



MINISTRY OF ECONOMY
DEPARTMENT OF STATISTICS MALAYSIA



Online Training Course on 'Basic Statistics for Diplomats'

Compilation of GDP Production and Income Approach

20 March 2023





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ACCOUNTS AND GDP**

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**MALAYSIA'S ECONOMIC
PERFORMANCE**

1. INTRODUCTION TO NATIONAL ACCOUNTS AND GDP





WHAT IS SYSTEM OF NATIONAL ACCOUNTS?



SYSTEM OF NATIONAL ACCOUNTS

The System of National Accounts (SNA) is the **internationally agreed standard set of recommendations on how to compile measures of economic activity** in accordance with strict accounting conventions based in economic principles

The recommendations are expressed in terms of a set of **concepts, definitions, classifications and accounting rules that comprise the internationally agreed standard** for measuring such items as **gross domestic product (GDP)**, the most frequently quoted indicator of economic performance

The accounting framework of the SNA allows economic data to be compiled and presented in a format that is designed for purposes of **economic analysis, decision-taking and policymaking**

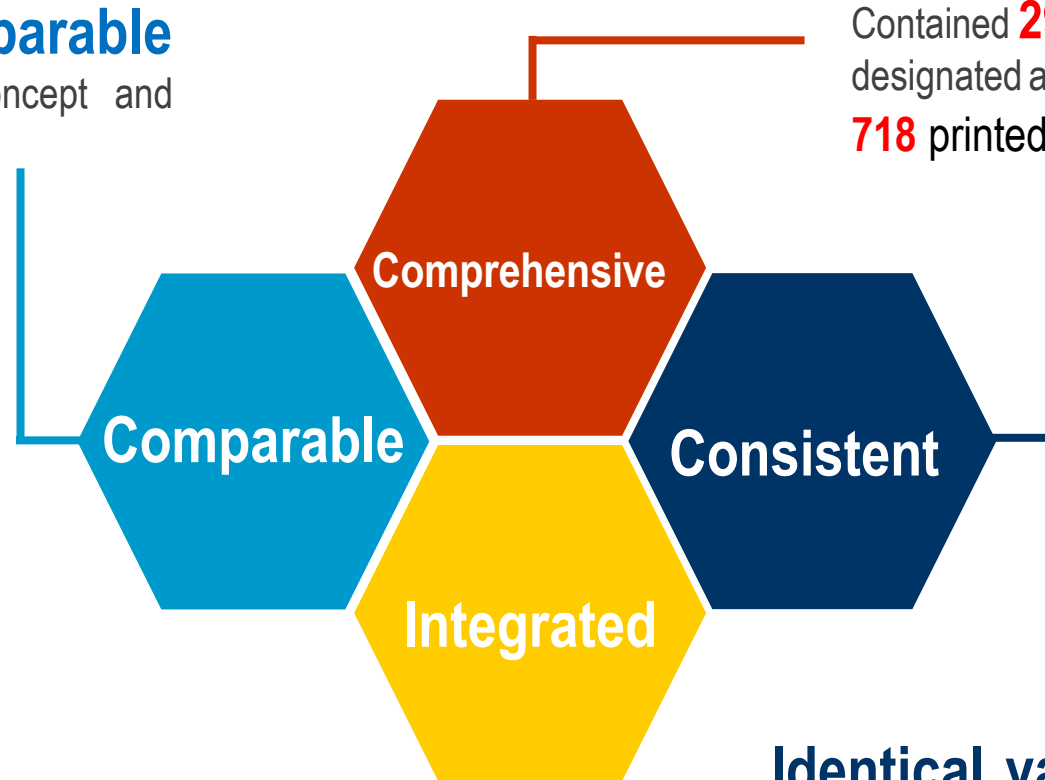


STRENGTH OF THE SNA



Internationally comparable

in terms of classification, concept and definition



Contained **29 chapters** with all designated activities are covered.
718 printed pages

All consequences of single economic action are captured in the accounts and balance sheets - constitute a
coherent, closed system

Identical values are used for the consequences of a single economic action



BASIC IDEAS OF SNA



- 01 **Who are the players?** ➔ Institutional Units
- 02 **What do they do?** ➔ Engage in Production, Consumption, Accumulation
- 03 **How is this measured?** ➔ By means of transactions and other flows explaining the evolution of stocks of assets
- 04 **How is this information presented?** ➔ In economic accounts



To understand the macro economy, we need to measure it.

Chief measure of economy is the level of production.

We need to combine the many goods produced or consumed in an economy into one measure.



“

Without measures of economic aggregates like GDP, policymakers would be adrift in a sea of unorganized data. The GDP and related data are like beacons that help policymakers steer the economy toward the key economic objectives

”

Paul Samuelson, in Samuelson and Nordhaus (1995)



WHAT CONSTITUTES AN ECONOMY?



Economic Territory

- Geographic territory administered by the government of the country within which persons, goods, and capital can circulate freely

Residence

- An institutional unit is treated as a resident unit of a country when it has **centre of predominant economic interest** in its economic territory

Institutional units

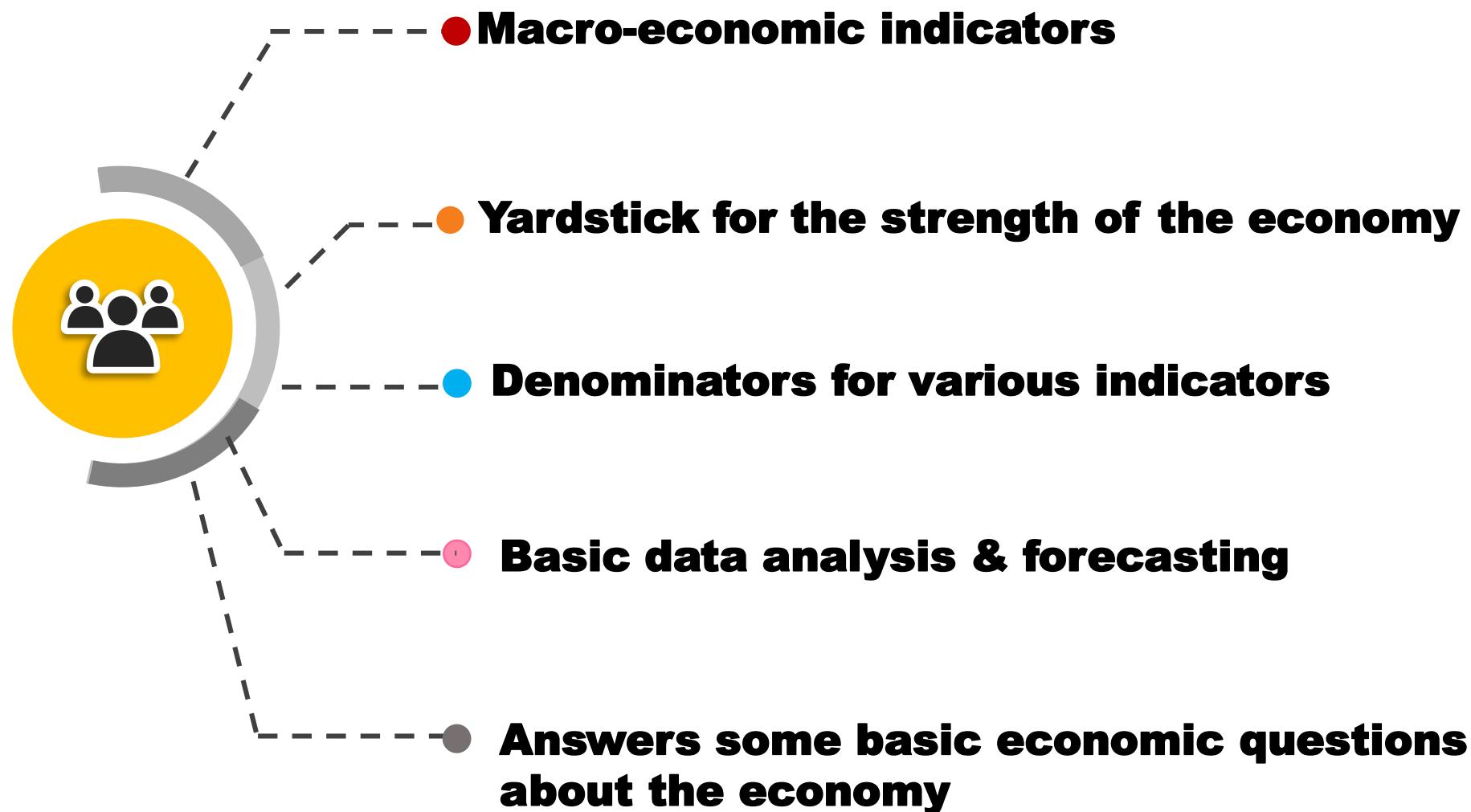
- The basic building blocks used to compile statistics by economic sector
- Owning assets
- Incurring liabilities
- Engaging in economic activities and transportations with other economic units
- Having a full set of accounts



- What is GDP?
 - Statistics that measures the value of all goods and services produced in the country
 - The broadest and most comprehensive measure of the economy that is widely accepted
- Uses of the GDP Statistics
 - Monitoring the behaviour of the economy
 - Macroeconomic analysis
 - International comparisons



THE IMPORTANCE OF GDP



2. HOW TO MEASURE GDP?





HOW TO MEASURE?



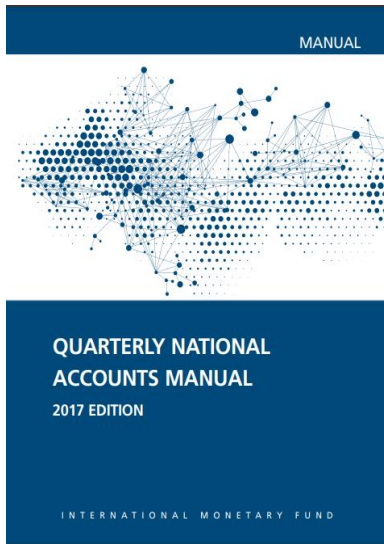
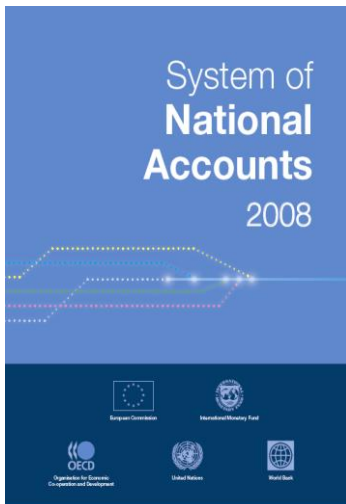
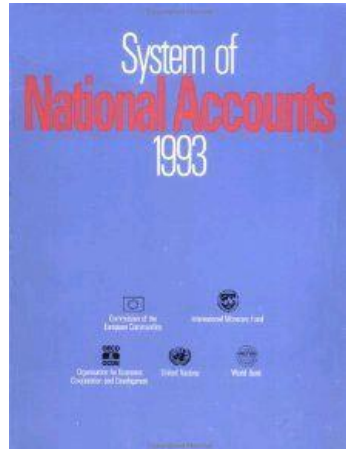
GROSS DOMESTIC PRODUCT (GDP)		
<p>Production Approach</p> <p>What is produced? Value of total production of goods and services by resident of a country</p> <div> <p>Value Added = Output – Intermediate Consumption</p> </div>	<p>Expenditure Approach</p> <p>What is spent? + Final Private Consumption + Gov. Final Consumption + GFCF + Changes in Inventories + Export – Import</p>	<p>Income Approach</p> <p>What is earned? Wages, dividends, and saving + Compensation of employees + Gross Operating Surplus + (Taxes – Subsidies)</p>
Changes in Output & Intermediate Input Components	Changes in Demand Components i.e Domestic Economy as well as Rest of The World Components	Changes in Income Components
<p>Critical Factors :</p> <p>Methods of compilation that applied, Business Reporting – accuracy and reliability of Data Sources, Change of activity of Companies / Establishment, Concept & Definition, Classification, Timeliness & Frequency of Reporting, Level of Analysis and Interpretation.</p>		



- **GDP at current prices** measures the value of output at the prices prevailing in the period during which the output is produced.
- **GDP at constant prices** or real GDP measures the value of output produced in any one period at the **price of the base year**.



MANUAL



SYSTEM OF NATIONAL ACCOUNTS, UNITED NATIONS (2008 SNA)

- 1) The **original motivation** for the development of national accounts and the systematic measurement of employment was the need for **accurate measures of aggregate economic activity**
- 2) 2008 SNA was prepared under the auspices of the Inter-Secretariat Working Group on National Accounts (ISWGNA).
- 3) ISWGNA consists of five organizations:
 - i. IMF
 - ii. OECD
 - iii. UNSD
 - iv. EUROSTAT
 - v. World Bank



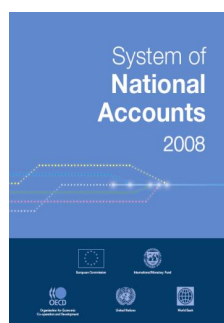
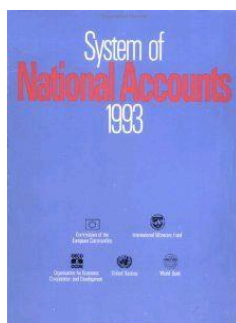
MANUAL & CLASSIFICATION



MANUAL

- SYSTEM OF NATIONAL ACCOUNTS, UNITED NATIONS (2008 SNA)

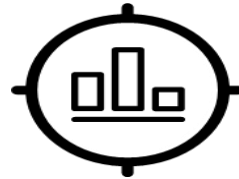
CLASSIFICATION



- **PRODUCT & INDUSTRY CLASSIFICATION**
 - Malaysia Standard Industrial Classification 2008 (MSIC 2008)
 - Malaysia Classification of Products by Activity (MCPA 2009)
 - Central Product Classification (CPC)
 - External Trade: Harmonized System (HS); SITC; AHTN; BEC
- **OTHER INTERNATIONAL CLASSIFICATION**
 - Household Consumption:
Classification of Expenditure According to Purpose (COICOP)
 - Government Function:
Classification of Function of Government (COFOG)
 - Non Profit Institutions:
Classification of Purpose of NPISH (COPNI)



HOW TO MEASURE?



HOW WE GET STARTED?

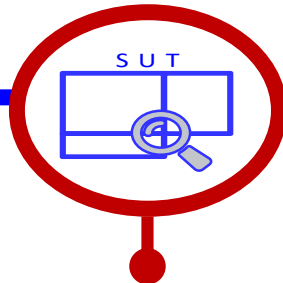
ECONOMIC CENSUS

- 662,939 establishment in 2010 and almost 921 thousands in 2015
- Every 5 years (2000, 2005, 2010, 2015)



BENCHMARK GDP

- Estimation in Current & Constant prices
- Output, Input & VA
- 1174 Industries



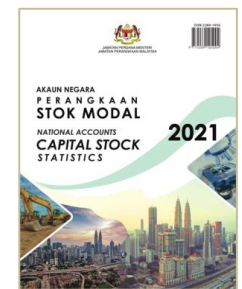
SUPPLY AND USE TABLES

- 1174 industries x 1174 commodities
- Commodity balancing

ANNUAL GDP



OTHER NATIONAL ACCOUNT PRODUCTS



GDP BY PRODUCTION APPROACH



ECONOMIC ACTIVITY	VALUE 2021 AT CURRENT PRICES (RM Billion)
Services	838.3
Manufacturing	362.7
Mining & Quarrying	123.6
Agriculture	148.2
Construction	55.6
plus Import duties	17.0
GDP	1,545.4

- **GDP:** Σ Value Added made by individual producer, industry or sector.
- **Value Added (VA):** is the value of output less the value of intermediate consumption (IC)
- **Output :** Goods & Services produced by establishment
- **IC :** Goods & Services consumed as input in a process of production
- Example:
 Output = RM 1,000
 IC = RM 650
VA = Output – IC
 = RM 1,000 – RM 650
 = RM 350 #

Source: [DOSM](http://DOSM.gov.my)



- ❖ The measurement of the output of agriculture, forestry and fishing is complicated by the fact the process of production may extend over many months, or even years.
- ❖ Growing crops, standing timber, and stocks of fish or livestock reared for purposes of food have to be treated as work-in progress that is, as output which is not yet sufficiently processed to be in a form which is ready to be marketed.
- ❖ When the **crops are harvested**, the trees felled, or the livestock slaughtered, the process of **production is completed** and the **work-in-progress is transformed into inventories** of finished products **ready for sale or other use**.
- ❖ **Output should be recorded as being produced continuously** over the entire period of production and not simply at the moment of time when the process is completed, i.e., when the crops are harvested or animals slaughtered.



MINING & QUARRYING



- Mining and Quarrying includes all units mainly engaged in mining, in exploration for minerals, and in the provision of a wide variety of services to mining and mineral exploration, as well as mining units under development.
- Include extraction, dressing and beneficiating of minerals occurring naturally as solids such as coal and ores, liquids such as crude oil, or gases such as natural gas.

- ❑ Manufacturing, includes the **physical or chemical transformation** of materials, substances, or components into new products, although this cannot be used as the single universal criterion for defining manufacturing. The materials, substances, or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities. Substantial alteration, renovation or reconstruction of goods is generally considered to be manufacturing...MSIC 2008
- ❑ **Output** consists of those goods or services that are produced within an establishment that become **available for use outside that establishment, plus any goods and services produced for own final use.**
- ❑ **Intermediate consumption (Input)** consists of the value of the goods and services **consumed as inputs by a process of production, excluding fixed assets** whose consumption is recorded as consumption of fixed capital; the goods or services may be either transformed or used up by the production process.



Construction industry activity normally required **longer time period** to complete. The estimation of output for construction industry based on SNA 2008 is as follows:

*‘The production of high value capital goods such as ships, heavy machinery, **buildings and other structures** may take several months of year to complete. The output from such production must usually be **measured by work-in-progress** and cannot be recorded simply at the moment in time when the process of production is completed’.*

The value work-in-progress also which translated into **value of work done** for specified period of time is used to measure the value of output for construction.

Source: System of National Accounts 2008, The Production Account, page 112



The value of gross **output of Services** is defined to include the following items:

Income from services rendered

- + Value of goods sold in the same condition as purchased
- + Management services
- + Commission and brokerage earned
- + Fees earned from membership
- + Rental income received except land rental
- + Other operating income
- + Service tax and services charges
- Value of goods purchased for resale in the same condition
- + Closing stocks - Opening stocks
- + Research and development expenditure (In-house)

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

All other input costs (including training and value of the free apparel provided for the workers)

- + Purchase of goods, materials and services
- + Insurance premiums
- + Royalty and patent fees
- + Bank charges
- + Purchase of electricity and water
- + Purchase of fuels, lubricants and gas
- + Research and development expenditure
- + Environmental compliance expenditure
- + Other operating expenditure



DATA SOURCES



Activity

Primary

Secondary

AGRICULTURE

1. Monthly/Annual Rubber Statistic
2. Economic Census

1. Malaysian Rubber Board
2. Malaysian Cocoa Board
3. Malaysian Palm Oil Board
4. MOA, DOA, DOF, DOV, Forestry Department

MANUFACTURING

1. Monthly/ Annual Survey
2. Economic Census

1. External Trade Data
2. Accountant General

MINING & QUARRYING

1. Petroleum and Natural Gas Census
2. Economic Census

1. Petroliaam Nasional Berhad (PETRONAS)
2. Mineral & Geoscience Department, Malaysia
3. External Trade Data
4. Construction Industry



Activity

CONSTRUCTION

Primary

1. Quarterly Construction Statistics
2. Economic Census

Secondary

Administrative Data (MOF)

SERVICES

1. Quarterly Distributive Trade Survey
2. Quarterly Services Survey
3. Census of Accommodation Services
4. Census/Survey of Transport Services
5. Census of Communication Services
6. Economic Census

1. Water board, private sector producers and distributors of electricity and water
2. Gas distribution industry
3. Companies account statement
4. Port authorities, toll and airport operation
5. Government agencies
6. Financial statement from companies
7. Central Bank of Malaysia
8. Royal Malaysian Customs Department
9. PDRM



CONCEPTS & DEFINITION

Compensation of Employees (CE)

- Wages & salaries
- Gratuity, retirement/ retrenchment benefits
- Payments in kind to paid employees (free medical attention, free food, free accommodation etc.)
- Employer's social contribution (EPF, SOCSO, worker's compensation insurance, etc)



Gross Operating Surplus (GOS)

- Profit/Loss
- Property, rental and investment income
- Mixed income (earnings of the owners and family members of unincorporated enterprises are partly compensation for their labour and partly operating surplus)
- Consumption of fixed capital

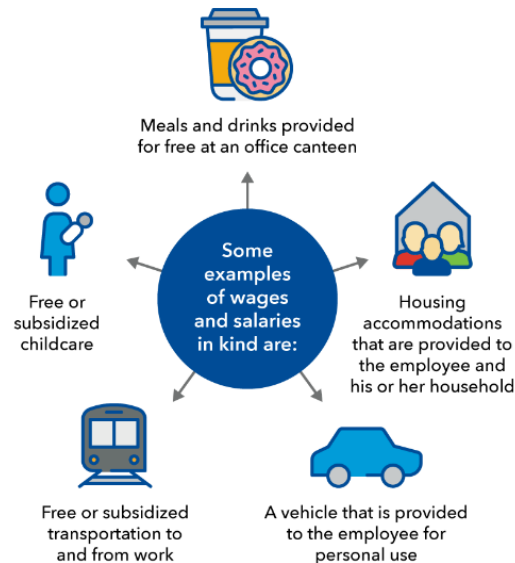


Taxes less Subsidies on Production & Imports

- Taxes on products (export duties, import duties, sales taxes, services taxes, excise duties, CESS)
- Other taxes on production (quit rent, road tax, business licenses)
- Subsidies on products (fertilizer, pesticides, diesel)
- Other subsidies on production



- **Wages and salaries** include the value of remuneration in cash and in kind before any deductions are done for income taxes paid by the employees, payments on loans, personal social contributions, etc.
 - i. Wages and Salaries **in cash**
 - ii. Wages and Salaries **in kind**



- **Employers' social contributions**
 - i. Employers' **actual** social contributions
 - ii. Employers' **imputed** social contributions
- Employers' actual social contributions consist of the payments made by employers for the benefit of their employees to insurers (social security funds and private funded schemes).
- Employers' imputed social contributions represent counterpart to unfunded social benefits which paid directly by employers to their employees or former employees and other eligible persons. (Do not involve an insurance enterprise or autonomous pension fund)



GROSS OPERATING SURPLUS (GOS) AND MIXED INCOME



Operating Surplus

- GOS is a measure of surplus accruing from process of production.
- 'left-over' from gross value added once labor and governments have received their shares.
- Gross operating surplus has two components:
 - i. **consumption of fixed capital (CoFC)**; and
 - ii. **net operating surplus (OS)**.
- CoFC represents the decline in the value of the gross capital stock due to normal damage and obsolescence, and wear and tear from the use of the assets in production.
- CoFC is calculated for all fixed assets (not for valuables and depletion/degradation of non-produced assets).
- Preferably compiled by using Perpetual inventory method

Mixed income

- Received by the **unincorporated enterprises** in the households sector
- Implicitly contains an element corresponding to remuneration for work done by the owner or members of his family which cannot be distinguished from his profits as entrepreneur

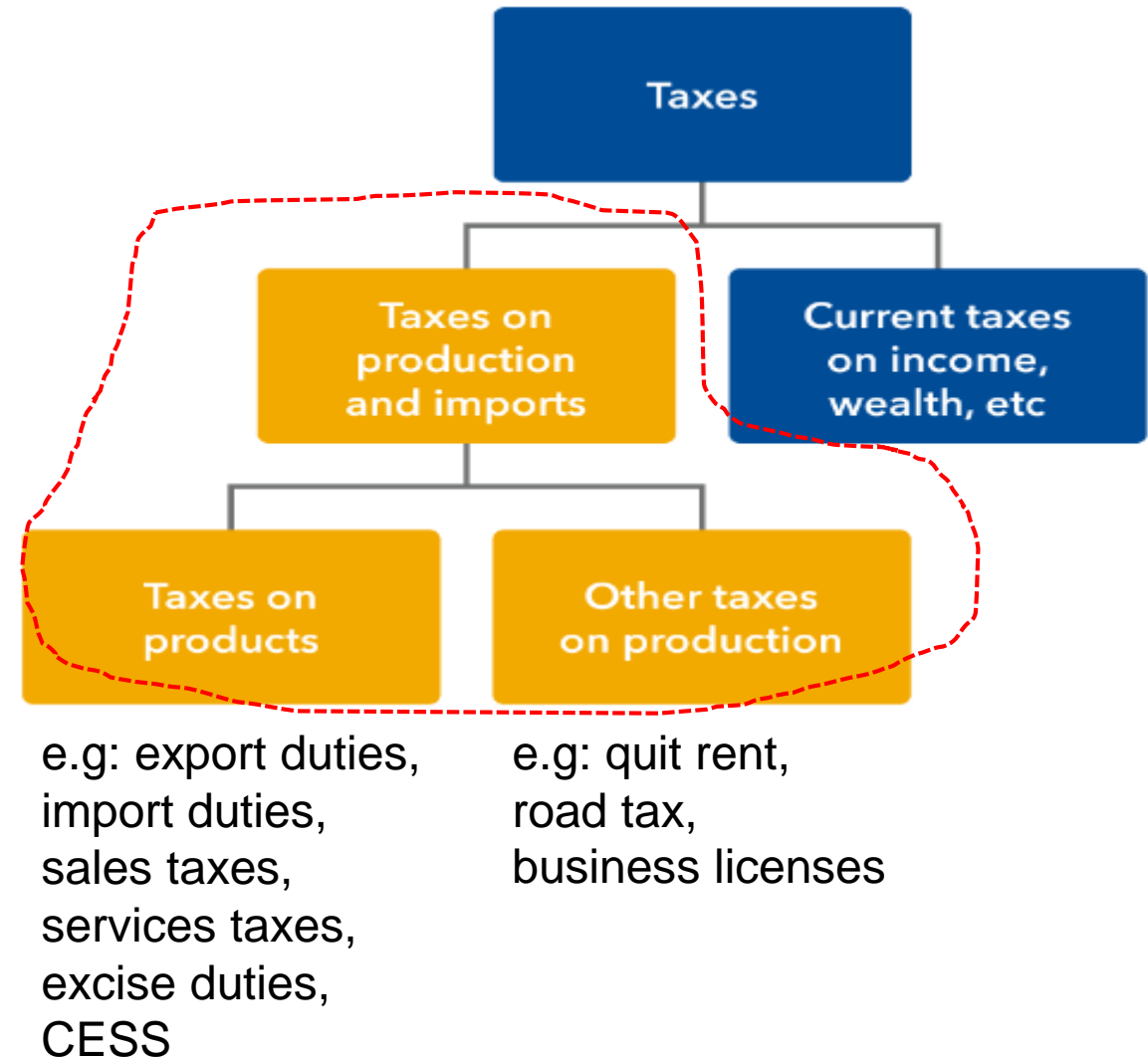


TAXES ON PRODUCTION AND IMPORTS

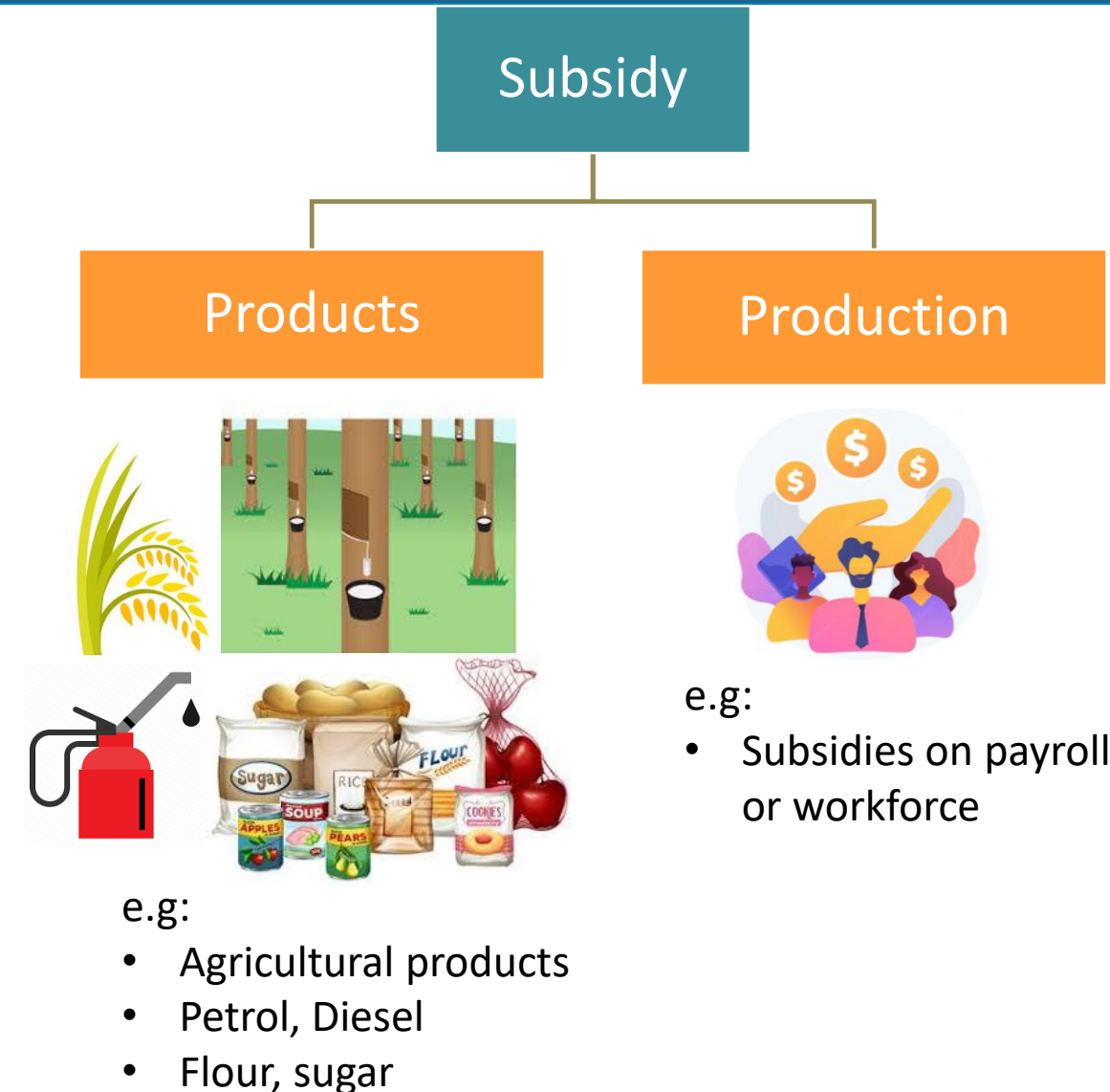


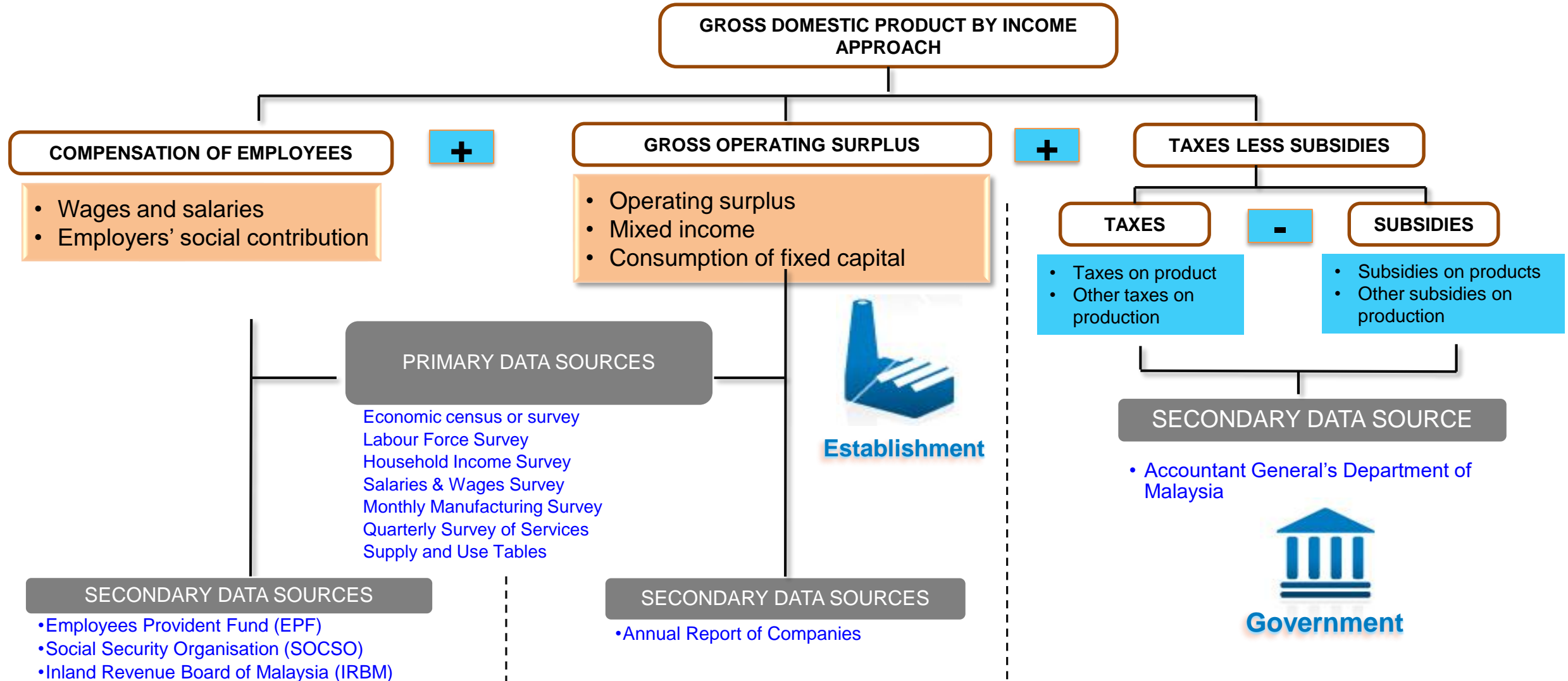
- Consist of **compulsory, unrequited payments, in cash or in kind** which are **levied by general government in respect of the production and importation of goods and services**, the **employment of labor**, the **ownership or use of land, buildings or other assets used in production**
- Taxes on production and imports are divided into:
 - taxes on products**
 - other taxes on production**

Taxes in the SNA



- Current unrequited payments which **government makes to resident producers**, on the basis of the levels of their production activities or the quantities or values of the goods or services that they produce, sell, or import.
- Subsidies may be designed to **influence their levels of production**, their **prices** or the **remuneration** of the **factors of production**
- Subsidies are classified into:
 - subsidies on products**
 - other subsidies on production**







COMPARISON OF 3 APPROACHES

GDP at current prices, 2021 (RM billion)		
Production Approach	Expenditure Approach	Income Approach
+ 148.2 (Agriculture)	+ 894.9 (Private Final Consumption)	+ 537.9 (Compensation of Empl.)
+ 123.6 (Mining & quarrying)	+ 196.5 (Government Final Consumption)	+ 971.7 (Gross Operating Surplus)
+ 362.7 (Manufacturing)	+ 298.1 (Gross Fixed Capital Formation)	+ 35.7 (Taxes - Subsidies)
+ 55.6 (Construction)	+ 46.0 (Changes in inventories and valuables)	
+ 838.3 (Services)	+ 1063.8 (net Export)	
+ 17.0 (Import duties)		
1,545.4	1,545.4	1,545.4

Production = Expenditure = Income

3. Malaysia's Economic Performance





WORLD ECONOMIC FORECAST



Global growth is projected to grow at **3.4 per cent in 2022** to **2.9 per cent in 2023**. The projection for 2022 is 0.2 percentage point higher than the October 2022 forecast reflecting the resilient demand in the United States and Europe, easing energy costs and the full reopening of China's economy.

*Malaysian economy is expected to register a higher growth in the range of **6.5 to 7.0 per cent in 2022**. The economy is projected to grow between **4.0 to 5.0 per cent in 2023**, supported by:*

WORLD ECONOMY	2021	2022e	2023f	2024f
World	6.2	3.4	2.9	3.1
Advanced economies	5.4	2.7	1.2	1.4
United States	5.9	2.0	1.4	1.0
Euro area	5.3	3.5	0.7	1.6
Japan	2.1	1.4	1.8	0.9
Emerging market and developing economies	6.7	3.9	4.0	4.2
China	8.4	3.0	5.2	4.5
Indonesia	3.7	5.3	4.8	5.1
Thailand	1.5	3.2	3.7	3.6
Malaysia	3.1	6.7	4.4	4.9
Philippines	5.7	7.0	5.0	6.0
India	8.7	6.8	6.1	6.8



Source: *Economic Outlook 2023, October 2022*
Ministry of Finance, Malaysia

MALAYSIA'S GDP (2015 = 100)

PRODUCTION APPROACH

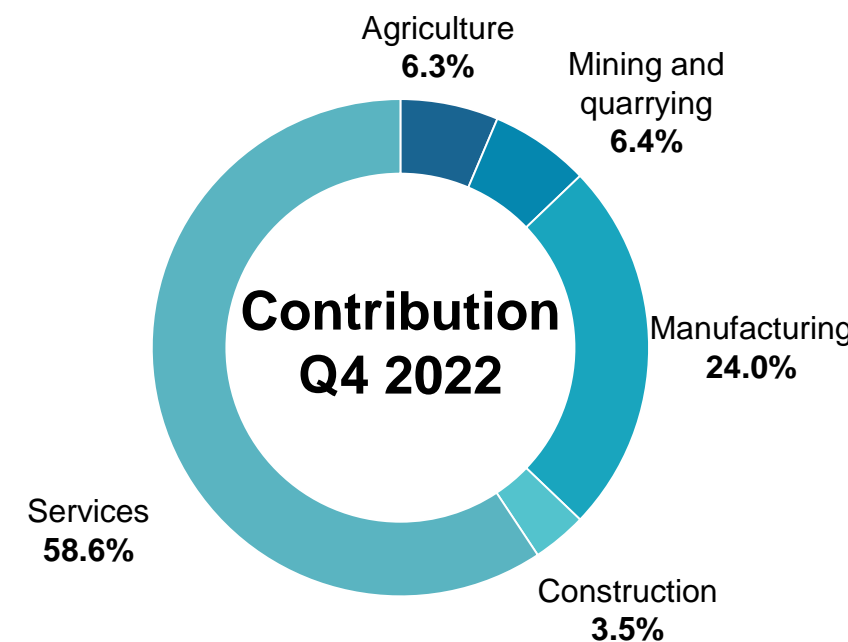


Annual Growth of Main Economic Activities (YoY%)

Type of Economic Activity	2020	2021	2022	2021				2022			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
GDP	-5.5	3.1	8.7	-0.5	15.9	-4.5	3.6	5.0	8.9	14.2	7.0
Services	-5.4	1.9	10.9	-2.3	13.4	-4.9	3.2	6.5	12.0	16.7	8.9
Manufacturing	-2.7	9.5	8.1	6.7	26.7	-0.8	9.1	6.6	9.2	13.2	3.9
Mining & quarrying	-9.7	0.3	3.4	-4.4	10.6	-3.2	-0.6	-1.1	-0.5	9.2	6.8
Construction	-19.3	-5.2	5.0	-10.4	40.3	-20.6	-12.2	-6.2	2.4	15.3	10.1
Agriculture	-2.4	-0.2	0.1	0.1	-1.5	-2.0	2.8	0.1	-2.4	1.2	1.1

HIGHLIGHT

Malaysia's GDP grew moderately driven by the Services, Manufacturing and Mining & Quarrying sectors.



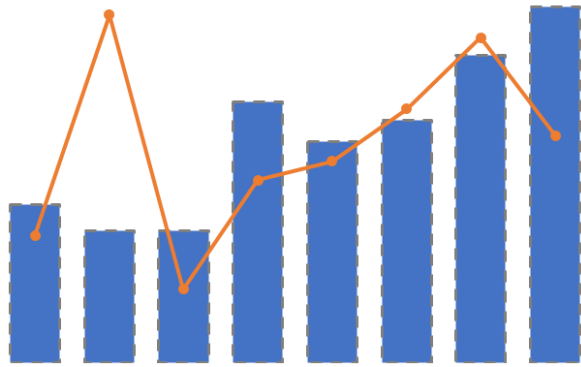
Note: Import Duty not included



PERFORMANCE OF MALAYSIA'S ECONOMY FOURTH QUARTER 2022



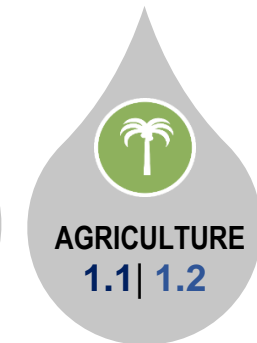
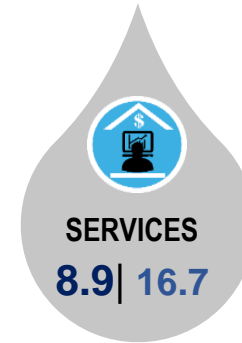
Malaysia's economic performance increased



7.0%

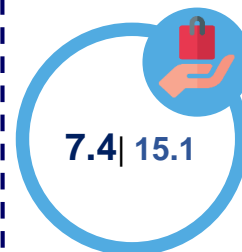
Q322: 14.2%

Performance in terms of production is driven by the **Services** and **Manufacturing** sectors



Performance on the expenditure side was driven by **Private Final Consumption Expenditure**

PRIVATE FINAL
CONSUMPTION
EXPENDITURE



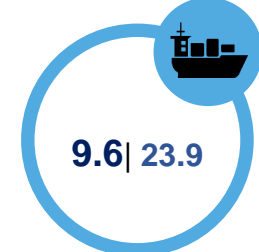
GROSS FIXED
CAPITAL
FORMATION



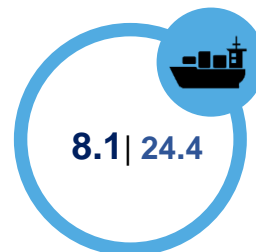
GOVERNMENT
FINAL
CONSUMPTION
EXPENDITURE



EXPORTS



IMPORTS



Note: **Q422**|Q322

GDP at Current Prices



RM467.3 billion

Q322: RM455.8 billion

Gross National Income (GNI)



RM455.8 billion

Q322: RM438.7 billion

GDP at Constant Prices



RM397.2 billion

Q322: RM383.8 billion

GNI per capita



RM55,232

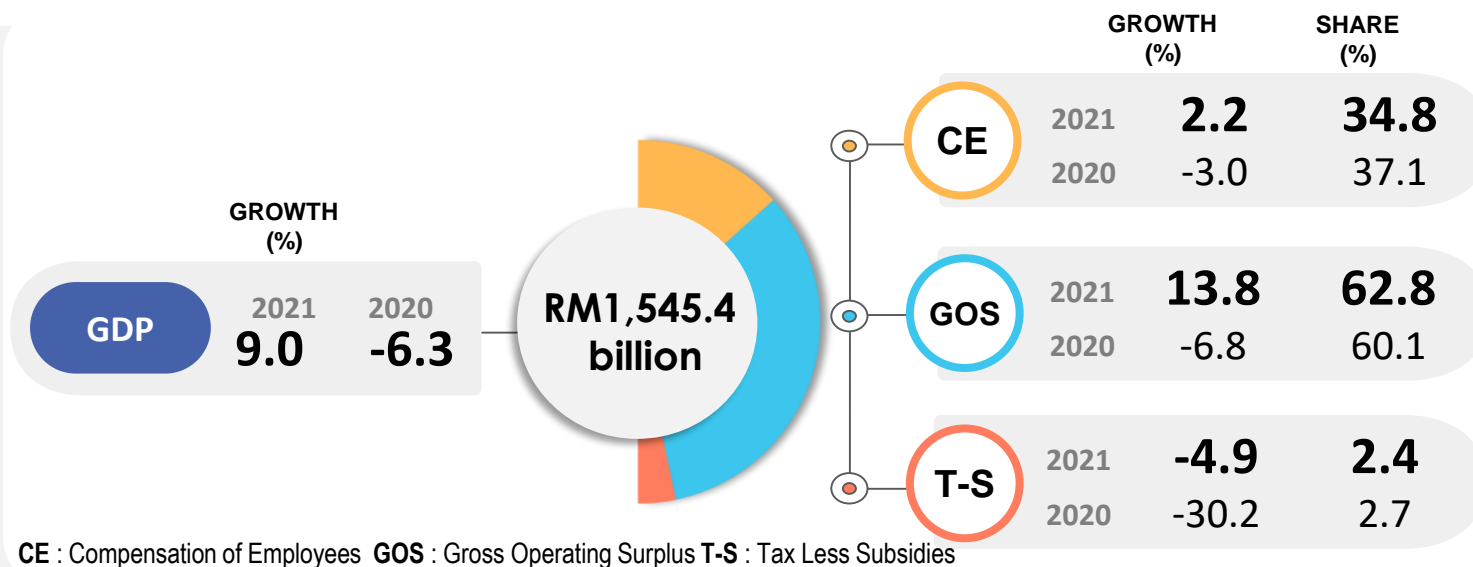
Q322: RM53,383



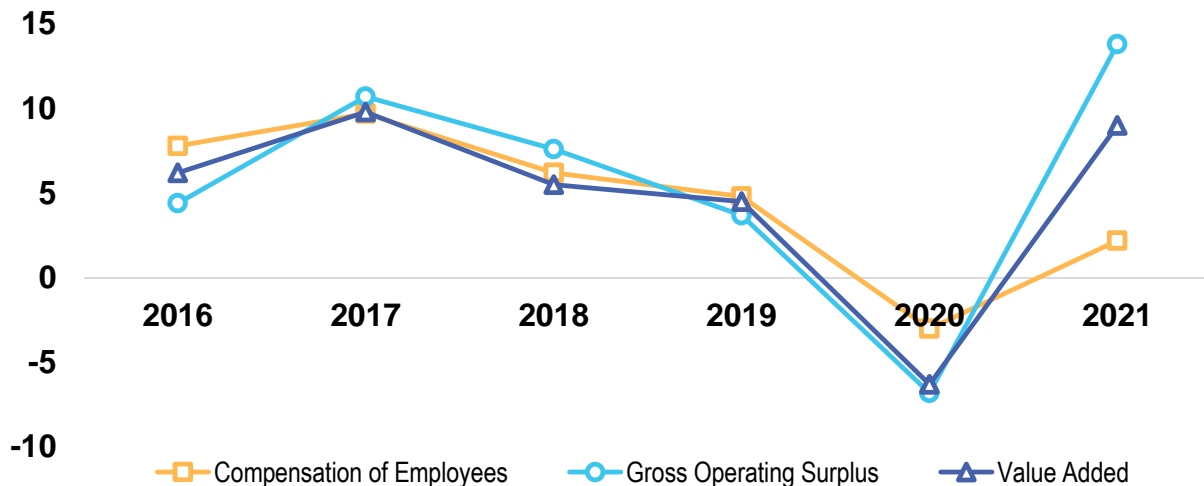
PERFORMANCES OF INCOME COMPONENTS 2021



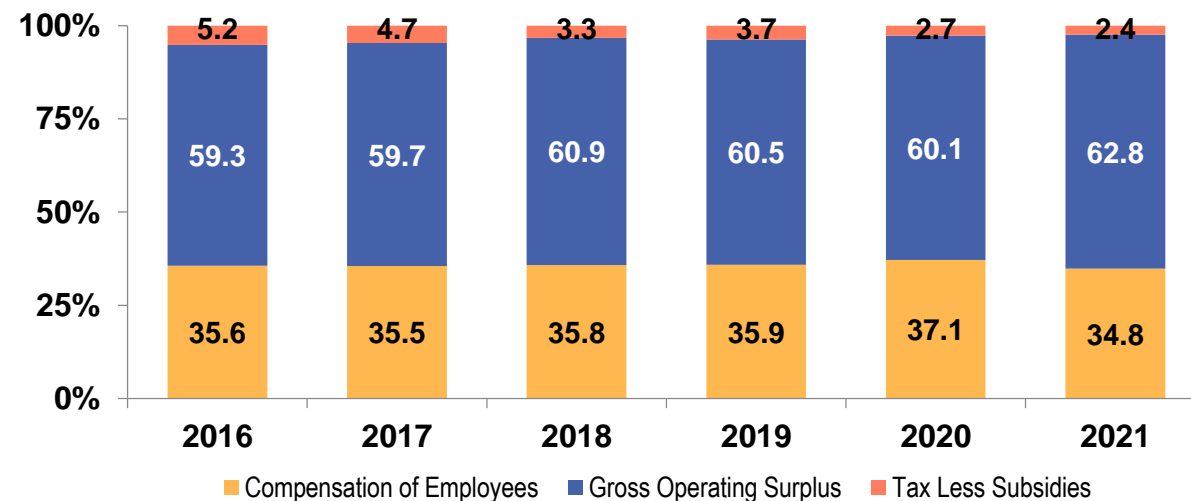
In 2021, the Malaysia's economy recorded a value added of **RM1,545.4 billion**



Annual Percentage Change



Share of Income Components to GDP





PERFORMANCES OF INCOME COMPONENTS BY SECTOR



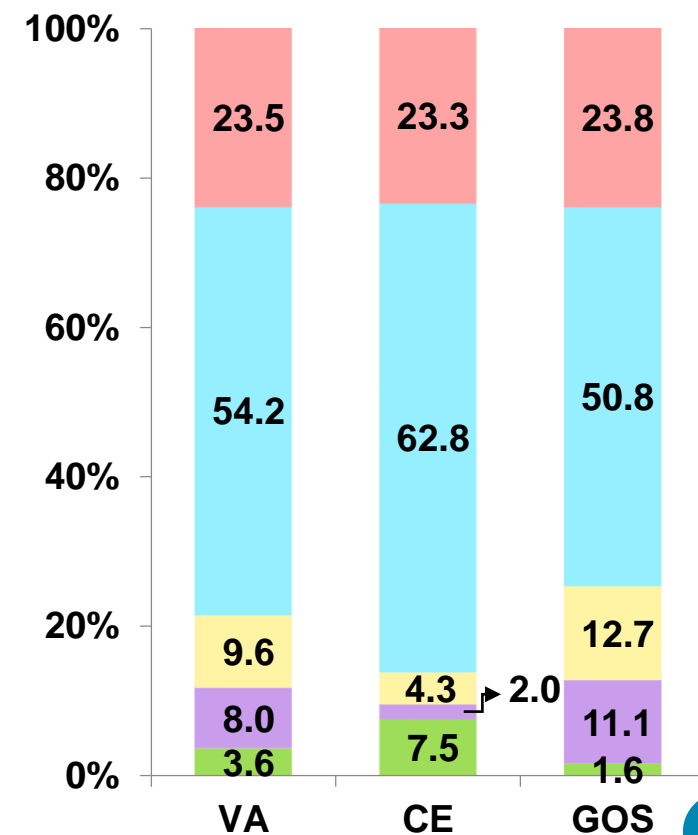
HIGHLIGHT






Manufacturing, Services and Agriculture are the main contributors for the Compensation of employees to GDP.

2021

CE : 2.2%	GOS: 13.8%
RM 537.9b	RM 970.6b

Composition by Sector



Sector	Annual Percentage Change (%)						Share of Compensation of Employess to Value Added (%)		
	Value Added			CE					
	2019	2020	2021	2019	2020	2021	2019	2020	2021
 MANUFACTURING	3.9	-2.6	14.9	4.1	-1.0	5.8	37.0	37.6	34.6
 SERVICES	6.8	-5.0	2.6	5.9	-1.3	1.1	39.4	40.9	40.3
 AGRICULTURE	0.7	5.7	27.9	0.1	2.0	8.2	19.3	18.6	15.7
 MINING AND QUARRYING	-2.8	-26.6	28.5	4.9	-13.3	5.4	8.9	10.5	8.6
 CONSTRUCTION	1.5	-18.9	-3.5	1.2	-18.0	-3.6	71.9	72.7	72.6
TOTAL	4.5	-6.3	9.0	4.8	-3.0	2.2	35.9	37.1	34.8

"STATISTICS BLOOM IN HARMONY"

Doesn't matter far or near
Strength in numbers
we don't live in fear

Birds of feather flock together
Statistics our form of adour
We, will always live it up

So let us live in solidarity
And in the world arena we'll
succeed
It is statistics that will come to be
The reason we will bloom in
harmony

Everybody undivided
Data's where our hearts reside in
There will always be a bind

Just like fire that ignites
That's how brightly lit our dreams are
We'll reach higher than the stars

Sending love to one another
Leaving no one in a slumber
We will stand with unity

Mustering our courage while
Embracing our disparities
We'll achieve our victory

One dream with unity
One love with harmony



"STATISTICS BLOOM
IN HARMONY"
VIDEO

<https://bit.ly/StatisticsBloomInHarmony>

THANK YOU



StatsMalaysia

www.DOSM.gov.my

