang diperlukan bagi menghasilkan anggaran ekonomi berkaitan TMK secara agregat. Output terdiri daripada barangan dan perkhidmatan yang dihasilkan oleh sesebuah pertubuhan yang boleh digunakan di luar daripada pertubuhan. Nilai bagi output TMK merupakan nilai pasaran bagi barangan dan perkhidmatan TMK. Nilai ditambah dikira bagi industri TMK dan industri lain yang mengeluarkan produk TMK.

### 3. Pengukuran e-dagang

Pengukuran nilai ditambah e-dagang adalah berdasarkan manual *OECD Internet Economy Outlook 2012*. Dua kaedah pendekatan yang disarankan adalah *narrow approach* dan *broad approach*. *Narrow approach* hanya meliputi sektor Perdagangan borong dan runcit. Manakala, *broad approach* meliputi kesemua industri dalam ekonomi.

Diandaikan bahawa peratus keuntungan daripada e-dagang kepada keuntungan industri adalah berkadar dengan peratusan nilai ditambah e-dagang kepada nilai ditambah industri tersebut. *Broad approach* digunakan dalam pengukuran e-dagang di Malaysia. E-dagang terdiri daripada nilai bagi industri TMK dan industri lain.

### 4. Sumber data

Sumber data dalam penyusunan ASTMK adalah seperti berikut:

INDUSTRI / DATA	SUMBER DATA
Industri pembuatan TMK	<ul style="list-style-type: none"> <li>• Banci Ekonomi</li> <li>• Survei Tahunan</li> <li>• SUT</li> <li>• KDNK</li> </ul>
Industri perdagangan TMK	
Industri perkhidmatan TMK	
Aktiviti penerbitan buku, terbitan berkala dan penerbitan lain	
Aktiviti wayang gambar, video dan program televisyen	
Aktiviti rakaman bunyi dan penerbitan muzik	
Aktiviti pemrograman dan penyiaran	
Aktiviti perkhidmatan maklumat lain	
Industri lain	

INDUSTRI / DATA	SUMBER DATA
Eksport dan import bagi barang dan perkhidmatan TMK	<ul style="list-style-type: none"> <li>Perangkaan Perdagangan Luar Negeri</li> <li>Statistik Perdagangan Perkhidmatan Antarabangsa</li> </ul>
Cukai dan subsidi	<ul style="list-style-type: none"> <li>Jabatan Akauntan Negara Malaysia</li> <li>Jabatan Kastam Diraja Malaysia</li> <li>KDNK Kaedah Pendapatan</li> </ul>
Perbelanjaan penggunaan akhir kerajaan	<ul style="list-style-type: none"> <li>Akaun Kewangan Kerajaan Persekutuan, Kerajaan Negeri, Pihak Berkuasa Tempatan dan Badan Berkanun</li> </ul>
Perbelanjaan penggunaan akhir swasta	<ul style="list-style-type: none"> <li>Survei Perbelanjaan Isi Rumah</li> </ul>
Pembentukan modal kasar	<ul style="list-style-type: none"> <li>KDNK</li> <li>Pembentukan Modal Tetap Kasar</li> </ul>
Pampasan pekerja	<ul style="list-style-type: none"> <li>Survei Pendapatan Isi Rumah</li> <li>Akaun Kewangan Kerajaan Persekutuan, Kerajaan Negeri, Pihak Berkuasa Tempatan dan Badan Berkanun</li> <li>Survei Tenaga Buruh</li> <li>KDNK Kaedah Pendapatan</li> </ul>
Lebihan kendalian kasar	<ul style="list-style-type: none"> <li>KDNK Kaedah Pendapatan</li> </ul>
Guna tenaga	<ul style="list-style-type: none"> <li>Survei Tenaga Buruh</li> <li>Survei Ekonomi Tahunan</li> <li>Survei Perkhidmatan Suku Tahunan</li> <li>Survei Pembuatan Bulanan</li> <li>Survei Perdagangan Borong dan Runcit</li> </ul>

**5. Jadual utama** ASTMK mempunyai sembilan (9) jadual dan penjelasannya adalah seperti **ASTMK Malaysia** berikut:

**Jadual 1 Industri TMK dan industri lain yang mengeluarkan produk TMK**

**Jadual 1** mengandungi statistik berkaitan semua industri yang mengeluarkan produk TMK. Jadual ini dijana berdasarkan SUT 2015 mengikut pengkelasan produk TMK. Bagi tahun-tahun seterusnya, data adalah berdasarkan KDNK tahunan.

**Jadual 2A, 2B dan 2C Penawaran dan penggunaan produk TMK**

**Jadual 2A, 2B dan 2C** mempersembahkan statistik penawaran dan penggunaan produk TMK. Nilai penawaran mestilah sama dengan nilai penggunaan produk TMK. Data penawaran dan penggunaan produk TMK diperoleh daripada SUT 2015. Bagi tahun-tahun seterusnya, data adalah berdasarkan KDNK tahunan. Industri dan produk dipilih berdasarkan klasifikasi ASTMK. Data penawaran produk TMK terdiri daripada pengeluaran domestik produk TMK, import produk TMK dan cukai tolak subsidi ke atas produk TMK. Data penggunaan produk TMK pula terdiri daripada penggunaan perantaraan produk TMK, penggunaan akhir oleh isi rumah dan kerajaan ke atas produk TMK, pembentukan modal kasar produk TMK dan eksport produk TMK.

**Jadual 3 dan 4 Eksport dan import produk TMK**

**Jadual 3 dan 4** mengandungi statistik eksport dan import bagi produk TMK. Data daripada barangan diperolehi daripada perisytiharan kastam (Perangkaan Perdagangan Antarabangsa) di mana penyusunan adalah berdasarkan kod *Harmonized Commodity Description and Coding Systems* (HS). Manakala, nilai eksport dan import perkhidmatan diperolehi daripada data Perangkaan Imbangan Pembayaran. Penyusunan ini juga telah mengambil kira saranan daripada SNA 2008 serta *Balance of Payments and International Investment Position Manual Sixth Edition* (BPM6) khususnya dalam pelaksanaan *Goods for Processing from Abroad* (GFP) dan *Manufacturing Services* (MS).

**Jadual 5 Komponen pendapatan industri TMK**

**Jadual 5** mengandungi statistik komponen pendapatan industri TMK yang terdiri daripada pampasan pekerja, lebihan kendalian kasar dan cukai tolak subsidi ke atas pengeluaran dan import. Jadual ini dijana berdasarkan SUT 2015 mengikut industri yang mengeluarkan produk TMK. Bagi tahun-tahun seterusnya, data adalah berdasarkan KDNK kaedah pendapatan tahunan.

**Jadual 6 Guna tenaga dalam industri TMK**

**Jadual 6** merupakan statistik guna tenaga dalam industri TMK. Statistik disusun berdasarkan Survei Tenaga Buruh, Survei Ekonomi Tahunan, Survei Perkhidmatan Suku Tahunan, Survei Pembuatan Bulanan dan Survei Perdagangan Borong & Runcit Bulanan yang dijalankan oleh Jabatan Perangkaan Malaysia.

**Jadual 7A, 7B dan 7C**      **Nilai Ditambah Kasar industri TMK**

**Jadual 7A, 7B dan 7C** terdiri daripada statistik Nilai Ditambah Kasar industri TMK pada harga semasa. Pengukuran Nilai Ditambah Kasar industri TMK adalah secara keseluruhan tanpa mengambil kira sama ada output dikeluarkan untuk menghasilkan produk TMK atau sebaliknya. Data adalah berdasarkan KDNK tahunan.

**Jadual 8A dan 8B**      **Nilai Ditambah Kasar e-dagang**

Terdapat dua jadual bagi Nilai Ditambah Kasar e-dagang. **Jadual 8A** memaparkan statistik Nilai Ditambah Kasar e-dagang mengikut industri TMK manakala **Jadual 8B** adalah Nilai Ditambah Kasar e-dagang mengikut sektor utama. Pengukuran Nilai Ditambah Kasar e-dagang adalah berdasarkan kepada *OECD Internet Economy Outlook 2012*. Data adalah berdasarkan kepada peratus pendapatan e-dagang mengikut industri yang diperolehi daripada Banci Ekonomi 2016.

**Jadual 9**      **Sumbangan TMK kepada ekonomi**

**Jadual 9** adalah statistik TMK kepada ekonomi yang mana terdiri daripada Nilai Ditambah Kasar industri TMK (**Jadual 7**) dan Nilai Ditambah Kasar e-dagang bagi industri lain (**Jadual 8A**).

**6. Semakan penerbitan dan data**

Penerbitan ini mempersembahkan ASTMK bagi tahun 2015 hingga 2022. Siri ini akan dikemaskini berdasarkan data terkini yang diperolehi.

**7. Simbol**

- : negatif
- ..          : tidak berkenaan
- e          : anggaran
- p          : permulaan
- 0          : nilai kurang daripada 0.05
- %         : peratus

# TECHNICAL NOTES



## CONCEPTS AND DEFINITIONS

**A. OVERVIEW** *Information and Communication Technology Satellite Account (ICTSA) of Malaysia 2022 is based on the System of National Accounts 2008, the OECD Guide to Measuring the Information Society 2011 and the OECD Internet Economy Outlook 2012. The concepts and definitions are adapted to Malaysia's requirement.*

*This section will briefly present the concepts and definitions practiced by Malaysia in constructing ICTSA tables.*

## B. CONCEPTS AND DEFINITIONS OF ICT

**1. ICT** *Information and Communication Technology (ICT) refers to the technologies and services that enable information to be accessed, stored, processed, transformed, manipulated and disseminated, including the transmission or communication of voice, image and/or data over a variety of transmission media.*

**2. ICT industry** *ICT industry refers to the industries which produce ICT products as primary activities. Details of ICT industry are described in the Classification Section. The main categories of ICT industry in the compilation of ICTSA are as follows:*

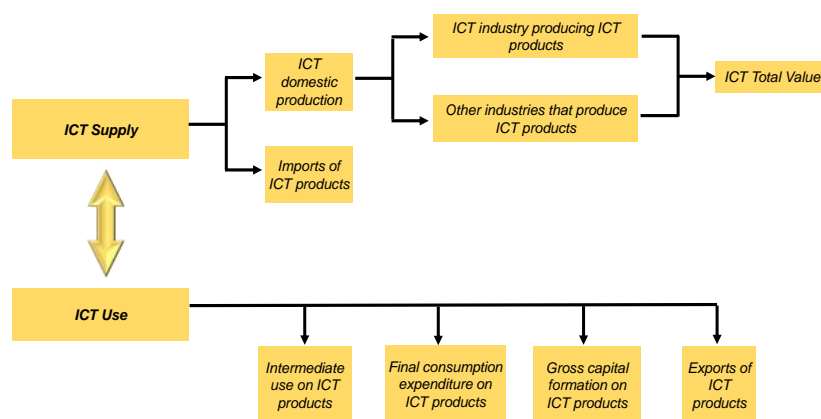
- 1. ICT manufacturing*
- 2. ICT trade*
- 3. ICT services*
- 4. Content and media*

**3. Other industries** *Other industries refers to the other non ICT industries that produce ICT products.*

**4. ICT products** *The details of ICT products are listed in the Classification Section. The main categories of ICT products are as follows:*

1. *ICT goods*
  - 1.1. *Computers and peripheral equipment*
  - 1.2. *Communication equipment*
  - 1.3. *Consumer electronic equipment*
  - 1.4. *Miscellaneous ICT components and goods*
  
2. *ICT services*
  - 2.1. *Manufacturing services for ICT equipment*
  - 2.2. *Business and productivity software and licensing services*
  - 2.3. *Information technology consultancy and services*
  - 2.4. *Telecommunications services*
  - 2.5. *Leasing or rental services for ICT equipment*
  - 2.6. *Other ICT services*
  
3. *Content and media products*
  - 3.1. *Printed and other text-based content on physical media, and related services*
  - 3.2. *Motion picture, video, television and radio content, and related services*
  - 3.3. *Music content and related services*
  - 3.4. *Games software*
  - 3.5. *On-line content and related services*
  - 3.6. *Other content and related services*

**5. Schematic view of ICTSA**



**6. E-commerce** *E-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. E-commerce transaction can be between enterprises, households, individuals, governments and other public or private organisations.*

*Method of payment and the ultimate delivery of the e-commerce goods or services might be done through computer network/internet or traditionally.*

*E-commerce transactions include orders made in web pages, extranet or Electronic Data Interchange (EDI). Nevertheless, orders made by telephone calls, facsimile or manually typed e-mail are not categorised as an e-commerce transactions.*

**7. E-commerce other industries** *E-commerce other industries is an industries not categorized under the other industries ICT industry classification.*

**8. ICT to economy** *ICT to economy consists of ICT industry plus e-commerce of other industries.*

### **C. PRODUCTION ACCOUNTS FOR ICT**

**1. Production account** *The **production account** records the activity of producing goods and services as defined within the System of National Accounts. The production account shows output as resources and intermediate consumption as uses and the balancing item is value added.*

**2. Gross Domestic Product** ***Gross Domestic Product (GDP)** is the total value of all goods and services produced in a certain period after deducting the cost of goods and services used up in the process of production. This value is before deducting the allowances for consumption of fixed capital i.e. the sum of value added of resident producers in producers' prices plus import duties. GDP is equivalent to expenditure on the GDP (in purchasers' prices) i.e. the sum of all components of final expenditure on goods and services less imports of goods and services. GDP can be measured by using three approaches namely Production, Expenditure and Income Approach.*

**3. Value added** ***Value added** is the value that a producer adds to the raw material of goods and services it purchases in the process of production. Thus, value added is the value of output less the value of intermediate consumption.*

**4. Gross Value Added of ICT** ***Gross Value Added of ICT industry (GVAICT)** is the total Gross Value Added of all establishments belonging to ICT industry, regardless of whether all their output is provided for ICT and of degree of specialisation of their production process.*



## **D. INCOME ACCOUNTS FOR ICT**

- 1. Compensation of employees**      **Compensation of employees** includes remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done during the accounting period.
- 2. Gross operating surplus**      **Gross operating surplus** refers the operating surplus before deducting the consumption of fixed capital and mixed income.
- 2.1. Operating surplus      Operating surplus refers to measures the surplus or deficit accruing from processes of production before deducting any explicit or implicit interest charges, rent or other property income payable on the financial assets, land or other natural resources required to carry on the production. By definition, operating surplus can only be earned by industries.
- 2.2. Mixed income      Mixed income includes an unknown element of remuneration for work done by the owner of the enterprise, or other members of the household, as well as operating surplus accruing from the production.
- 2.3. Consumption of fixed capital      Consumption of fixed capital is defined as the decline in the current value of the stock of fixed assets owned and used by a producer during the course of the accounting period as a result of physical deterioration, normal obsolescence or nominal accidental damage.
- 3. Taxes less subsidies on production and imports**      **Taxes less subsidies on production and imports** consists of taxes on products and other taxes on production less subsidies on product and other subsidies on production.
- 3.1. Taxes on products      Taxes that are payable per unit of some goods or services and usually become payable when they are produced, delivered, sold, transferred or otherwise disposed by their producer. The tax may be a specific amount of money per unit of quantity of a good or service, or it may be calculated *ad valorem* as a specified percentage of the price per unit or value of the goods or services transacted. For example, sales taxes, excise taxes, import duties, export duties, etc.
- 3.2. Other taxes on production      Other taxes on production consists of all taxes except taxes on products that enterprises incur as a result of engaging in production such as taxes payable on land, fixed assets or labour employed in the production process

*or certain activities or transactions. Examples of other taxes on production are taxes payable by enterprises for business licenses, payroll taxes, stamp duties, etc.*

**3.3. Subsidies on products** *A subsidy payable per unit of a good or service. The subsidy may be a specific amount of money per unit of quantity of a good or service, or it may be calculated ad valorem as a specified percentage of the price per unit of the goods or services. A subsidy on products usually becomes payable when the good or service is produced, sold or imported, but it may be also payable in other circumstances such as when a good is transferred, leased, delivered or used for own consumption or own capital formation.*

*The subsidy may be designed to influence resident enterprises' levels of production or the prices at which their outputs are sold.*

**3.4. Other subsidies on production** *Other subsidies on production consists of subsidies except subsidies on products that resident enterprises may receive as a consequence of engaging in production such as subsidies on payroll or workforce. The subsidy may be designed to influence the remuneration of the institutional units engaged in production.*

## **METHOD OF COMPILATION AND DATA SOURCES**

**1. Establishment of ICTSA** *The compilation of ICTSA is made possible due to the well established of System of National Accounts in Malaysia. The term "satellite account" is adopted to reflect the nature of the account developed. It is a "satellite" to the core set of National Accounts that presents additional information which is beyond the available information provided in the National Accounts.*

*This satellite information focuses on a particular aspect of the economy for example contribution of ICT to the nation. It also permits further linkages to additional information specific to ICT such as income, exports, imports and employment. ICT consists of industries such as manufacturing, trade, services and content & media.*

*The development of satellite account is a systematic statistical measurement that applies concepts, definitions and classification which are based on international standard to enable comparison among countries. Various information available in different agencies is compiled to provide holistic and better picture of the impact of ICT industry in Malaysia.*

**2. Framework of ICTSA** *The basis of ICTSA compilation in Malaysia is the framework of supply and use tables (SUT). However, it only focuses on ICT products and industries. The supply table indicates the goods and services of ICT products that are supplied by each producer. Meanwhile, use table tracks the usage of those products by industries, government, households and exports.*

*Supply of each product (valued at purchasers' prices) consists of;*

- *Domestic production by industry (valued at basic prices);*
- *Imports;*
- *Transport, retail and wholesale trade margins; and*
- *Taxes less subsidies on production and imports.*

*Use of each product (valued at purchasers' prices) consists of:*

- *Intermediate use by industries (products that are consumed by industries in the process of producing other products); and*
- *Final use by type of expenditure. Final use includes consumption households and government, products that have been capitalised, changes in inventories and exports.*

The following table illustrates the basic structure of SUT.

## SUPPLY TABLE

Supply of product	Output of industries at basic prices* (economic activities)				Imports (2)	Total supply at basic prices (3) = (1) + (2)	Trade and transport margins (4)	Taxes less subsidies on products (5)	Total supply at purchasers' prices** (6) = (3) + (4) + (5)
	Industry A	Industry B	Industry ...	Total industry (1)					
ICT product A	Output by product and by industry				Imports by product	Supply by product			
ICT product B									
ICT product C									
ICT product									
Total Supply (ICT product)	Total output by industry				Total imports	Total supply by product			

## USE TABLE

Use of product	Intermediate use by industry (economic activities)				Final consumption expenditure (2)	Gross capital formation (3)	Exports (4)	Total use at purchasers' prices** (5) = (1) + (2) + (3) + (4)
	Industry A	Industry B	Industry ...	Total intermediate use (1)				
ICT product A	Intermediate consumption by product and by industry				Final use by product and by type of expenditure***			
ICT product B								
ICT product C								
ICT product ...								
Total use (ICT product)	Total intermediate consumption by industry				Total final use by product and by type of expenditure***			
Compensation of employees	Value added by component and by industry							
Gross operating surplus								
Taxes less subsidies on production and imports								
Industry output at basic prices*								

Note:

\* Basic prices is the price received by the producer for a unit of good and service produced as output, excluding any tax payable or including any subsidy receivable on the product as a subsequent of its sales or use. It also excludes any delivery charges invoiced separately by the producer.

\*\* Purchasers' prices is the price paid by the purchaser to take delivery of a good and service at the time and place required by the purchaser. It includes any transport charges paid separately by the purchaser.

\*\*\* Type of expenditure refers to the final consumption expenditure, gross capital formation and exports.

A comprehensive use table includes primary inputs of production namely compensation of employees, gross operating surplus and other taxes less subsidies on products and production for each industry.

The SUT are used to assemble and integrate all data required to produce estimates of economic aggregates related to ICT. Output consists of those goods and services produced within an establishment which become available for use outside that establishment. The value of ICT output is the market value of ICT goods and services. Value added will be computed for ICT industry and other industries which produce ICT products.

**3. Measurement of e-commerce** Measurement of e-commerce value added is based on the manual OECD Internet Economy Outlook 2012. There are two recommended approaches, which are narrow and broad approaches. Narrow approach only takes into account value added from the wholesale and retail sectors. While, broad approach includes all industries across the economy.

It is assumed that the share of revenue from e-commerce to total revenue for each industry is proportional to the percentage of value added from e-commerce to the total value added for the same industry. Broad approach is used in measuring the e-commerce in Malaysia. E-commerce consists of the value of ICT industry and other industries.

**4. Data sources** The data sources in compiling ICTSA are as follows:

INDUSTRY / DATA	DATA SOURCES
ICT manufacturing industries ICT trade industries ICT services industries Publishing of books, periodicals and other publishing activities Motion picture, video and television programme activities Sound recording and music publishing activities Programming and broadcasting activities Other information service activities Other industries	<ul style="list-style-type: none"> <li>• Economic Census</li> <li>• Annual Survey</li> <li>• SUT</li> <li>• GDP</li> </ul>
Exports and imports of ICT goods and services	<ul style="list-style-type: none"> <li>• External Trade Statistics</li> <li>• Statistics of International Trade in Services</li> </ul>

<b>INDUSTRY / DATA</b>	<b>DATA SOURCES</b>
<i>Tax and subsidies</i>	<ul style="list-style-type: none"> <li>Accountant General's Department of Malaysia</li> <li>Royal Malaysian Customs Department</li> <li>GDP Income Approach</li> </ul>
<i>Government final consumption expenditure</i>	<ul style="list-style-type: none"> <li>Financial Accounts of Federal Government, State Government, Local Authorities and Statutory Bodies</li> </ul>
<i>Private final consumption expenditure</i>	<ul style="list-style-type: none"> <li>Household Expenditure Survey</li> </ul>
<i>Gross capital formation</i>	<ul style="list-style-type: none"> <li>GDP</li> <li>Gross Fixed Capital Formation</li> </ul>
<i>Compensation of employees</i>	<ul style="list-style-type: none"> <li>Household Income Survey</li> <li>Financial Accounts of Federal Government, State Government, Local Authorities and Statutory Bodies</li> <li>Labour Force Survey</li> <li>GDP Income Approach</li> </ul>
<i>Gross operating surplus</i>	<ul style="list-style-type: none"> <li>GDP Income Approach</li> </ul>
<i>Employment</i>	<ul style="list-style-type: none"> <li>Labour Force Survey</li> <li>Annual Economic Survey</li> <li>Quarterly Survey of Services</li> <li>Monthly Manufacturing Survey</li> <li>Monthly Survey of Wholesale &amp; Retail Trade</li> </ul>

**5. Main tables  
Malaysia's  
ICTSA**

*ICTSA comprises of nine (9) tables of each table and the explanation are as follows:*

**Table 1      *ICT industry and other industries that produce ICT products***

*Table 1 contains the statistics on all industries that produce ICT products. This table derived from SUT 2015 according to the ICT product classification. For the subsequent years, data is based on published Annual GDP.*

**Table 2A, 2B and 2C**      **Supply and use of ICT products**

*Table 2A, 2B and 2C present the statistics on the supply and use of ICT products. The value of supply must be equal to the value of use of ICT product. The data on the supply and use of ICT products are derived from the SUT 2015. For the subsequent years, data are based on published Annual GDP. Industry and products have been selected based on the ICTSA classification. Supply of ICT products data comprises of domestic production of ICT products, imports of ICT products and tax less subsidies on ICT products. Use of ICT products data consists of intermediate use of ICT products, final consumption expenditure of ICT products by households and governments, gross capital formation for ICT products and export of ICT products.*

**Table 3 and Table 4**      **Exports and imports of ICT products**

*Tables 3 and 4 consists the exports and imports statistics for ICT products. Data from goods extracted from the customs declaration (International Trade Statistics) where the compilation is based on the Harmonized Commodity Description and Coding Systems (HS) code. Meanwhile, the value of the exports and imports services is derived from the balance of payments statistics. The arrangement also took into account the recommendations by the SNA 2008 and Balance of Payments and International Investment Position Manual Sixth Edition (BPM6) particularly in implementation on treatment of Goods for Processing from Abroad (GFP) and Manufacturing Services (MS).*

**Table 5**      **Income components of ICT industry**

*Table 5 consists statistics on Income components of ICT industry comprises of compensation of employees, gross operating surplus and taxes less subsidies on production and imports. This statistics is derived using on SUT 2015 according to the industry that produces ICT products. For the subsequent years, data is based on published Annual GDP Income Approach.*

**Table 6**      **Employment in the ICT industry**

*Table 6 is statistics on employment data in the ICT industry. The statistics is compiled using Labor Force Survey, Annual Economic Survey, Quarterly Survey of Services, Monthly Manufacturing Survey and Monthly Survey of*

Wholesale & Retail Trade are obtained by the Department of Statistics Malaysia.

**Table 7A, 7B and 7C**      **Gross Value Added of ICT industry**

*Table 7A, 7B and 7C* comprise the Value Added statistics of ICT industry at current prices. Its measure the Gross Value Added of ICT industries as a whole, whether the output is provided for ICT or non ICT products. Data is based on published Annual GDP.

**Table 8A and 8B**      **Gross Value Added of e-commerce**

There are two table for e-commerce. **Table 8A** are present the Gross Value Added statistics of e-commerce by ICT industry while **Table 8B** was Gross Value Added of e-commerce by main sector. Measurement of e-commerce value added is based on the OECD Internet Economy Outlook 2012. Data are based on the percentage of e-commerce revenues by industries from the Economic Census 2016.

**Table 9**      **ICT contribution to economy**

**Table 9** is statistics to economy which is comprises Gross Value Added of the ICT industry (**Table 7**) and the Gross Value Added of e-commerce by other industries (**Table 8A**).

**6. Publication and data revision**      This publication presents ICTSA for the year 2015 to 2022. The series will be updated whenever any latest data available.

**7. Symbols**

-	: negative
..	: not applicable
e	: estimate
p	: preliminary
0	: value less than 0.05
%	: per cent





**KOD DAN KLASIFIKASI**  
***CODES AND CLASSIFICATIONS***

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# KOD DAN KLASIFIKASI

Klasifikasi industri TMK adalah berdasarkan Piawaian Klasifikasi Industri Malaysia (MSIC) 2008 Ver.1.0 yang diselaraskan dengan *International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4*. Klasifikasi bagi produk TMK adalah berdasarkan Klasifikasi Produk Mengikut Aktiviti Malaysia (MCPA) 2009 yang diselaraskan dengan *Central Products Classification (CPC) Ver. 2*.

## Industri TMK

Keterangan		ISIC Rev. 4	MSIC 2008
<b>1. Pembuatan TMK</b>			
1.1	Komputer dan kelengkapan peranti		
1.1.1	Pembuatan komputer dan kelengkapan peranti	2620	26201, 26202
1.2	Komponen & papan elektronik, peralatan komunikasi dan elektronik pengguna		
1.2.1	Pembuatan komponen dan papan elektronik	2610	26101, 26102, 26103, 26104, 26105, 26109
1.2.2	Pembuatan peralatan komunikasi	2630	26300
1.2.3	Pembuatan elektronik pengguna	2640	26400
1.2.4	Pembuatan media magnetik dan optikal	2680	26800
<b>2. Perdagangan TMK</b>			
2.1	Perdagangan borong		
2.1.1	Jualan borong barang sukan, barang permainan, barang kulit, barang pengembaraan dan peralatan muzik	4643	46432, 46434
2.1.2	Jualan borong lain-lain barangan isi rumah t.t.t.l.	4649	46496
2.1.3	Jualan borong komputer, peralatan peranti komputer ( <i>peripheral</i> ) dan perisian	4651	46510
2.1.4	Jualan borong kelengkapan dan komponen (termasuk alat ganti) elektronik dan telekomunikasi	4652	46521, 46522
2.1.5	Jualan borong lain-lain jentera dan kelengkapan	4659	46593
2.1.6	Jualan borong bahan buangan dan sekerap dan produk lain t.t.t.l.	4669	46699
2.2	Perdagangan runcit		
2.2.1	Jualan runcit di kedai khusus yang menjual komputer, peralatan peranti komputer ( <i>peripheral</i> ), sofwer dan peralatan telekomunikasi	4741	47411, 47412, 47413
2.2.2	Jualan runcit di kedai yang khusus menjual peralatan audio dan video	4742	47420
2.2.3	Jualan runcit di kedai khusus yang menjual peralatan elektrik, perabot, lampu dan barangan lain isi rumah	4759	47597, 47598

Keterangan		ISIC Rev. 4	MSIC 2008
2.2.4	Jualan runcit di kedai khusus yang menjual buku, akhbar dan alat tulis	4761	47611
2.2.5	Jualan runcit di kedai khusus yang menjual instrumen muzik dan rakaman video	4762	47620
2.2.6	Jualan runcit di kedai khusus yang menjual permainan dan barang mainan	4764	47640
2.2.7	Jualan runcit di kedai khusus yang menjual barang baru lain	4773	47731
2.2.8	Jualan runcit barang terpakai	4774	47742
2.2.9	Jualan runcit barangan lain di gerai dan pasar	4789	47892, 47893, 47894, 47895
2.2.10	Jualan runcit melalui pesanan mel atau internet	4791	47911, 47912, 47913, 47914
2.2.11	Lain-lain jualan bukan di kedai, gerai atau pasar	4799	47992
<b>3. Perkhidmatan TMK</b>			
3.1	Telekomunikasi		
3.1.1	Aktiviti telekomunikasi berwayar	6110	61101, 61102
3.1.2	Aktiviti telekomunikasi tanpa wayar	6120	61201, 61202
3.1.3	Aktiviti telekomunikasi satelit	6130	61300
3.1.4	Aktiviti telekomunikasi lain	6190	61901, 61902, 61903, 61904, 61905, 61909
3.2	Pengaturcaraan komputer, perundingan, maklumat dan aktiviti yang berkaitan		
3.2.1	Aktiviti pengaturcaraan komputer	6201	62010
3.2.2	Aktiviti perundingan komputer dan pengurusan kemudahan komputer	6202	62021, 62022
3.2.3	Aktiviti perkhidmatan teknologi maklumat dan komputer lain	6209	62091, 62099
3.2.4	Aktiviti prosesan data, <i>hosting</i> dan yang berkaitan	6311	63111, 63112
3.2.5	Web portal	6312	63120
3.3	Perkhidmatan TMK lain		
3.3.1	Pembaikan mesin	3312	33120
3.3.2	Pembaikan peralatan elektronik dan optikal	3313	33131, 33133
3.3.3	Pembaikan bagi peralatan elektrik	3314	33140
3.3.4	Pemasangan bagi perindustrian mesin dan kelengkapan	3320	33200

Keterangan		ISIC Rev. 4	MSIC 2008
3.3.5	Pemasangan elektrik	4321	43212, 43213, 43214, 43216
3.3.6	Pemasangan sistem paip, pemanasan dan pendinginan udara	4322	43223
3.3.7	Penerbitan perisian yang sedia cipta (bukan tempahan khas)	5820	58201, 58202, 58203
3.3.8	Penyelidikan dan pembangunan eksperimen sains semula jadi dan kejuruteraan	7210	72106
3.3.9	Aktiviti profesional, saintifik dan teknikal lain t.t.t.l.	7490	74903
3.3.10	Aktiviti perkhidmatan sistem keselamatan	8020	80200
3.3.11	Aktiviti perkhidmatan awam am	8411	84111, 84112
3.3.12	Pembaikan komputer dan peralatan sampingan	9511	95111, 95112, 95113
3.3.13	Pembaikan dan penyelenggaraan peralatan komunikasi	9512	95121, 95122, 95123, 95124, 95125, 95126, 95127
3.3.14	Pembaikan peralatan elektronik pengguna	9521	95211, 95212, 95213, 95214
3.3.15	Pembaikan kelengkapan isi rumah dan peralatan rumah dan halaman	9522	95221
<b>4. Kandungan dan media</b>			
4.1	Aktiviti penerbitan buku, terbitan berkala dan penerbitan lain	1811, 1812, 1820, 5811, 5812, 5813, 5819, 8219	18110, 18120, 18200, 58110, 58120, 58130, 58190, 82196, 82199
4.2	Aktiviti wayang gambar, video dan program televisyen	5911, 5912, 5913, 5914, 7410, 7420, 9000	59110, 59120, 59130, 59140, 74102, 74200, 90009
4.3	Kandungan dan media lain		
4.3.1	Aktiviti rakaman bunyi dan penerbitan muzik	5920	59200
4.3.2	Aktiviti pemrograman dan penyiaran	6010, 6020	60100, 60200
4.3.3	Aktiviti perkhidmatan maklumat lain	6391, 6399, 8220, 9329	63910, 63990, 82200, 93297

## Produk TMK

Keterangan		CPC Ver. 2	MCPA 2009 (5 Digit)
<b>1. Barangan TMK</b>			
1.1	Komputer dan kelengkapan peranti	45142, 45221, 45222, 45230, 45240, 45250, 45261, 45262, 45263, 45264, 45265, 45266, 45269, 45271, 45272, 45289, 45290, 47315, 47550	26201, 26202, 28170
1.2	Kelengkapan komunikasi	46921, 47211, 47212, 47213, 47221, 47222, 47223, 47401, 54612, 54613	26300, 43216
1.3	Kelengkapan elektronik pengguna	38581, 47214, 47215, 47311, 47312, 47313, 47314, 47321, 47323, 47330, 47402, 48321, 48322, 48323, 48324, 48330, 48353, 88748	26400, 26701, 26702, 32400
1.4	Pelbagai komponen dan barangan TMK	45281, 47130, 47140, 47150, 47160, 47173, 47403, 47530, 47540, 47590, 47910, 47920, 48220, 48244, 48315, 48354	26101, 26102, 26104, 26105, 26109, 26511, 26800, 32909
<b>2. Perkhidmatan TMK</b>			
2.1	Perkhidmatan pembuatan bagi kelengkapan TMK	88741, 88742, 88743, 88744, 88749	26103
2.2	Perkhidmatan perniagaan dan produktiviti perisian dan pelesenan	47811, 47812, 47813, 47814, 47821, 47829, 73311, 81129, 83143, 84341, 84342, 84392, 85220, 85230	58201, 58203, 72106, 74903, 80200
2.3	Perkhidmatan dan perundingan teknologi maklumat	83117, 83131, 83132, 83141, 83142, 83151, 83152, 83159, 83161, 83162	62010, 62021, 62022, 63111, 63112, 70201
2.4	Perkhidmatan telekomunikasi	84110, 84121, 84122, 84131, 84132, 84140, 84150, 84190, 84210, 84221, 84222, 84290, 85931, 85939	61101, 61201, 61300, 61901, 61902, 61903, 61904, 61905, 61909, 82200
2.5	Perkhidmatan pajakan atau sewaan kelengkapan TMK	73124, 73210, 73215	77292, 77301, 77307
2.6	Perkhidmatan TMK lain	54614, 83325, 87120, 87130, 87151, 87152, 87153, 87155, 87331, 87332, 87340, 87350	33120, 33140, 33200, 43213, 43214, 62099, 71102, 95111, 95112, 95113, 95121, 95122, 95123, 95124, 95125, 95126, 95127, 95211, 95212, 95213, 95214, 95221
<b>3. Produk kandungan dan media</b>			
3.1	Cetakan dan lain-lain kandungan berasaskan teks pada media fizikal dan perkhidmatan berkaitan	32210, 32220, 32230, 32291, 32292, 32299, 32300, 32410, 32420, 32490, 32511, 32530, 32540, 32620, 32630, 32690, 32800, 47691, 47692, 83631, 84311, 85951, 89121	18110, 18120, 58110, 58120, 58130, 58190, 82196, 82199

Keterangan		CPC Ver. 2	MCPA 2009 (5 Digit)
3.2	Kandungan wayang gambar, video, televisyen dan radio dan perkhidmatan berkaitan	38950, 47620, 83632, 83919, 84611, 84612, 84621, 84622, 84631, 84632, 84633, 84634, 96121, 96122, 96123, 96131, 96132, 96133, 96134, 96135, 96136, 96137, 96139, 96140, 96150	59110, 59120, 59130, 59140, 60100, 60200, 74102
3.3	Kandungan muzik dan perkhidmatan berkaitan	32520, 47610, 89123, 96111, 96112, 96113	18200, 59200
3.4	Perisian permainan	38582, 47822, 84391	58202
3.5	Kandungan atas talian dan perkhidmatan berkaitan	73312, 83633, 84311, 84312, 84313, 84321, 84322, 84331, 84332, 84393, 84394, 84399	63120
3.6	Lain-lain kandungan dan perkhidmatan berkaitan	38941, 38942, 47699, 73320, 83611, 83620, 83639, 83811, 83812, 83813, 83814, 83815, 83819, 83820, 83940, 84410, 84420, 85991, 89110, 96330	63910, 63990, 73100, 74200, 90001, 90002, 90003, 90004, 90005, 90006, 90007, 90009

# CODES AND CLASSIFICATIONS



The classification of ICT industry is based on Malaysia Standard Industrial Classification (MSIC) 2008 Ver.1.0. which is in concordance with International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4. The classification of ICT products is based on Malaysian Classification of Products by Activity (MCPA) 2009 which conforms with Central Products Classification (CPC) Ver. 2.

## ICT industry

Description		ISIC Rev. 4	MSIC 2008
<b>1. ICT manufacturing</b>			
1.1	Computers and peripheral equipment		
1.1.1	Manufacture of computers and peripheral equipment	2620	26201, 26202
1.2	Electronic components & boards, communication equipment and consumer electronics		
1.2.1	Manufacture of electronic components and boards	2610	26101, 26102, 26103, 26104, 26105, 26109
1.2.2	Manufacture of communication equipment	2630	26300
1.2.3	Manufacture of consumer electronics	2640	26400
1.2.4	Manufacture of magnetic and optical media	2680	26800
<b>2. ICT trade</b>			
2.1	Wholesale trade		
2.1.1	Wholesale of sports goods, games, leather, travelling goods and musical instruments	4643	46432, 46434
2.1.2	Wholesale of other household goods n.e.c.	4649	46496
2.1.3	Wholesale of computers, computer peripheral equipment and software	4651	46510
2.1.4	Wholesale of electronic and telecommunications equipment and parts	4652	46521, 46522
2.1.5	Wholesale of other machinery and equipment	4659	46593
2.1.6	Wholesale of waste and scrap and other products n.e.c.	4669	46699
2.2	Retail trade		
2.2.1	Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores	4741	47411, 47412, 47413
2.2.2	Retail sale of audio and video equipment in specialized stores	4742	47420
2.2.3	Retail sale of electrical household appliances, furniture, lighting equipment and other household articles in specialized stores	4759	47597, 47598
2.2.4	Retail sale of books, newspapers and stationary in specialized stores	4761	47611



Description		ISIC Rev. 4	MSIC 2008
2.2.5	Retail sale of music and video recordings in specialized stores	4762	47620
2.2.6	Retail sale of games and toys in specialized stores	4764	47640
2.2.7	Other retail sale of new goods in specialized stores	4773	47731
2.2.8	Retail sale of second-hand goods	4774	47742
2.2.9	Retail sale via stall and market of other goods	4789	47892, 47893, 47894, 47895
2.2.10	Retail sale via mail order houses or via Internet	4791	47911, 47912, 47913, 47914
2.2.11	Other retail sale not in stores, stalls or markets	4799	47992
<b>3. ICT services</b>			
3.1	Telecommunications		
3.1.1	Wired telecommunications activities	6110	61101, 61102
3.1.2	Wireless telecommunications activities	6120	61201, 61202
3.1.3	Satellite telecommunications activities	6130	61300
3.1.4	Other telecommunications activities	6190	61901, 61902, 61903, 61904, 61905, 61909
3.2	Computer programming, consultancy, information and related activities		
3.2.1	Computer programming activities	6201	62010
3.2.2	Computer consultancy and computer facilities management activities	6202	62021, 62022
3.2.3	Other information technology and computer service activities	6209	62091, 62099
3.2.4	Data processing, hosting and related activities	6311	63111, 63112
3.2.5	Web portals	6312	63120
3.3	Other ICT services		
3.3.1	Repair of machinery	3312	33120
3.3.2	Repair of electronic and optical equipment	3313	33131, 33133
3.3.3	Repair of electrical equipment	3314	33140
3.3.4	Installation of industrial machinery and equipment	3320	33200
3.3.5	Electrical installation	4321	43212, 43213, 43214, 43216
3.3.6	Plumbing, heat and air-conditioning installation	4322	43223
3.3.7	Publishing of ready-made (non-customized) software	5820	58201, 58202, 58203
3.3.8	Research and experimental development on natural sciences and engineering	7210	72106

<b>Description</b>		<b>ISIC Rev. 4</b>	<b>MSIC 2008</b>
3.3.9	<i>Other professional, scientific and technical activities n.e.c.</i>	7490	74903
3.3.10	<i>Security systems service activities</i>	8020	80200
3.3.11	<i>General public administration activities</i>	8411	84111, 84112
3.3.12	<i>Repair of computers and peripheral equipment</i>	9511	95111, 95112, 95113
3.3.13	<i>Repair of communication equipment</i>	9512	95121, 95122, 95123, 95124, 95125, 95126, 95127
3.3.14	<i>Repair of consumer electronics</i>	9521	95211, 95212, 95213, 95214
3.3.15	<i>Repair of household appliances and home and garden equipment</i>	9522	95221
<b>4. Content and media</b>			
4.1	<i>Publishing of books, periodicals and other publishing activities</i>	1811, 1812, 1820, 5811, 5812, 5813, 5819, 8219	18110, 18120, 18200, 58110, 58120, 58130, 58190, 82196, 82199
4.2	<i>Motion picture, video and television programme activities</i>	5911, 5912, 5913, 5914, 7410, 7420, 9000	59110, 59120, 59130, 59140, 74102, 74200, 90009
4.3	<i>Other content and media</i>		
4.3.1	<i>Sound recording and music publishing activities</i>	5920	59200
4.3.2	<i>Programming and broadcasting activities</i>	6010, 6020	60100, 60200
4.3.3	<i>Other information service activities</i>	6391, 6399, 8220, 9329	63910, 63990, 82200, 93297

## ICT products

Description		CPC Ver. 2	MCPA 2009 (5 Digit)
<b>1. ICT goods</b>			
1.1	Computers and peripheral equipment	45142, 45221, 45222, 45230, 45240, 45250, 45261, 45262, 45263, 45264, 45265, 45266, 45269, 45271, 45272, 45289, 45290, 47315, 47550	26201, 26202, 28170
1.2	Communication equipment	46921, 47211, 47212, 47213, 47221, 47222, 47223, 47401, 54612, 54613	26300, 43216
1.3	Consumer electronic equipment	38581, 47214, 47215, 47311, 47312, 47313, 47314, 47321, 47323, 47330, 47402, 48321, 48322, 48323, 48324, 48330, 48353, 88748	26400, 26701, 26702, 32400
1.4	Miscellaneous ICT components and goods	45281, 47130, 47140, 47150, 47160, 47173, 47403, 47530, 47540, 47590, 47910, 47920, 48315, 48354, 48220, 48244	26101, 26102, 26104, 26105, 26109, 26511, 26800, 32909
<b>2. ICT services</b>			
2.1	Manufacturing services for ICT equipment	88741, 88742, 88743, 88744, 88749	26103
2.2	Business and productivity software and licensing services	47811, 47812, 47813, 47814, 47821, 47829, 73311, 81129, 83143, 84341, 84342, 84392, 85220, 85230	58201, 58203, 72106, 74903, 80200
2.3	Information technology consultancy and services	83117, 83131, 83132, 83141, 83142, 83151, 83152, 83159, 83161, 83162	62010, 62021, 62022, 63111, 63112, 70201
2.4	Telecommunications services	84110, 84121, 84122, 84131, 84132, 84140, 84150, 84190, 84210, 84221, 84222, 84290, 85931, 85939	61101, 61201, 61300, 61901, 61902, 61903, 61904, 61905, 61909, 82200
2.5	Leasing or rental services for ICT equipment	73124, 73210, 73215	77292, 77301, 77307
2.6	Other ICT services	54614, 83325, 87120, 87130, 87151, 87152, 87153, 87155, 87331, 87332, 87340, 87350	33120, 33140, 33200, 43213, 43214, 62099, 71102, 95111, 95112, 95113, 95121, 95122, 95123, 95124, 95125, 95126, 95127, 95211, 95212, 95213, 95214, 95221
<b>3. Content and media products</b>			
3.1	Printed and other text-based content on physical media, and related services	32210, 32220, 32230, 32291, 32292, 32299, 32300, 32410, 32420, 32490, 32511, 32530, 32540, 32620, 32630, 32690, 32800, 47691, 47692, 83631, 84311, 85951, 89121	18110, 18120, 58110, 58120, 58130, 58190, 82196, 82199

<b>Description</b>		<b>CPC Ver. 2</b>	<b>MCPA 2009 (5 Digit)</b>
3.2	<i>Motion picture, video, television and radio content, and related services</i>	38950, 47620, 83632, 83919, 84611, 84612, 84621, 84622, 84631, 84632, 84633, 84634, 96121, 96122, 96123, 96131, 96132, 96133, 96134, 96135, 96136, 96137, 96139, 96140, 96150	59110, 59120, 59130, 59140, 60100, 60200, 74102
3.3	<i>Music content and related services</i>	32520, 47610, 89123, 96111, 96112, 96113	18200, 59200
3.4	<i>Games software</i>	38582, 47822, 84391	58202
3.5	<i>On-line content and related services</i>	73312, 83633, 84311, 84312, 84313, 84321, 84322, 84331, 84332, 84393, 84394, 84399	63120
3.6	<i>Other content and related services</i>	38941, 38942, 47699, 73320, 83611, 83620, 83639, 83811, 83812, 83813, 83814, 83815, 83819, 83820, 83940, 84410, 84420, 85991, 89110, 96330	63910, 63990, 73100, 74200, 90001, 90002, 90003, 90004, 90005, 90006, 90007, 90009



