MACROECONOMICS

Student Guidelines

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Acknowledgement

Preface

This book is designed to provide a frame of reference for Polytechnic diploma courses in majoring in business, accounting or related courses. The book is alternatively helpful to those who wish to keep in enhancing their knowledge on economics and provides information on the concepts of economics. This course also provides information in the importance of government policy to overcome the economic problem.

The book has been structured into seven chapters, which cover all the topics addressed by Macroeconomics course syllabus adapted by the Malaysia Polytechnics. Students are guided to acquire the required skill in explain the impact of macroeconomics problem to the economics system in current economics trends.

Finally, may this book be beneficial to students and others who directly or indirectly used this book as a reference. Hope this book be beneficial in helping them achieve an excellent result during the final examination.

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Macroeconomics

CHAPTER 1
INTRODUCTION OF MACROECONOMICS

LEARNING OUTCOME:

👉 **Explain the concept of macroeconomics**

👉 **Explain Aggregate Demand and Aggregate Supply**

👉 **Discuss 4th Industrial Revolution and its impact on the economy**

CONCEPT OF MACROECONOMICS

Though macroeconomics encompasses a variety of concepts and variables, there is three major concern of macroeconomics which are output, unemployment, and inflation. To explore further on the concept of macroeconomics we will look at the definitions, differences between microeconomics and macroeconomics, macroeconomic goals and problems in macroeconomic goals.

DEFINATION OF MACROECONOMICS

Macroeconomics can be define as the branch of economics that studies the behavior and performance of an economy as a whole system, looking at how demand and supply of product, services and resources are determined and factors that influence them. It is concerned with aggregate level behavior of the entire economy. It differs from microeconomics, which deals with how individual economic players, such as consumers and firms, make decisions.

.

Microeconomics is about money you don't have, and macroeconomics is about money the government is out of.

— *P. J. O'Rourke* —

MICROECONOMIC VS MACROECONOMIC

Don't be confused between
MICROECONOMICS & MACROECONOMICS

	Micro Economics		Macro Economics	
MARKET	1		1	G D P
EFFECT OF PRICES OF GOODS	2		2	INFLATION
LABOUR MARKET	3		3	EMPLOYMENT/UNEMPLOYMENT
CONSUMER BEHAVIOUR	4		4	AGGREGATE DEMAND
SUPPLY OF GOOD	5		5	CAPACITY OF ECONOMY

MICROECONOMICS	MACROECONOMICS
Studies individual income	Studies national income
Analyzes demand and supply of labor	Analyzes total employment in the economy
Deals with households and firms decisions	Deals with aggregate decisions
Studies individual prices	Studies overall price level
Analyzes demand and supply of goods	Analyzes aggregate demand and aggregate supply

MACROECONOMICS GOAL

FULL EMPLOYMENT

The situation in which all available resources in the economy are employed to produce good and services. Commonly indicated by the employment of labor resources, measured by the unemployment rate.
.

PRICE STABILITY

The objective of the nation is to keep its inflation rate as low as possible maintaining price stability. This also means that the price of some goods and services may increase, while some other prices may drop at the same time.

ECONOMIC GROWTH

To achieve economic growth, the economy must be operating a maximum capacity. Economy growth is achieved by increasing the economy's ability to produce goods and services.

EQUITABLE DISTRIBUTION OF INCOME

Most of the nation try to narrow the gap between the higher income and the lower income groups. This is to ensure that all people are equal in term of the standard of living, One of the method of achieving an equitable distribution of income is taxation. When taxes are imposed, the higher income groups pay a higher tax to the government.

COMPETITIVE INTERNATIONAL TRADE

Countries in the world often trade with other for the mutual benefit of the exchange process. Countries actively involved in international trade are believed to reach the level of production, consumption and aggregate economic welfare higher than a closed economy. Therefore, rapid international trade is one of the main goals of a country's economy.
.

SATISFACTORY EQUILIBRIUM OF BALANCE PAYMENT

Equilibrium in the balance of payments without the use of artificial constraints results in exports being equal to imports in the long run.

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PROBLEM OF MACROECONOMICS GOALS

Macroeconomic policy can never be devoid of politics: it involves fundamental trade-offs and affects different groups differently.

— Joseph Stiglitz —

Unemployment

- A situation where a person desires to work but is unable to gain employment.
- Unemployment rises during an economic decline. However, unemployment will exist even if the economy is good.
- Macroeconomics studies the sources of unemployment, types of unemployment and methods to overcome this problem.

Inflation

- A rise in the general price level which is usually measured against a standard index of purchasing power.
- Inflation rates vary over a given period of time and is not the same for every country.

Deficit Balance of Payment

This can cause many adverse effects on the economy of a country and should be avoided.

Economic Decline and Expansion

- An economy will experience decline and expansion.
- Macroeconomics studies the sources that contribute to economic change, and government policies that can be applied to overcome certain economic problems.

AGGREGATE DEMAND & AGGREGATE SUPPLY

DEFINATION:

Aggregate Demand (AD)
Total quantity of output demanded at alternative price levels during a given period of time, ceteris paribus.

Aggregate Supply (AS)
Total quantity of output supplied at alternative prices levels in a given period of time, ceteris paribus

AGGREGATE DEMAND & AGGREGATE SUPPLY CURVES

In a standard AS-AD model, the output (Y) is the x-axis and price (P) is the y-axis. Aggregate supply and aggregate demand are graphed together to determine equilibrium. The equilibrium is the point where supply and demand meet to determine the output of a good or service.

AD & AS CURVES

Overall Price Index

AS

E*

P*

AD

Q*

Real GDP
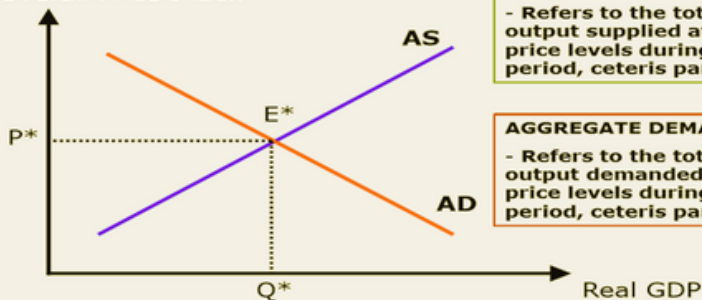
AGGREGATE SUPPLY (AS)
- Refers to the total quantity of output supplied at alternative price levels during a given time period, ceteris paribus.

AGGREGATE DEMAND (AD)
- Refers to the total quantity of output demanded at alternative price levels during a given time period, ceteris paribus.

FACTORS THAT SHIFT AGGREGATE DEMAND & AGGREGATE SUPPLY CURVES

LEFT	RIGHT

Price level (rm)

AD0

AD1

GDP
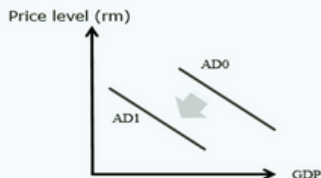
* **Shift** in the AD curve to left
  * Income ▼
  * Interest rates increases
  * Government expenditures ▼
  * Taxation increases
  * Wealth ▼
  * Investment ▼

Price level (rm)

AD1

AD0

GDP
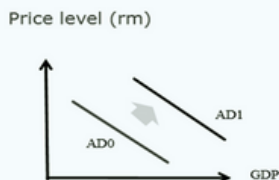
* **Shift** in the AD curve to right
  * Income increases
  * Interest rates ▼
  * Government expenditures increases
  * Taxation ▼
  * Wealth increase
  * Investment increase

LEFT	RIGHT

Price level (rm)

AS1

AS0

GDP
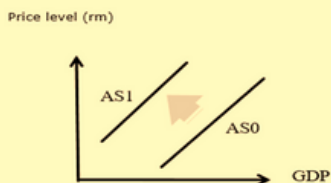
* **Shift** in the AS curve to left
  * Interest rates increases
  * Productivity ⬇
  * Costs increases
  * Taxation increases

Price level (rm)

AS0

AS1

GDP
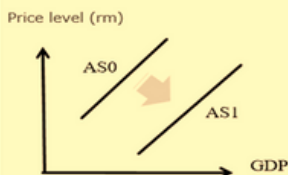
* **Shift** in the AS curve to right
  * Interest rates ⬇
  * Productivity increases
  * Costs ⬇
  * Taxation ⬇

4th INDUSTRIAL REVOLUTION AND ITS IMPACT ON THE ECONOMY

The fourth industrial revolution is the current and developing environment in which disruptive technologies and trends such as the Internet of Things, robotics, virtual reality (VR) and artificial intelligence (AI) are changing the way we live and work.

The Fourth Industrial Revolution, also known as Industry 4.0, Involves the adoption ofcyber-physical systems like the Internet of Things and the Internet of Systems.

Internet of Things. Also known as IoT, the Internet of Things is a network of interconnected smart devices that allow each separate device to interact (i.e., send or receive data) fro mother devices on the network.

Internet of Systems Business owned systems that can collect data from IoT networks to make independent decisions about your business' marketing campaigns, sales, etc.

Industry 4.0 has been defined as "a name for the current trend of automation and data exchange in manufacturing technologies, including cyber-physical systems, the Internet of things, cloud computing and cognitive computing and creating the smart factory"

Industry 1.0
• Mechanization
• Steam power
• Weaving loom

Industry 2.0
• Mass production
• Assembly line
• Electrical energy

Industry 3.0
• Automation
• Computers and electronics

Industry 4.0
• Cyber Physical Systems
• Internet of things
• Networks

1784   1870   1969   Today
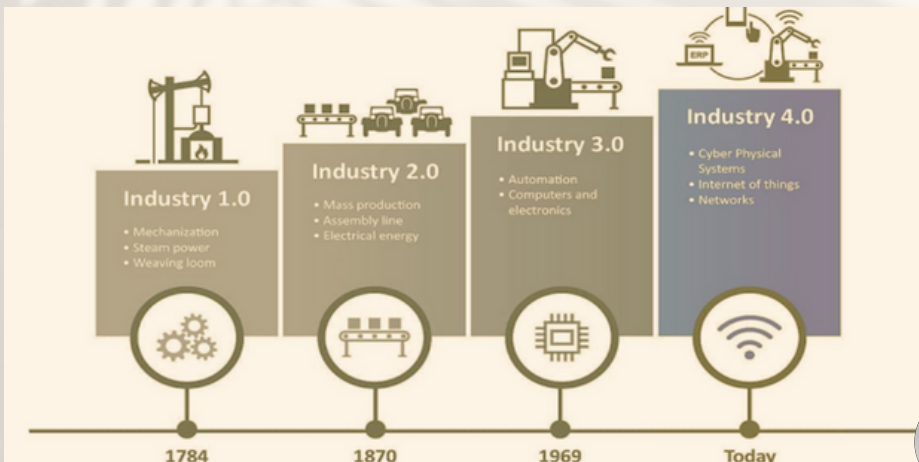
THE INFLUENCE OF 41R ON THE ECONOMY

The Industrial Revolution brought about sweeping changes in economic and social organization. These changes included a wider distribution of wealth and increased international trade. Managerial hierarchies also developed to oversee the division of labor

GIG ECONOMY

THE GROWTH OF GIG ECONOMY AND DIGITAL ECONOMY

Some workers choose to enter the gig economy for the flexibility, freedom, and personal fulfillment that it provides them. A gig economy is a free market system in which temporary positions are common and organizations contract with independent workers for short-term engagements.

Examples of gig employees in the workforce could include freelancers, independent contractors, project-based workers, and temporary or part-time hires.

Digital economy refers to an economy that is based on digital computing technologies, although we increasingly perceive this as conducting business through markets based on the internet and the World Wide Web. That is because it can have significant competitiveness and productivity-boosting opportunities related to access to digital products and services that help optimize processes and production, reduce transaction costs, and transform supply chains.

Example of E-business infrastructure are hardware, software, telecoms, networks and human capital. E-business is how business is conducted, any process that an organization conducts over computer-mediated networks.

TECHNOLOGIES AND THE FUTURE OF JOBS

"The best way to predict the future is to create it."

Abraham Lincoln

- The adoption of these technologies is essential to the development of more intelligent manufacturing processes, which includes devices, machines, production modules and products that are able to independently exchange information, trigger actions and control each other, thus enabling an intelligent manufacturing environment A gig economy is a free market system in which temporary positions are common and organizations contract with independent workers for short-term engagements.

- Training enhances the skills of the employees in the performance of a particular job. Ensuring that employees are up-to-date with new technological advancements and innovations is vital to remain competitive in the new business environment.

- Employee training helps in acquiring new skills, increasing the workforce's contribution to business, while also building their self-esteem and making them future ready, thereby also benefiting in terms of better work prospects and/ or better pay. Examples...3D Printing Technician, Block chain Developer, Digital Content Specialist, Data Analyst

FORMATIVE EXERCISE

A. OBJECTIVE QUESTIONS

1. Macroeconomics is a study of _____

    A. the behavioral of individual firms.
    B. individual price level.
    C. the entire economy
    D. government units

2. Which of the following deals with macroeconomics.

    A. individual saving.
    B. individual output.
    C. general price level
    D. individual income.

3. Which of the following is **NOT** the subject matter of macroeconomic.

    A. Law of demand and supply.
    B. National Income Accounting
    C. General price level
    D. Business cycles

4. Which branch of macroeconomics specifically focuses on the problems of developing economies?

    A. Public Finance.
    B. Monetary Economic.
    C. Development Economic.
    D. Trade Cycle Theory.

5. Which of the following is **NOT** concerned with macroeconomics?

    A. Individual Firm
    B. International Trade.
    C. National Income Accounting
    D. Inflation

6. One measure of the economy macroeconomist pay attention to study the pace of the growth in the economy is:

    A. demand.
    B. supply.
    C. inflation
    D. equilibrium price

FORMATIVE EXERCISE

7. The economy must operate at maximum capacity refers to?

    A. full employment
    B. price stability.
    C economics growth
    D. equitable distribution of income

8. Which of the following is a subject matter of macroeconomics

    A. Studies Employment & Unemployment
    B. Promote Economics Growth & Development
    C Determine National Income
    D. All of the above options.

9. Equilibrium in macroeconomics refer to _____.

    A. Aggregate demand doing greater than aggregate supply
    B. Aggregate demand being equal to aggregate supply
    C Aggregate supply being greater than aggregate demand
    D. Total value of output being produces more than total value of expenditure.

10. Which of the following is a macroeconomics statement?

    A. The productivity of steel works increased by 1% in the year of 2020,
    B. The price of beef declined by 1% last year,
    C General Motors' profit increased in the year 2019.
    D. The gross profit of all Malaysian business were RM20 billion last year.

B. SUBJECTIVE QUESTIONS

QUESTION 1

i. State TWO (2) factors that shifts the aggregate demand curve.   (2 marks)

ii. State 3 factors that shifts the aggregate supply curve   (3 marks)

iii. List FOUR (4) macroeconomics goals   (2 marks)

iv. Explain any one of macroeconomics problems.   (3 marks)

ANSWERS OF FORMATIVE EXERCISE

A. OBJECTIVE QUESTIONS

1. C
2. C
3. A
4. C
5. A
6. C
7. A
8. D
9. B
10. D

B. SUBJECTIVE QUESTIONS

QUESTION 1

i. State 2 factors that shifts the aggregate demand curve. (2 marks)
- Consumption Expenditures
- Investment Expenditure
- Government purchases

ii. State 3 factors that shifts the aggregate supply curve (3 marks)
- Interest rates
- Productivity
- Production cost
- Taxation

iii. List FOUR (4) macroeconomics goals (2 marks)
a. Full Employment
b. Price Stability
c. Good Economic Growth
d. Competitive International Trade
e. Fair and Equitable Distribution of Income
f. Satisfactory Equilibrium in Balance Payments

iv. Explain any one of macroeconomics problems
Any answer macroeconomics problem + explanations (3 marks)

CHAPTER 2
NATIONAL INCOME ACCOUNTING

LEARNING OUTCOMES:-

🌎 Define concepts in national income accounting

🌎 Calculate the national income accounting

🌎 Explain the problems related to national income

INTRODUCTION

In this chapter, we learn about national income as a general and calculated national income in difference approach. National income can be describe in many ways. In general national income is known as the flow of goods and services in a nation over a certain period of time, usually for a year.

There are other definitions are as follows:

1. National income as a total net output of the nation
2. National income is the total payments received by the factors of production through the production of goods and services in a country in a year

CONCEPTS OF NATIONAL INCOME

GROSS DOMESTIC PRODUCT (GDP)

- Is the total money value of all final goods and services produced within a country in a given time period.
- GDP excludes goods and services produced by Malaysian citizens working overseas as well as intermediate goods.
- Output produced by foreign workers in Malaysia will be included.
- GDP can be measured at market prices or factor cost.

GROSS NATIONAL PRODUCT (GNP)

- Is the total market value of all final goods and services produced by the residents of a country during a given a period of time.
- Total amount of income earned by nationals of the country regardless of where they are.
- However, income earned by foreign workers working in Malaysia will not be included in the GNP.
- GNP can be measured at market prices or factor cost.

NET NATIONAL PRODUCT (NNP)

- Is also know as net national product at factor cost.
- Is the market value of the net output of final goods and services produced by a nation during a year.
- NNP is obtained when the value of depreciation is subtracted from the GNP.
- NNP can be measured at market prices or factor cost.
- But, NNP at market price is NOT a national income.

NATIONAL INCOME (NI)

"National income at factor cost (NI) is defined as the total of all income payments made to factor of production.

$$NI = GNP_{FC} - \text{Depreciation value}$$
$$\text{OR}$$
$$NI = NNP_{MP} + \text{Subsidies} - \text{indirect Taxes}$$

MARKET PRICE AND COST FACTOR

- Market price is a current price in the market through the forces of demand and supply.
- Is the actual prices paid by consumers to get the product or service.
- Market price does not reflect real price.
- Cost factor is the real price that earned by producers or seller.
- The difference between market price and cost factor arises from indirect taxes and subsidies.

PERSONAL INCOME (PI)

- Is the income that is actually received by individuals and households in an economy in a year.
- Personal income can be spent to used to pay taxes or be saved.

DISPOSABLE PERSONAL INCOME (DPI)

- Is the total income received and available for an individual to spend on goods and services produced by an economy.
- Not all personal income is available to be spent or saved, as some portion must be used to pay personal income tax.
- Thus, the disposable personal income can be obtained by deducting personal income tax from personal income.

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CALCULATE THE NATIONAL INCOME ACCOUNTING

There are three approach of measuring national income because national income is capable of being viewed from three dimensions :
total output, total income or total expenditure.

METHODS OF CALCULATING NI

EXPENDITURE APPROACH

PRODUCT APPROACH

INCOME APPROACH

source :-Economics, Oxford Fajar Sdn.Bhd, 2011
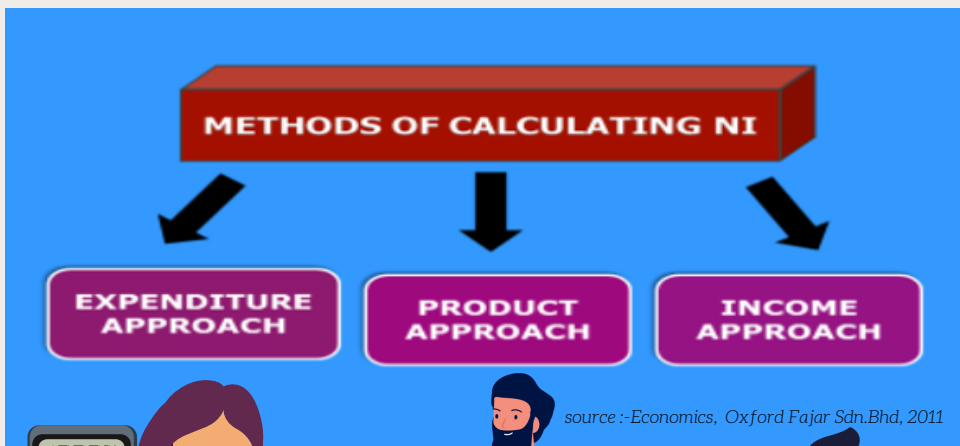
METHODS OF CALCULATING NATIONAL INCOME

National income can be calculated by using three approach:

a) EXPENDITURE APPROACH.

In this approach, national income is obtained by looking at the perspective of total spending on the final goods and services within the period of one year.

This approach comprises four component:-
- Personal consumption expenditure (C)
- Investment (I)
- Government expenditure (G)
- Net Export (X- M)
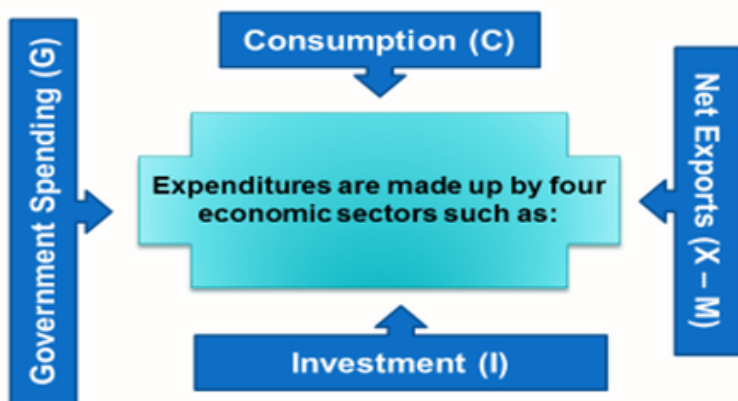
source :-Economics, Oxford Fajar Sdn.Bhd, 2011

Examples:- Calculation of national income using the expenditure approach.

The following table show the value of national income of Country A for 2021. Calculate national income.

Items	RM (million)
Household consumption	35350
Public and private investments	8150
Government expenditure	10000
Export goods and services	23900
Import goods and services	20400
Net factor income from abroad	-7000
Indirect taxes	5950
Subsidies	850
Depreciation	2900
Rental	1970

Answers : -.

Items	RM (million)	RM (million)
Household consumption		35350
Public and private investments		8150
Government expenditure		10000
Export goods and services (X)	23900	
Import goods and services (M)	20400	
Net exports (X-M)		**3500**
GDP$_{mp}$		**57000**
Net factor income from abroad		-7000
GNP$_{mp}$		**50000**
(+) Subsidies		850
(-) Indirect taxes		5950
GNP$_{fc}$		**44900**
Depreciation		2900
National income		**42000**

SAMPLE OF QUESTIONS

ITEMS	RM (Million)
Exports	500
Personal consumption expenditure	1400
Changes in stock	-40
Indirect business tax	30
Government expenditure	990
Investment	1000
Personal income tax	80
Subsidies	50
Imports	400
Factors income paid abroad	80
Depreciation	40
Factors income received from abroad	90

Calculate the :
  a) Gross Domestic Product at market price
  b) Gross Domestic Product at factor cost
  c) Gross National Product at factor cost
  d) National Income

Suggested solution

a) Gross Domestic Product at market price
   GDPmp = C + I + G + (X - M)
          = 1400 + 1000 + 990 + (500 – 400) + (-40)
          = **RM 3450 m**

b) Gross Domestic Product at factor cost
   GDPfc = GDPmp + Subsidy – Indirect tax
          = 3450 + 50 – 30
          = **RM 3470 m**

c) Gross National Product at factor cost
   GNPfc = GDPfc + Net factor Income from abroad
          = 3470 + (90 – 80)
          = **RM 3480 m**

d) National Income
   NI = GNPfc - depreciation
        = 3480 – 40
        = **RM 3440 m**

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b) PRODUCT APPROACH

- In this approach, national income is measured by net value of all final goods and services produced by a nation during a year.

- This approach also known as *Output Approach* or *Value Added Approach .*

Primary Sector

NI is measured by net value of <u>all final</u> goods and services produced by a nation during a year.

Tertiary Sector

Secondary Sector

source :-Economics, Oxford Fajar Sdn.Bhd, 2011

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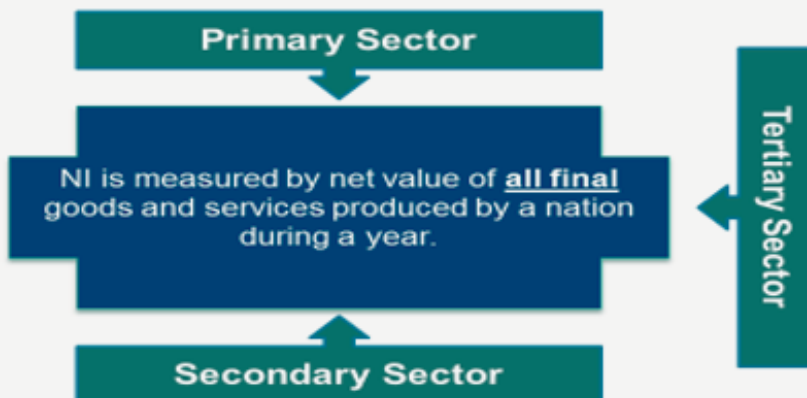
Examples:- Calculation of national income using the product approach.

The following table shows the national income data for an economy in year 2021. Calculate national income by using product approach.

Details	RM (million)
Forestry and fishing	30 000
Manufacturing	100 000
Mining and quarrying	35 000
Construction	15 000
Electricity, gas and water	10 000
Transportation, storage and communication	20 000
Wholesale and retail	22 000
Hotel and restaurant	25 000
Finance, insurance and real estate	40 000
Government service	25 000
Other service	20 000
Factor income received from abroad	25 000
Transfer payment	3 500
Factor income paid to abroad	18 000
Corporate tax	7 000
Indirect taxes	500
Subsidies	700
Depreciation	5 000
Retained earnings	100
Social security contribution	800

Examples:- Calculation of national income using the product approach.

Details			RM (million)
Forestry and fishing	+		30 000
Manufacturing	+		100 000
Mining and quarrying	+		35 000
Construction	+		15 000
Electricity, gas and water	+		10 000
Transportation, storage and communication	+		20 000
Wholesale and retail	+		22 000
Hotel and restaurant	+		25 000
Finance, insurance and real estate	+		40 000
Government service	+		25 000
Other service	+		20 000
Gross Domestic Product at market price			342 000
Factor income received from abroad		25 000	
Factor income paid to abroad		18 000	
Net factor income payments from abroad	+		7 000
Gross National Product at market price			349 000
Indirect taxes	-		500
Subsidies	+		700
Gross National Product at factor cost			349 200
Depreciation	-		5 000
National Income			344 200

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c) INCOME APPROACH

- In this approach, national income is measured by adding all the various types of income paid to firms and households in the form of wages for labour, rent for land, interest for capital and profits to entreprenuers.

- In the income approach, all the figures are in factors cost because only earnings of factors of production can be calculated.
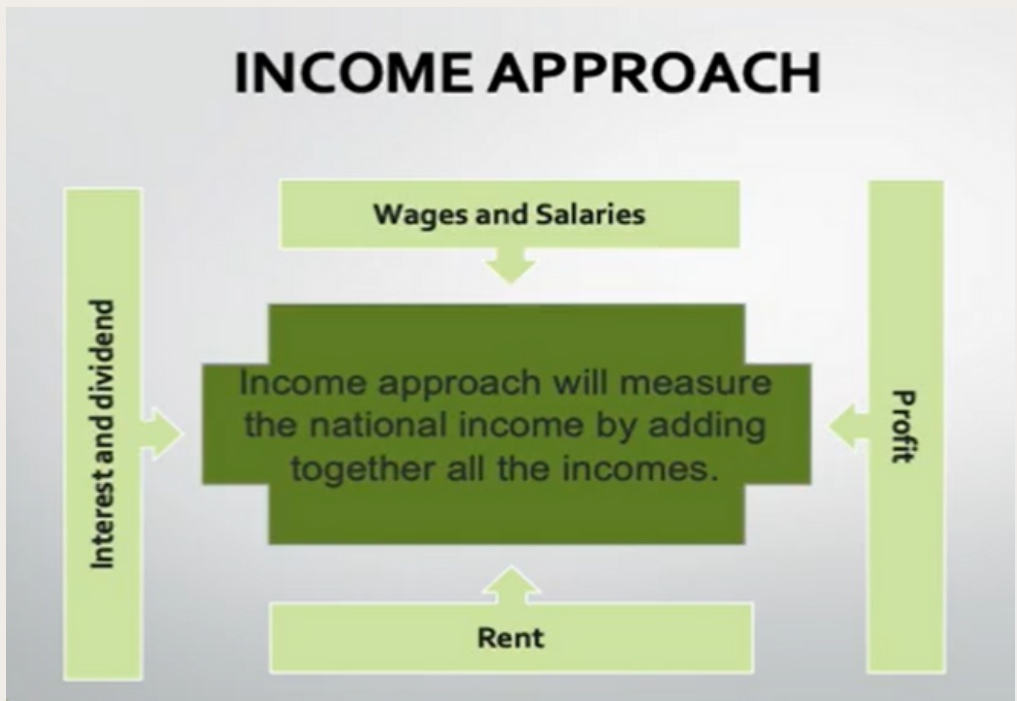
Calculation of national income using the income approach.

Items	RM million	RM million
Salaries and wages		xxx
	(+)	
Net interest		xxx
	(+)	
Rent		xxx
	(+)	
Private corporate income		xxx
	(+)	
Corporate profit	xxx	
Dividends	xxx	
Undistributed profit	xxx (+)	xxx
Corporate income tax		

Formula for calculating PI and DPI approach

ITEMS	(RM) MILLION
National income (salaries & wages, rent, net interest, private Corporate income, corporate profit, dividends)	XXX
+ Transfer payments XXX + Interest on consumer loans XXX + Interest on goverment loans XXX	XXX
- Undistributed profits XXX - Corporate income tax XXX - EPF contributions XXX - Insurance premium XXX	XXX
Personal Income	XXX
- Personal income tax	XXX
Disposable personal income	XXX

Examples:- Calculation of Personal Income and Disposable Income.

The table below shows the data of national income for an economy in the year of 2016.

Items/ *Item*	RM Million/ *Juta*
Undistributed profit/ *Keuntungan yang tak diagihkan*	9 900
Indirect taxes/ *Cukai tak langsung*	700
Corporate tax/ *Cukai syarikat*	4 100
Transfer payment/ *Bayaran pindahan*	18 000
Social security contribution/ *Sumbangan keselamatan sosial*	12 000
National income/ *Pendapatan negara*	45 000
Personal income tax/ *Cukai perdapatan persendirian*	2 200

Based on the table above, calculate:
- i)   Personal income
- ii)   Disposable income
- iii)   Percapita income if the population is RM25 million people.

Answer.

a) PI= RM37 00 m
b) DPI= RM348 00 m
c) Percapita Income= RM1800

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Problems Related to National Income

Difficulties in calculating national income

1.Double Counting

Double counting implies the possibility of intermediate goods being included in the national income more than once

2.Accuracy of information

This problem arises in developed, less developed or third world countries. People do not disclose their income or underestimate will create an inaccurate representation of economics situation

3. Unpaid activities

-Income received or activities paid in money will be included in the calculation of national income. Unpaid activities are not included in national income.

4. Transfer payment

-Several type of government expenditures like security,social service and transfer payments are excluded in national income calculation therefore its result inaccurate representation of national income.

5. Illegal yet productive activities

Illegal activities yet productive are excluded from calculation national income in certain countries some others are included. Accurate information generally difficult to obtain.

6.Depreciation

The industrial which uses heavy machinery will experience depreciation due to damage & obsolescence. Depreciation cannot be valued accurately, so its reflect to inaccurate estimation of national income.

Problems of Comparison National Income between Countries

Concepts of national income

Some countries include the final goods and service produced by different economic sector in calculation national income, while others include the values of final goods buy exclude the contribution by the service sector.

Different treatment of item

Illlegal prostitution activities are excluded in the calculation of national income in Malaysia, but are included in calculating in others countries such as Thailand.

Pattern of income distribution

When per capita income is used as a basic comparison of the standard of living between countries, a high national income does not mean they have a higher standard of living if the pattern of income distribution are not equal, national production concentrated in certain group.

General price level

Comparison of national income based on the value of monetary income rather than on real income value (purchasing power) will provide an in accurate representation of the country standard of living due to the difference general price level between countries..

Foreign exchange rate

The fluctuation exchange rate between countries will cause the per capita income to change, but the country's standard of living may not change at the same rate.

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USES OF NATIONAL INCOME DATA

National income data is very important both to individuals and the government as a overall performance in economics activities. Below are the main usages of the national income data..

1. To measure economic performance over time

National income estimates are given to measure the performance of an economy over time by comparing the national income of one time period to that of another. The national income tell us whether the economics performance is growing, stagnant or declining.

2. To measure sectorial contribution

Based on the product approach. contribution made by each economic sector(primary sector, secondary sector & tertiary sector) towards the overall economics growth can be calculated. The government can determine the sectors that are considered the backbone of the country's economy.

3. Economic Planning

National income data are a very important tool for the government to formulate its short term and long term economic planning. The government cannot formulate any economic planning without details information or trends in national income. Furthermore, the government can also use national income data to forecast future developments based on current economic performance.

4. To measure a country's general standard of living

National income data helps us compare the standard of living of people in different countries to the people living in the same country at difference times.

5. To show the success or failure of government policies.

National income data are an important tool in macroeconomic policy and analysis. The government is able to evaluate the effectiveness of an economics policy that has been implemented based on the information about activity in an economy. With national income estimates, future economics policies for development of a nation can be formulated.

TEST YOUR UNDERSTANDING

QUESTION 1

Fill in the blank

1- Gross domestic product at market price = Consumption + Investment + Government expenditure + _____ - import.

2- Gross national product at factor cost = Gross domestic product at market price + _____ + _____ - _____ .

3- National income = Gross national product at market price + _____- _____ - _____.

4- Disposable income = Personal Income - _____.

5- Net factors income abroad = Factor income received from abroad - _____.

Answers

QUESTION 1

1- Export

2- Net factor income abroad , subsidies , indirect tax

3- Subsidies, indirect tax, depreciation

4- Personal income tax

5- Factor income paid from abroad

QUESTION 2

The following table show the value of economic activities of a country in 2020.

Items	RM (million)
Consumption expenditure	30
Exports	10
Government expenditure	25
Change in stock	-5
Personal income tax	3
Tax on expenditure	10
Imports	15
Transfer payment	5
Wages and salaries	30
Capital consumption	5
Employees Provident Fund	2
Subsidies	4
Nett factors income from abroad	50
Private investment	20

Calculate :-

    a) Gross domestic product at factor cost

    b) Gross national product at market price

    c) Gross national product at factor cost

    d) National income

    e) Disposable income

Answers

QUESTION 2

a) Gross domestic product at factor cost

GDPfc = GDPmp + subsidies +indirect taxes

= (C + G + I + E - M) + subsidies - indirect taxes

= (30+25+(-5)+20+10-15) + 4 -10

= **RM 59 million**

b) Gross national product at market price

GNPmp = GDPmp + net factor income from abroad

= 65 + 50

= **RM 115 million**

c) Gross national product at factor cost

GNPfc = GNPmp + subsidies - indirect tax

= 115 + 4 -10

= **RM109 million**

d) National income

National income = GNPfc - deprecition

= 109 - 5

= **RM 104 million**

e) Disposable income

Disposable income = Personal income - personal income tax

= (National income - transfer payment - EPF) - income tax)

= (104 + 5 -2) -3

= **RM 104 million**

CHAPTER 3

NATIONAL INCOME EQUILIBRIUM

LEARNING OUTCOME:

- Apply National Income equilibrium in two-sector economics

- Apply National Income equilibrium in three-sector economics

- Apply National Income equilibrium in four-sector economics

CONCEPTS

National Income Equilibrium (NIE) is a situation of equilibrium achieved by a country's economics activities.

NIE achieved when the **total demand (AD)** for goods or services in an economy is **the same as their total (AS) supply** in the economy.

AS = AD

NATIONAL INCOME EQUILIBRIUM

TWO APPROACHES TO DETERMINE EQUILIBRIUM:

1. Aggregate demand- Aggregate supply

2. Injection- Leakages
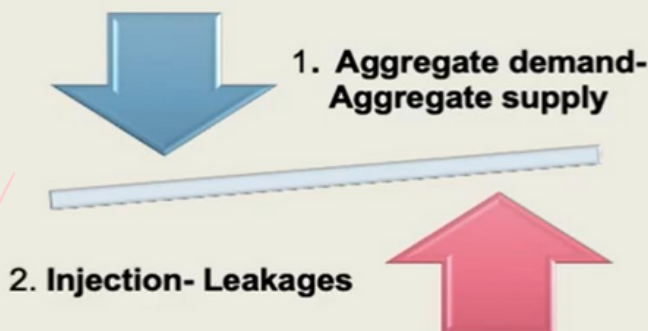
TWO APPROACHES TO DETERMINE EQUILIBRIUM:

1. AGGREGATE DEMAND – AGGREGATE SUPPLY APPROACH (AD = AS)

- *Aggregate demand (AD) or aggregate expenditure (AE) is the total demand for goods and services in the economy.*

There are four (4) components in aggregate demand:
  - i. consumption expenditure (C),
  - ii. investment expenditure (I),
  - iii. government expenditure (G)
  - iv. foreign sector (net exports) (X-M).

- *Aggregate supply (AS) or aggregate output is the total quantity of goods and services produced in an economy in a given period of time.*
- Equilibrium occurs when **AD = AS**

TWO APPROACHES TO DETERMINE EQUILIBRIUM:

2. LEAKAGE – INJECTION APPROACH

- *Leakage* is a withdrawal from the income – expenditure stream.
- Leakages include savings(S) , taxes(T) and imports(M).
- *Injection* is an addition of spending to the income-expenditure stream.
- Injections include investment, government expenditures and exports.
- Equilibrium occurs when leakages are equal to injections.

EQUILIBRIUM IN TWO SECTOR ECONOMY
Circular Flow of Income

- Equilibrium in a two-sector economy is a simple economy, which consists of 2 agents only, namely households and firms.
- Equilibrium occurs when the **AD = AS** or **Leakage = Injection**.

Factor Market

Y = rent, wages, profit, interest

HOUSEHOLD

FIRM

Consumption (C)

(1) Saving (S)

Product Market

Financial Market
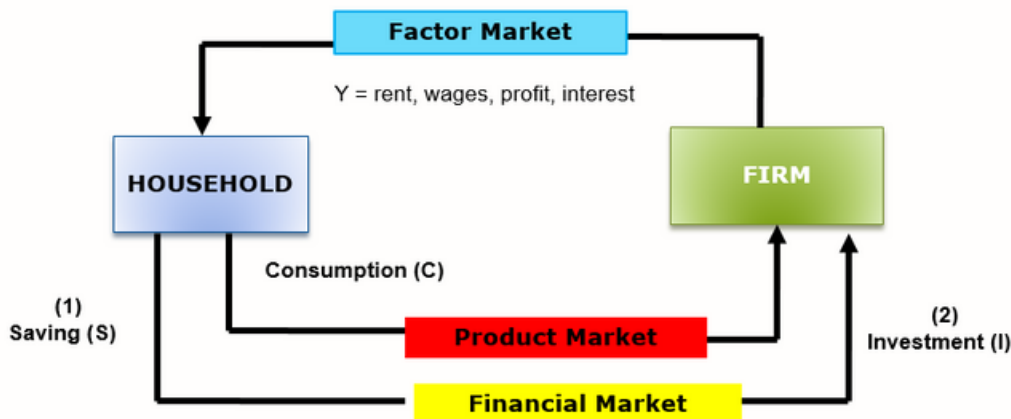
(2) Investment (I)

Variable in two sector of economy

SECTOR ECONOMY	AD-AS approach	Leakage-Injection approach
TWO	Y = C + I	S=I

Y	National Income
C	Consumption
I	Investment
S	Saving

Variable : Consumption (C)

CONSUMPTION THEORY

- Consumption refers to the purchase of goods and services by individuals or households that are produced by firms.
- Income (Y) is divided into two parts, consumption (C) and savings (S).

$$Y = C + S$$

CONCEPT OF CONSUMPTION

AVERAGE PROPENSITY TO CONSUME (APC)

APC is the ratio of total consumption to total income.

$$APC = \frac{TOTAL\ CONSUMPTION}{TOTAL\ INCOME} = \frac{C}{Y}$$

MARGINAL PROPENSITY TO CONSUME (MPC)

MPC is the ratio of change in total consumption to change in total income.

$$MPC = \frac{\Delta\ TOTAL\ CONSUMPTION}{\Delta\ TOTAL\ INCOME} = \frac{\Delta C}{\Delta Y}$$

CONSUMPTION FUNCTION

- Consumption function refers to the relationship between consumption level and income level.
- The general equation for a linear consumption function can be written as below:

$$C = a + bY$$

Consumption expenditure

Autonomous consumption

MPC

Disposable income

Variable in two sector economy

Variable : Saving (S)

SAVING THEORY

- Saving is divided into autonomous saving and induced savings.
- Autonomous saving refers to the part of savings that does not depend on the level of income and occurs when there is autonomous consumption.

AVERAGE PROPENSITY TO SAVE (APS)

APS is the ratio of total saving to total income.

$$APS = \frac{TOTAL\ SAVING}{TOTAL\ INCOME} = \frac{S}{Y}$$

MARGINAL PROPENSITY TO SAVE (MPS)

MPC is the ratio of change in total consumption to change in total income.

$$MPS = \frac{\Delta\ TOTAL\ SAVING}{\Delta\ TOTAL\ INCOME} = \frac{\Delta S}{\Delta Y}$$

SAVING FUNCTION

- Saving function refers to the relationship between savings and income level.
- The general equation for a linear consumption function can be written as below.

$$S = -a + (1-b)\ Y_d$$

Saving   Autonomous saving   MPS   Disposable income

DERIVE SAVING FUNCTION FROM CONSUMPTION FUNCTION

- Given the consumption function: $C = 100 + 0.65Y_d$

     Saving function : $S = -100 + 0.35Y_d$

Variable in two sector economy

CONSUMPTION AND SAVING SCHEDULE

- Table below shows some relationship between consumption and savings.
- The sum of APC and APS must be equal to 1.

$$APC + APS = 1$$

- The sum of MPC and MPS must also equal to one. The equation is as below

$$MPC + MPS = 1$$

MPC= (200 -125)/(200-100) =0.75

Disposable Income (Y_d)	Consumption (C)	Saving (S)	APC (C/ Y_d)	APS (S/ Y_d)	MPC ($\Delta C/\Delta Y_d$)	MPS ($\Delta S/\Delta Y_d$)
0	50	-50	-	-	-	-
100	125	-25	1.25	-0.25	0.75	0.25
200	200	0	1.00	0	0.75	0.25
300	275	25	0.92	0.08	0.75	0.25
400	350	50	0.88	0.12	0.75	0.25
500	425	75	0.85	0.15	0.75	0.25

APC = 125/100 = 1.25

APS= 25/300 =0.08

MPS= (50 -25)/(400-300) =0.25

Variable : Investment (I)

- Investment refers to the spending on purchases and accumulation of capital goods such as buildings, equipments and addition to inventories.
- There are two types of investment:

1. Autonomous Investment

- Autonomous investment is fixed and independent of income.

2. Induced Investment

- Induced investment depends on the national income.
- As national income increases, the induced investment will also increase since higher national income attracts more investors to invest.

CALCULATE NIE IN TWO SECTOR ECONOMY

AD –AS APPROACH

Equilibrium is achieved when aggregate demand is equal to aggregate supply.

AS = AD

Y = C + I

Algebra Analysis

Given the following information. Autonomous consumption = 100; MPC = 0.7; Autonomous Investment = 500

Solution

Consumption function, $C = 100 + 0.7Y_d$ (In two sector economy, $Y_d = Y$ since no tax)

Y	=	C + I
	=	100 + 0.7Y + 500
Y – 0.7Y	=	600
0.3Y	=	600
Y	=	600/0.3
Y	**=**	**2000** **EQUILIBRIUM INCOME**

LEAKAGE – INJECTION APPROACH

Equilibrium is achieved when leakage is equal to injection.

Injection = Leakage

I = S

Algebra Analysis

Given the following information. Autonomous consumption = 100; MPC = 0.7; Autonomous Investment = 500

Solution:

Consumption function, $C = 100 + 0.7Y_d$, so saving function is $S = -100 + 0.3Y_d$

S = I

-100 + 0.3Y = 500

0.3Y = 600

Y = 600/0.3

Y = 2000   EQUILIBRIUM INCOME

EQUILIBRIUM IN TWO SECTOR ECONOMY

AD–AS APPROACH

Equilibrium is achieved when aggregate demand is equal to aggregate supply.

$$AS = AD$$
$$Y = C + I$$

Graphic Analysis

AD (C,I)

Y=AD

C +I

$C = 100 + 0.7Y_d$

I=500

a=100

2000

National Income
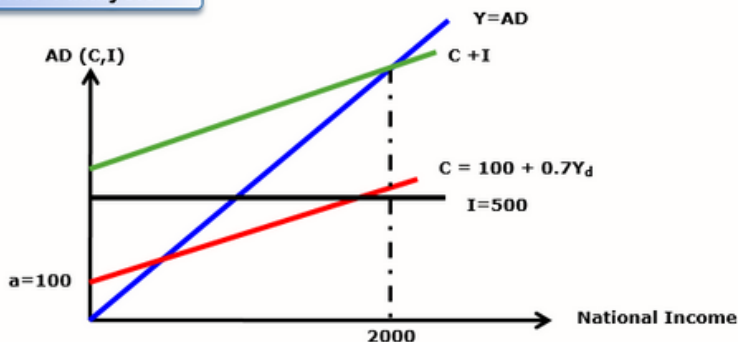
The equilibrium occurs when the consumption and 45 degree line intersects at RM2000

LEAKAGE - INJECTION APPROACH

Equilibrium is achieved when leakage is equal to injection.

Injection = Leakage
$$I = S$$

Graphic Analysis

Leakage-Injection

500

$S = -100 + 0.3Y_d$

I

2000

National Income

a=100
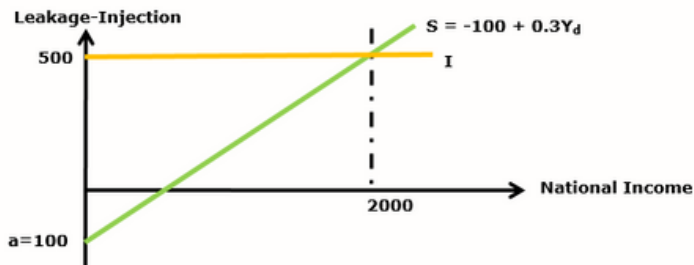
The equilibrium occurs when the saving function and investment function intersect at **RM2000.**

Tabular Analysis

- The equilibrium is achieved when AD = AS or I = S
- When both the AS and AD is same at one level, this is called as equilibrium income.

Aggregate Supply (Y)	Consumption (C)	Saving (S)	Investment (I)	Aggregate Demand (C + I)	Tendency of employment, output and income
0	100	-100	500	600	Increase
1000	800	200	500	1400	Increase
1500	1150	350	500	1650	Increase
2000	1500	500	500	2000	EQUILIBRIUM
2500	1850	650	500	2350	Decrease
3000	2200	800	500	2700	Decrease

AS = AD and I = S

EQUILIBRIUM IN THREE SECTOR ECONOMY
Circular Flow of Income

- Equilibrium in a three-sector economy consists households, firms and government.
- Equilibrium occurs when the AD = AS or Leakage = Injection.
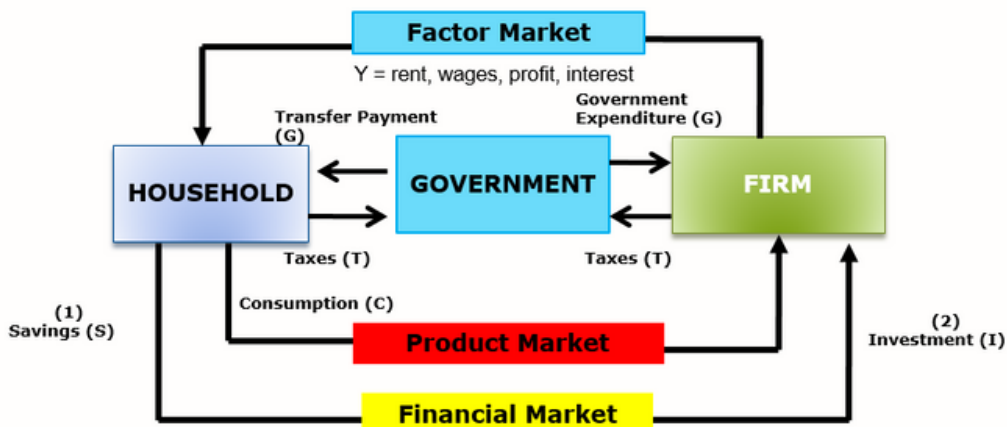
Variable in three sector of economy

SECTOR ECONOMY	AD-AS approach	Leakage-Injection approach
TWO	$Y = C + I$	$S = I$
THREE	$Y = C + I + G$	$S + T = I + G$

Y	National Income	I	Investment
C	Consumption	G	Government
S	Saving	T	Taxes

Variable in three sector economy

Variable : Government Sector (G)

- Government sector is another sector that has a major impact on the economy because of its expenditure.
- Government spending can be classified into two categories, purchases of goods and services and transfer payment.
- National income can be increased through government spending (as we discussed on the expenditure approach).
- Government spending is an injection into the spending stream.
- Government also can reduce the national income through imposing taxes.
- There are various tax imposed by the government such as direct taxes and indirect taxes.
- Taxes are leakages from the spending stream.

Variable : Taxes (T)

Equilibrium is achieved when aggregate demand is equal to aggregate supply.

$$AS \ = \ AD$$
$$Y \ = \ C + I + G$$

In three-sector economy, we need to focus on two types of taxes.

1. Autonomous Taxes

- Autonomous taxes refer to the amount of tax that is independent of income.
- If the income increases or decreases, autonomous taxes remain constant. For example, Tax = RM100

2. Induced Taxes

- Induced taxes refer to the amount of tax that depends on income.
- If income increases, induced tax will increase and vice versa. For example, Tax = 0.6Y

AD –AS APPROACH | Algebra Analysis

Equilibrium using autonomous tax

Given the following information:
$C = 200 + 0.75Yd$; $I = 100$; $G = 50$; $T = 100$

Solution

Calculate "C" after tax (alternative method)

$C = 200 + 0.75 (Y-T)$

$C = 200 + 0.75 (Y – 100)$

$C = 200 + 0.75Y - 75$

$C = 125 + 0.75Y$

Y	=	C + I + G
Y	=	125 + 0.75Y + 100 + 50
Y	=	275 + 0.75Y
Y – 0.75Y	=	275
0.25Y	=	275
Y	=	275/0.25
Y	=	**1100**

Equilibrium using induced tax

Given the following information. :
$C = 200 + 0.75Yd$; $I = 100$; $G = 50$; $T = 0.2Y$

Solution

Y	=	C + I + G
	=	200 + 0.75Yd + 100 + 50
	=	350 + 0.75(Y –T)
	=	350 + 0.75(Y – 0.2Y)
	=	350 + 0.75(0.8Y)
	=	350 + 0.6Y
Y – 0.6Y	=	350
0.4Y	=	350
Y	=	350/0.4
Y	=	**875**

LEAKAGE – INJECTION APPROACH | Algebra Analysis

$$S + T = I + G$$

Equilibrium using autonomous tax

Given the following information. :
$C = 200 + 0.75Yd$; $I = 100$; $G = 50$; $T = 100$

Solution

Calculate "S" after tax (alternative method)

$S = -200 + 0.25 (Y-T)$

$S = -200 + 0.25 (Y – 100)$

$S = -200 + 0.25Y – 25$

$S = -225 + 0.25Y$

$S + T = I + G$

$-225 + 0.25Y + 100 = 100 + 50$

$-125 + 0.25Y = 150$

$0.25Y = 275$

Y = 1100

Equilibrium using induced tax

Given the following information. :
$C = 200 + 0.75Yd$; $I = 100$; $G = 50$; $T = 0.2Y$

Solution

$S + T = I + G$

$- 200 + 0.25Yd + 0.2Y = 100 + 50$

$- 200 + 0.25(Y – 0.2Y) + 0.2Y = 150$

$-200 + 0.25(0.8Y) + 0.2Y = 150$

$-200 + 0.2Y + 0.2Y = 150$

$0.4Y = 350$

Y = 875

INCOME

AD –AS APPROACH

Graphic Analysis

Equilibrium using autonomous tax

Y=AD

AD (C,I,G)   C +I + G

C = 200 + 0.75Y$_d$
(BEFORE TAX)

325

C = 175 + 0.75Y
(AFTER TAX)

200

175

National Income
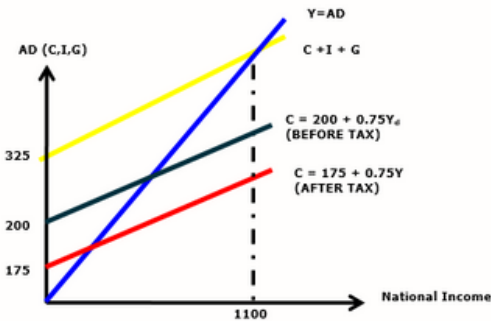
1100

The equilibrium occurs when AD curve and 45 degree line intersects at RM1100.

Equilibrium using induced tax

Y=AD

AD (C,I,G)   C +I + G

C = 200 + 0.75Y$_d$
(BEFORE TAX)

350

C = 200 + 06Y
(AFTER TAX)

200

National Income

875
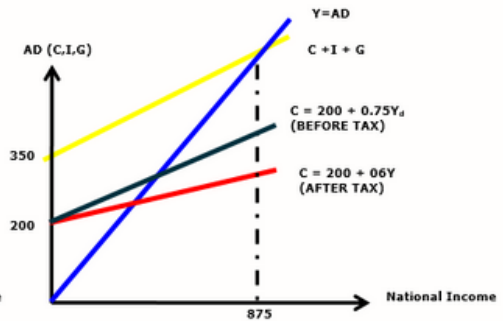
The equilibrium occurs when AD curve and 45 degree line intersects at RM875.

LEAKAGE – INJECTION APPROACH

Graphic Analysis

Equilibrium using autonomous tax

Leakages/Injections

S = -200 + 0.25Y$_d$
(BEFORE TAX)

S +T = -225 + 0.25Y
(AFTER TAX)

150

I +G

National Income

1100

-200

-225
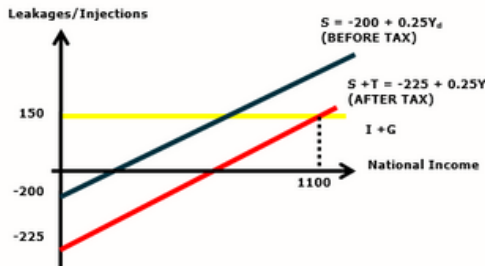
The equilibrium occurs when I+G schedule Intersects with S+T at RM1100.

Equilibrium using induced tax
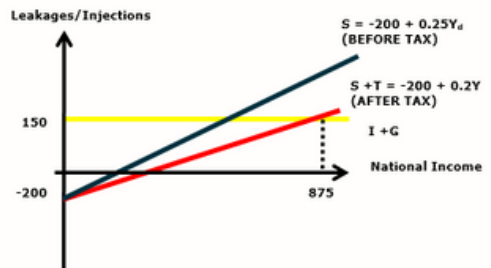
Leakages/Injections

S = -200 + 0.25Y$_d$
(BEFORE TAX)

S +T = -200 + 0.2Y
(AFTER TAX)

150

I +G

National Income

875

-200

The equilibrium occurs when I+G schedule Intersects with S+T at RM875.

Tabular Analysis

- The equilibrium is achieved when AD = AS or I + G = S + T
- When both the AS and AD is same at one level, this is called as equilibrium income.

Aggregate Supply (Y)	Taxes (T)	Disposable Income (Yd) (Yd = Y-T)	Consumption (C) (C = 200+0.75Yd)	Saving (S)	Investment (I)	Government Expenditure (G)	Aggregate Demand (C+ I+G)	Tendency of employment, output and income
100	100	0	200	-200	100	50	350	Increase
300	100	200	350	-150	100	50	500	Increase
600	100	500	575	-75	100	50	725	Increase
900	100	800	800	0	100	50	950	Increase
1100	**100**	**1000**	**950**	**50**	**100**	**50**	**1100**	**EQUILIBRIUM**
1300	100	1200	1100	100	100	50	1250	Decrease
1500	100	1400	1250	250	100	50	1400	Decrease

AS = AD and I+G =S+T

EQUILIBRIUM IN FOUR SECTOR ECONOMY
Circular Flow of Income

- Equilibrium in a three-sector economy consists households, firms, government and foreign sector.
- Equilibrium occurs when the AD = AS or Leakage = Injection.
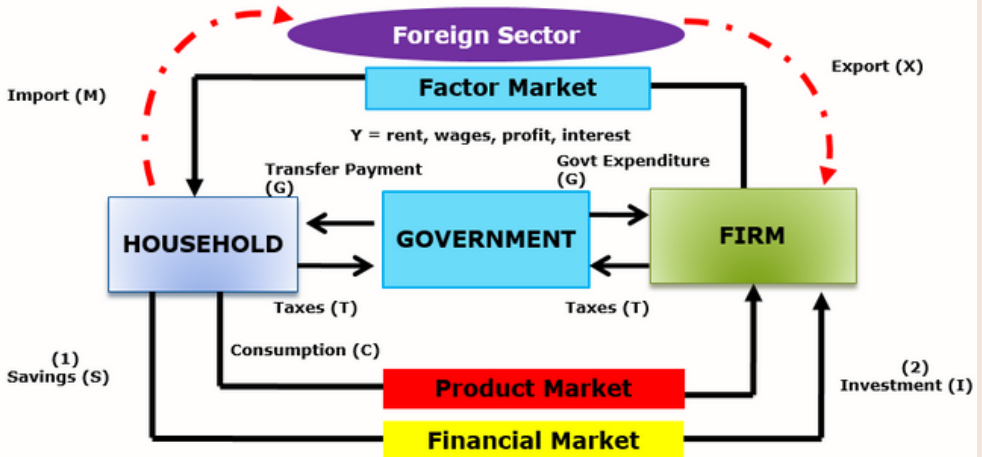
Variable in four sector of economy

SECTOR ECONOMY	AD-AS approach	Leakage-Injection approach
TWO	$Y = C + I$	$S = I$
THREE	$Y = C + I + G$	$S + T = I + G$
FOUR	$Y = C + I + G + (X - M)$	$S + T + M = I + G + X$

Y	National Income	I	Investment
C	Consumption	G	Government
S	Saving	T	Taxes
X	Export	M	Import

45

Variable in four sector economy

Foreign sector

Variable : Export (X)

- **Exports** are goods and services that are sold to foreign countries.
- For example, Malaysian made DVD player is sold to Thailand.
- Exports increase the national income and therefore export is an **injection** into the spending stream.

Variable : Import (M)

- **Imports** are goods and services that are purchased from foreign countries.
- For example, Malaysia buys cars from Germany.
- Imports reduce the national income and an import is a **leakage** from the spending stream.

Net Export (X- M)

- Net export is the difference between exports and imports.
- If net export is positive, exports are greater than imports and if net export is negative, exports are less than imports.

AD–AS APPROACH | Algebra Analysis

Equilibrium is achieved when aggregate demand is equal to aggregate supply.

$$AS = AD$$
$$Y = C + I + G + (X-M)$$

Given the following information. $C = 200 + 0.75 Y_d$; $I = 100$; $G = 50$; $T = 100$; $X = 100$; $M = 50$

Solution

$C = 200 + 0.75 (Y-T)$
$C = 200 + 0.75 (Y - 100)$
$C = 200 + 0.75Y - 75$
$C = 125 + 0.75Y$

Calculate "C" after tax (alternative method)

Y	=	$C + I + G + (X - M)$
	=	$125 + 0.75Y + 100 + 50 + (100 - 50)$
	=	$325 + 0.75Y$
$Y - 0.75Y$	=	325
$0.25Y$	=	325
Y	=	325/0.25
Y	**=**	**1300** **EQUILIBRIUM INCOME**

LEAKAGE-INJECTION APPROACH | Algebra Analysis

Equilibrium is achieved when leakage is equal to injection.

$$Injection = Leakage$$
$$I + G + X = S + T + M$$

Given the following information. $C = 200 + 0.75 Y_d$; $I = 100$; $G = 50$; $T = 100$; $X = 100$; $M = 50$

Solution

$S = -200 + 0.25 (Y-T)$
$S = -200 + 0.25 (Y - 100)$
$S = -200 + 0.25Y - 25$
$S = -225 + 0.25Y$

Calculate "S" after tax (alternative method)

$S + T + M = I + G + X$
$-225 + 0.25Y + 100 + 50 = 100 + 50 + 100$
$-75 + 0.25Y = 250$
$0.25Y = 325$
$Y = 1300$ **EQUILIBRIUM INCOME**

AD–AS APPROACH — Graphic Analysis

Equilibrium is achieved when aggregate demand is equal to aggregate supply.

$$AS = AD$$
$$Y = C + I + G + (X - M)$$

The equilibrium occurs when the aggregate demand (C+I+G+(X-M)) and 45 degree line intersects at RM1300.

LEAKAGE-INJECTION APPROACH — Graphic Analysis

Equilibrium is achieved when leakage is equal to injection.

$$Injection = Leakage$$
$$I+G+X = S+T+M$$
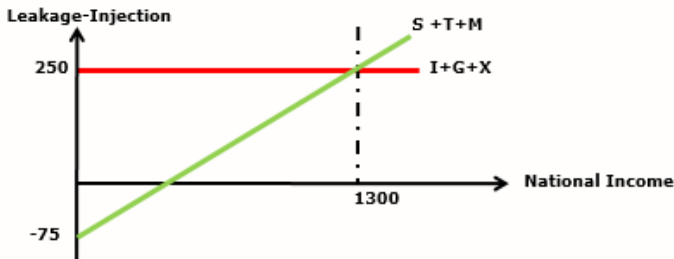
The equilibrium occurs when the I+G+X schedule and S+T+M schedule intersect at RM1300.

CALCULATE NIE FOUR SECTOR ECONOMY

Tabular Analysis

- The equilibrium is achieved when AD = AS or I + G + X = S + T + M
- When both the AS and AD is same at one level, this is called as equilibrium income.

Aggregate Supply (Y)	Taxes (T)	Disposable Income (Yd)	Consumption (C)	Saving (S)	Investment (I)	Government Expenditure (G)	Exports (X)	Imports (M)	Aggregate Demand (C+ I+G+ [X – M])	Tendency of employment, output and income
100	100	0	200	-200	100	50	100	50	400	Increase
300	100	200	350	-150	100	50	100	50	550	Increase
600	100	500	575	-75	100	50	100	50	775	Increase
900	100	800	800	0	100	50	100	50	1000	Increase
1100	100	1000	950	50	100	50	100	50	1150	Increase
1300	100	1200	1100	100	100	50	100	50	1300	EQUILIBRIUM
1500	100	1400	1250	250	100	50	100	50	1450	Decrease

AS = AD and I+G+X = S+T+M

SECTOR ECONOMY	AD-AS approach	Leakage-Injection approach
TWO	Y = C + I	S=I
THREE	Y = C + I + G	S+T = I+G
FOUR	Y = C + I + G + (X-M)	S+T+M = I+G+X

Exercises

QUESTION 1

In a two sector economy, the national consumption function for Country Zeeland is C = 150 + 0.65Y and Investment I = RM275 million.

Based on this information, answer the following questions.

a) Complete the following schedule.

National Income (Y) (RM million)	Consumption (C) (RM million)	Saving (S) (RM million)	Investment (I) (RM million)
0			
250			
500			
750			
1000			
1250			

b) Derive the saving function (S) based on the information above.

c) Calculate the national income equilibrium for Country Zeeland.

QUESTION 2

Answer the question below based on the information given. All data are in RM million.

Consumption	: C = 48 + 0.8Yd
Investment	: I = 100
Government Expenditure :	G = 80
Tax function	: T = 10

a) Derive the consumption and savings function after tax.

b) Calculate the national income equilibrium by using :-

   i Injection + Leakage approach
   ii AD = AS approach

   iii Calculate the total savings at the national income equilibrium.

Exercises

QUESTION 3

The Consumption, Investment, Government Expenditure, Tax, Export and Import functions are shown below : (all indicator are in RM million).

$$C = 10 + 0.8Yd$$
$$I = 23$$
$$G = 10$$
$$T = 10$$
$$X = 15$$
$$M = 0.3Y$$

a) Calculate the national income equilibrium by using AD=AS Approach.

b) Sketch the curve for national income equilibrium determination by using AD=AS.

c) Calculate the total import at the national income equilibrium.

QUESTION 1

In a two sector economy, the national consumption function for Country Zeeland is C = 150 + 0.65Y and Investment I = RM275 million.

Based on this information, answer the following questions.

a) Complete the following schedule. (9 marks)

National Income (Y) (RM million)	Consumption (C) (RM million)	Saving (S) (RM million)	Investment (I) (RM million)
0	150 (/)	-150 (/)	275 (/)
250	312.5 (/)	-62.5 (/)	275 (/)
500	475 (/)	25 (/)	275 (/)
750	637.5 (/)	112.5 (/)	275 (/)
1000	800 (/)	200 (/)	275 (/)
1250	962.5 (/)	287.5(/)	275 (/)

b) Derive the saving function (C) based on the information above.

S = -150 + 0.35Y

c) Calculate the national income equilibrium for Country Zeeland.

$$AS = AD \ (/)$$
$$Y = C + I \ (/)$$
$$Y = 150 + 0.65Y + 275 \ (/)$$
$$Y - 0.65Y = 425 \ (/)$$
$$0.35Y = 425 \ (/)$$
$$Y = 425/0.35 \ (/)$$
$$Y = 1204.29 \ (//)$$

Answer for Exercises

QUESTION 2

Answer the question below based on the information given. All data are in RM million.

Consumption	: $C = 48 + 0.8Yd$
Investment	: $I = 100$
Government Expenditure	: $G = 80$
Tax function	: $T = 10$

a) Derive the consumption and savings function after tax.

$C = 48 + 0.8(Y - T)$ (/)	$S = -48 + 0.2 (Y - T)$ (/)
$C = 48 + 0.8(Y - 10)$ (/)	$S = -48 + 0.2 (Y - 10)$ (/)
$C = 48 + 0.8Y - 8$ (/)	$S = -48 + 0.2Y - 2$ (/)
$C = 40 + 0.8Y$(/)	$S = -50 + 0.2Y$ (/)

b) Calculate the national income equilibrium by using :-

(i) Injection + Leakage approach

$$Injection = Leakage$$
$$I + G = S + T \ (/)$$
$$100 + 80 = -48 + 0.2(Y-T) + T \ (/)$$
$$180 = -48 + 0.2 (Y - 10) + 10 \ (/)$$
$$180 = -48 + 0.2Y - 2 + 10 \ (/)$$
$$180 = -40 + 0.2Y$$
$$180 + 40 = 0.2Y \ (/)$$
$$220 = 0.2Y$$
$$220/0.2 = Y \ (/)$$
$$1100 = Y \ (//)$$

(ii) AD = AS approach

$$AS = AD$$
$$Y = C + I + G \ (/)$$
$$Y = 48 + 0.8 (Y - T) + 100 + 80 \ (/)$$
$$Y = 48 + 0.8 (Y - 10) + 100 + 80 \ (/)$$
$$Y = 48 + 0.8Y - 8 + 100 + 80 \ (/)$$
$$Y = 220 + 0.8Y \ (/)$$
$$Y - 0.8Y = 220 \ (/)$$
$$0.2Y = 220$$
$$Y = 220/0.2 \ (/)$$
$$Y = 1100 \ (/)$$

c) Calculate the total savings at the national income equilibrium.

$$S = -50 + 0.2Y$$
$$S = -50 + 0.2 (1100) \ (//)$$
$$S = -50 + 220 \ (//)$$
$$S = 170 \ (//)$$

QUESTION 3

The Consumption, Investment, Government Expenditure, Tax, Export and Import functions are shown below : (all indicator are in RM million).

$$C = 10 + 0.8Yd$$
$$I = 23$$
$$G = 10$$
$$T = 10$$
$$X = 15$$
$$M = 0.3Y$$

a) Calculate the national income equilibrium by using AD=AS Approach.

    AS = AD
    Y = C + I + G + (X -M) (/)
    Y = 10 + 0.8 (Y -T) + 23 +10 + (15 - 0.3Y) (/)
    Y = 10 + 0.8 (Y - 10) + 23 +10 + 15 -0.3Y (/)
    Y = 10 + 0.8Y - 8 + 23 + 10+ 15 - 0.3Y (/)
    Y = 50 + 0.5Y (/)
 Y - 0.5Y = 50 (/)
    0.5Y = 50
    Y = 50/0.5 (/)
    Y = 100 (/)

b) Sketch the curve for national income equilibrium determination by using AD=AS.

AGGREGATE DEMAND (AD) (/)

Y = AD (/)

C+I+G+ (X-M) (/)

C' = 2 + 0.8Y (/)

50 (/)

2 (/)

NATIONAL INCOME (/)

100 (/)
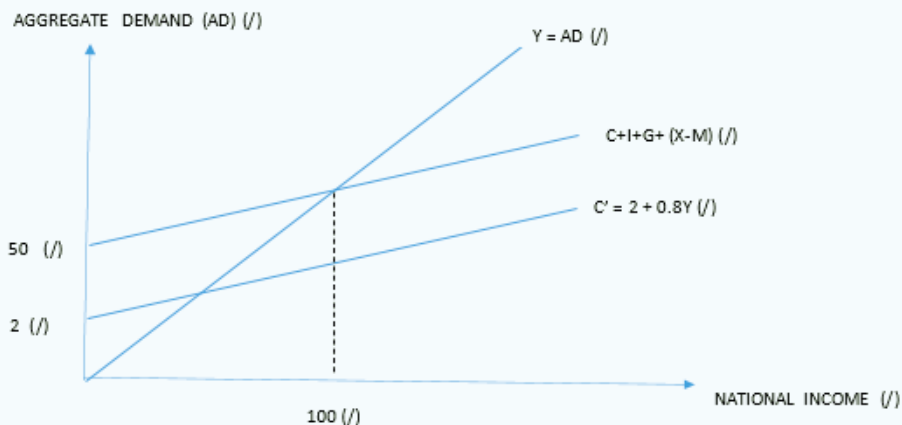
c) Calculate the total import at the national income equilibrium.

    M = 0.3Y (/)
    M = 0.3(100) (/)
    M = 3 (//)

CHAPTER 4

ROLE OF GOVENRMENT POLICY

LEARNING OUTCOME:

01 Role of government in the context of Macroeconomics

02 Government Policy

Role of Government in the context of Macroeconomics

Government plays an important role in ensuring the stability and economics growth of a country. The economics role of government can best be defined by classified of its economic policy aim.

Public Debt

Government Policy

- Monetary Policy
- Fiscal Policy

Types of budget

Role of Government

Government expenditure

Government revenue

SOURCES OF REVENUE

TAX REVENUE

- Tax is compulsory contribution by an individual or firm to the government
- Tax is collected based on laws that have been approved by the government.
- A major portion of the revenue is from taxes.
- There are two types of tax which is **Direct Tax** and **Indirect Tax**.

DIRECT TAX
- Collected by the Inland Revenue Board (IRB)
- Cannot be transferred to others
- **Examples**: personal income tax, company income tax, petroleum tax

INDIRECT TAX
- Collected by the Royal Customs and Excise Department
- Can be transferred to another party (part or all)
- **Examples**: export/import duties, excise duty, sales tax, service tax

If you tax too high, the revenue will yield nothing.

~ Ralph Waldo Emerson

NON REVENUE RECEIPTS

- Include refunds of expenditure and receipts from governement agencies

NON TAX REVENUE

- Revenue from non-tax sources
- Includes revenue from government services, fees for issue of license and permit, sales of government assets, rental of government property, returns on government investment, fines, fees and penalties

TYPES OF TAX STRUCTURE

1

Tax Rate

PROPORTIONAL TAX

- Tax imposed so that the tax rate is fixed, with no change.
- Example: corporation tax

Income

2

Tax Rate

PROGRESSIVE TAX

- Tax imposed so that the effective tax rate increases as income increases.
- It imposes a greater portion of tax on the higher income group than the lower income group.
- Example: personal income tax

Income

3

Tax Rate

REGRESSIVE TAX

- Tax imposed so that the tax rate decreases as the income increases.
- The lower income group will bear a higher proportion of tax than the higher income group.
- Example: sales tax and property tax

Income

NATIONAL BUDGET

National budget is a document containing a preliminary approval plan of public revenue and expenditure in a year.

3 Types Of Budget

Balanced budget

- occur when government total expenditure is equal to total revenue

Surplus budget

- occur when government total revenue is more than its total expenditure
- A government with surplus budget can pay up its debts.

Deficit budget

- occur when the government total expenditure is more than total revenue.
- A government with deficit budget must financed its by borrowing external or internal.

GOVERNMENT EXPENDITURE

- A current expenditure for the purpose of government administration
- Includes government spending in various departments, e.g. salaries, emoluments, supplies and services.
- A current expenditure for the purpose of government administration
- Includes government spending in various departments, e.g. salaries, emoluments, supplies and service.

- The investment expenditure, which involves expansions in the physical capital of a country, e.g. roads, schools and hospitals construction
- Results can only be seen in the long run
- Development expenditure consists of the following:-
-

  i) Defense and security
  ii) Economic service
  iii) Social services
  iv) General administration

National Debt

- National debt is a debt incurred by the government when the government needs to borrow money to finance the budget deficit, either from sources within the country, or abroad.

- It encompasses public debt owed by the federal government, the state government, and municipal and local governments.

Internal Sources

1. Loans from citizens through sale of securities, bonds and saving certificates
2. Loans from financial institutions, e.g. insurance companies by investing
3. Loans from the central bank
4. Loans from the commercial banks

External Sources

1. International money markets, e.g. foreign exchange banks in Paris, London and New York
2. Currency loans from foreign governments, e.g. USA, Germany, Japan (loans are documented in contracts)
3. Loans from international monetary financial institutions, e.g. IMF (short term basis) and World Bank (long term basis)

MONETARY & FISCAL POLICY

	MONETARY	FISCAL
DEFINATION	Refers to a policy which employs the central bank's control of supply of money. ➢ involves changing the interest rate and influencing the money supply.	A fiscal policy refers to the regulation of the level of government spending, taxation and public debt to influence aggregate demand, aggregate output, employment and prices in the economic.
OBJECTIVES	1. To maintain domestic price stability. 2. To achieve a balance of payment equilibrium. 3. To achieve full employment of resources. 4. To achieve a higher rate of economic growth. 5. To achieve a continuously low structure of interest rates.	1. Securing efficient allocation of economic resources. 2. Attaining and maintaining full employment. 3. Accelerating the rate of economic growth. 4. Controlling the equitable distribution of income and wealth.

TYPES OF POLICY

MONETARY		FISCAL	
EXPANSIONARY	**CONTRACTION**	**EXPANSIONARY**	**CONTRACTION**
• Increasing the money supply in the economy. • This policy is employed either to control unemployment or during recession. • Lower interest rate to spurs growth	• Decrease the money supply in the economy. • This policy is employed to control inflation. • Increase interest rate to overcome inflation	• To overcome unemployment or recession problem. • Two types of expenditure: - Operating expenditure - Development expenditure Example: Transfer payment • Will increase spending and decrease taxes to control unemployment it when inflation. • Encourage economic activities	• To reduce demand and overcome inflation problem. • Policy with decreasing government expenditure and increasing the tax. • A reduction in government expenditure will directly affect aggregate demand. • The government will provide fewer transfer payment, cut the salary of all civil servants and postpone its development projects to reduce the purchasing power of consumer.

INSTRUMENT OF MONETARY POLICY

QUANTITATIVE

1. Need for statutory reserves
2. Minimum liquidity requirement
3. Open Market Operation
4. Discount Operation
5. Interest rate
6. Funding

QUALITATIVE

1. Selective credit control
2. Moral persuasion

INSTRUMENT OF MONETARY POLICY

QUANTITATIVE

QUALITATIVE

QUANTITATIVE

1. Statutory reserve

The minimum amount of cash the central bank requires all commercial banks to keep in the central bank

2.Minimum liquidity requirement
Commercial banks do not have to hold cash but also other liquid assets such as treasury bills and government securities. The more liquid assets the bank hold, the lesser the credit that can be created.

3. Open market operation
Include the buying and selling of government securities by the central bank to influence the cash reserves in a commercial bank.

4. Bank discount or discount rate
Central bank charges on loans of reserves to other bank

5. Funding
In economics funds are injected into the market as capital by lenders and taken as capital by lenders and takes as loan by borrowers.

QUALITATIVE

1. Selective credit controls.
Controls regulate the extension of credit for a particular purpose.
(i) Control on credit mortgage
Inflation : The central bank will prevent people from buying assets in mortgages , such as housing. Deflation : The central bank will encourage people to buy assets in mortgages , such as housing.
(ii) Control on credit installment
Inflation : Central bank will prevent people buying cars on credit installment by increasing the minimum down payment
Deflation : Central bank will prevent people buying cars on credit installment by decreasing the minimum down payment.

2.Moral persuasion.
- Organizes a direct meeting with commercial bank to request some action from them. It can be conveyed through a speech , a press conference , or is informed directly.
Inflation : Central bank will persuade commercial banks to reduce loans for speculative purposes.
Deflation : Central bank will persuade commercial banks to increase lending on certain economic sectors that can accelerate economic growth.

TEST YOUR ⭐UNDERSTANDING

You can write the answer based on your understanding

In the boxes below, write down the correct answer that you understand from your study.

State the roles of governement

List down types of budget....

Give an example of internal of government debt

What are the instrument of qualitative monetary policy

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CHAPTER 5 UNEMPLOYEMENT AND INFLATION

LEARNING OUTCOME:

01 Explain the business cycle

02 Interpret unemployment in economy

03 Interpret the inflation in economy

THE BUSSINESS CYCLE

A business cycle, sometimes called a "trade cycle" or "economic cycle," refers to a series of stages in the economy as it expands and contracts. It comprised of concerted cyclical upswings and downswings in the broad measures of economic activity—output, employment, income, and sales. The Business Cycle allows people to understand the direction the economy (GDP) is going (growing or shrinking) and plan accordingly.

DEFINITION OF BUSINESS CYCLE

- ·Business cycle is a wave-like fluctuation in aggregate economic activity, particularly with regard to national income, employment, and output.

- According to Keynes, the business cycle is composed of periods of good trade with rising prices and low unemployment percentages, followed by periods of a bad trade with falling prices and high unemployment percentages.

- The business cycle is periodic but irregular up and down movement in economic activity measured by fluctuations in real gross domestic product (GDP) and other macroeconomic variables.

People think of a business cycle, which is a boom followed by a recession and then automatic stabilizers revive the economy. But this time we can't revive. The reason is that every recovery since 1945 has begun with a higher, and higher level of debt. The debt is so high now, that since 2008 we've been in what I call, debt deflation.

— *Michael Hudson* —

THE PHASES OF BUSINESS CYCLE
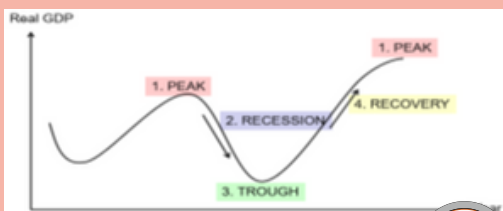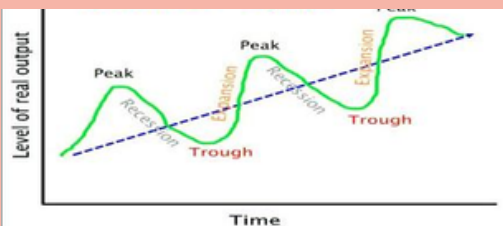
THE PHASES OF BUSINESS CYCLES

VS ECONOMICS ACTIVITY

Phases of a Business Cycle	Economic Activity
Peak Also known as expansion, boom, prosperity period or upswing of economy	Output – maximum level
	Unemployment – lowest level
	Economy at full employment and higher of income. Mor investment and increasing affective demand.
Recession It occurs when the recession , or contraction phase, bottoms out and starts to rebound into an expansion phase	Output – declines
	Unemployment – increases
	Decline in comsumpton expenditure and investment level and drop genera price.
Trough Also known as depression, contraction, or downswing of economy	Output – minimum level
	Unemployment – highest level
	Low general price and less investment and less profit. Suffering and hardship to soicety and the worse phase of business cycle.
Recovery Also known as revival. Initiated by government expenditure, changes in production techniques, new innovations and exploitation of new sources technology	Output – increases
	Unemployment - declines
	Increase in investmet, changes in production techniques, new innovations and explotation of new sources of energy. Increase in government expenditure wil stimulate the demand of consumption of goods and thus will increase the demand for capital goods.

UNEMPLOYMENT IN ECONOMY

INTERPRET UNEMPLOYMENT IN ECONOMY

The unemployment rate is the percent of the labor force that is jobless. It is a lagging indicator, meaning that it generally rises or falls in the wake of changing economic conditions, rather than anticipating them. When the economy is in poor shape and jobs are scarce, the unemployment rate can be expected to rise. Unemployment is an important macroeconomic indicator for several reasons. The amount of unemployment speaks to how well our economy is operating.

DEFINE THE UNEMPLOYMENT

Unemployment is a referring to individuals who are employable and actively seeking a job but are unable to find a job. Included in this group are those people in the workforce who are working but do not have an appropriate job. Usually measured by the unemployment rate, which is dividing the number of unemployed people by the total number of people in the workforce, unemployment serves as one of the indicators of a country's economic status.

According to **Adam Hayes** (2022) the term unemployment refers to a situation where one is actively searching for employment and is unable to find work.

Labour force
All persons above 16 years of age and older who are working or actively seeking work.

A discouraged worker
An individual who wants to work but has been unsuccessful for a long period of time in finding a job and who has consequently given up on seeking jobs.

Underemployment
People who work part-time or who are in jobs below their capability, but who are seeking full-time employment. Example: Graduate working as a salesperson in a convenience shop.

Full employment
The situation in the economy where all available resources are employed to produce goods and services.

A person who is:
- *Physically fit*
- *Mentally sound*
- *Well qualified*
- *Willing to work at a prevailing wage rate*
*BUT does not get a job. This situation is called **unemployment***

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TYPES OF UNEMPLOYMENT

FRICTIONAL UNEMPLOYMENT

- This is a type of voluntary unemployment that arises because of the time needed to match job seekers with job openings.
- Just as friction always takes place before the slider comes to its final position on the surface, people need time to find the best job thus voluntarily rubbing back and forth between choice and staying unemployed.
- Example: Alif a is a Diploma holder from polytechnic. Temporarily she is working as a salesgirl at Family Store Supermarket. But she is trying her hard to find another better job that is suit with her Diploma with better payment.

CYCLICAL UNEMPLOYMENT

- Occur when there is involuntary unemployment due to a lack of demand for goods and services.
- Thera are a lack of jobs because of downsizing in business cycle or a recession.
- Example: Jeffry is working at ABX factory in Kangar, because of recession the employer needs to downsizing the company by laid off a few of workers until the economy is recovered.
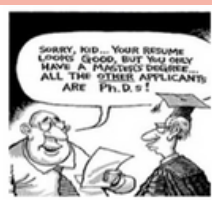
SEASONAL UNEMPLOYMENT

- Seasonal unemployment refers to a situation where a number of person are not able to find jobs during some months of the year. Hence many workers are temporarily laid off on a short term basis during certain times of the year.
- Example: Seasonal fluctuations in unemployment occurs in construction worker who will be unemployed during rainy season.

STRUCTURAL UNEMPLOYMENT

- This unemployment arises due to structural change in dynamic economy of the country. This is happening because the composition of the labour force does not respond quickly to meet changing demands, technological change and else.
- Structural unemployment poses more of a problem because workers musk seek job elsewhere or must develop the skills demanded. The process is full of pain and frustration and may lead to negative impacts on society.
- Example: Arman works at Mr. Ahmad farm. He has no skill on machines but only manual skill. To improve productivities, Mr. Ahmad would like to implement a modern mechanization in his farm. So Arman either must learn how to use the new technology or laid off from the job.

TECHNICAL UNEMPLOYMENT

- Technical unemployment caused by technological changes or new methods of production in an industry or business.
- The evolution of the automobile assembly plant. In the beginning everything on the line was done by humans in order to build a car.
- The assembly line itself was a great technological innovation. Today, robot is employed for much of the hand-work human used to do.
- Example: The worker who lost their jobs because of acquire news skill, machine, method, technique and so on.
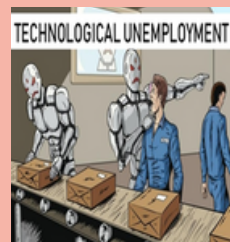
EFFECT OF UNEMPLOYMENT

EFFECTS OF UNEMPLOYMENT ON AN INDIVIDUAL

Reduced income

Unemployed individuals experience reduced income as a direct result of not having a job. Because a job provides wages for the person, being unemployed takes away these wages and leaves the individual with less available income.

Loss of job skills

Long-term unemployment might cause the skills of an individual to deteriorate. Local products cannot compete with the cheaper and better quality foreign product. Unemployment increases progressively with decreased educational levels, and the education system is not producing the skills for the labour market.

Health problems

Unemployment can also have a significant impact on a person's physical health. Being unemployed is a highly stressful situation, so it may cause stress-related health issues such as headaches, high blood pressure, diabetes, heart disease, back pain, and insomnia. These health issues often result in increased visits to a doctor and increased use of medication to manage the health conditions.

Negative familial effects

Family members of an unemployed person are also at risk of the negative impact of unemployment. According to the Society for the Psychological Study of Social Issues, individuals who are unemployed have less family and marital satisfaction and increased family challenges compared to unemployed people.

Mental health challenges

Studies have shown that unemployment increases a person's risk for depressive symptoms. Another mental health challenge that unemployed individuals often face is anxiety. Unemployed people often have decreased mental health compared to those who are employed. Unemployed persons also often experience a higher number of poor mental health days than their employed counterparts.

EFFECTS OF UNEMPLOYMENT ON AN SOCIETY

Family dispute

The impacts of unemployment on families include poverty and hardship, strained relationships, poorer health (although the causal relationships are not always clear), and housing stress. Unemployment could also harm children's development and employment futures.

Social problems

Being forced to take part in illegal activities to obtain money and it will cause social problems such as theft and robbery and threaten social peace.

Low standard of living

Unemployment normally results in a loss of income. The majority of the unemployed experience a decline in their living standards and are worse off out of work. This leads to a decline in spending power and the rise of falling into debt problems.

Increasing criminal rate

Societal costs of high unemployment include higher crime and a reduced rate of volunteerism. Crime and Violence come to the present because when an unemployed person is in need and cannot assist themselves or others, they turn to rob and killing others to satisfy their needs and wants.

EFFECTS OF UNEMPLOYMENT ON AN ECONOMY

Ruin the economic growth

Unemployment can have adverse effects on the economy and on the well-being and life satisfaction of those who are out of work. The firm has the excess production capacity and capital goods and equipment. The low profits will reduce the eagerness of investors to make a new investment.

Drop in government revenue and national per capita income

In unemployment situations, governments are no longer collecting the same levels of income tax as before. Lower tax collections, hence a fall in national per capita income.

Wastage of production resources

According to Clark, 2003, unemployment reduces the long-run growth potential of the economy. When the situation arises where there are more other resources for the production and no manpower leads to wastage of economic resources and lost output of goods and services and this has a great impact on government expenditure directly.

Social and political problem

Criminal activity acts like a tax on the entire economy: it discourages domestic and foreign direct investments, it reduces firms' competitiveness, and reallocates resources creating uncertainty and inefficiency.

CALCULATION OF UNEMPLOYEMENT RATE

A percentage of the labour force who are unemployed and are actively seeking jobs

UNEMPLOYMENT RATE (%) = <u>NUMBER OF UNEMPLOYED</u> X 100%
                            LABOUR FORCE

OR

UNEMPLOYMENT RATE (%) = <u>LABOUR FORCE-EMPLOYMENT</u> X 100%
                            LABOUR FORCE

Question

	2018	2019
Total Labor Force	A	10 500
Employment	9 508	10 080
Unemployment		415
Unemployment Rate = $\frac{C}{100}$ X	D	E

	2018	2019
Total Labour Force	= 9508 + 415 = 9923/	10500
Employment	9508	10 080
Unemployment	415	=10500-10080 420
Unemployment Rate = $\frac{\text{\# uumployment X 100/}}{\text{Labour Force/}}$	= $\frac{415}{9923}$ X 100 / = 4.15 %/	= $\frac{420}{10500}$ X 100 / 4.0%

METHOD TO CONTROL UNEMPLOYMENT

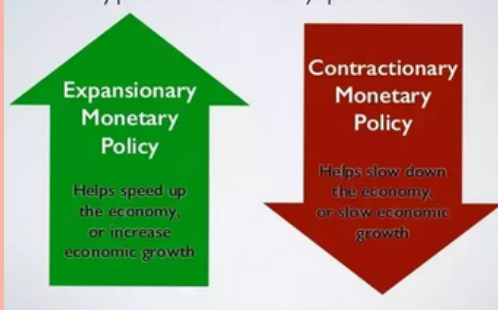| Contractionary Monetary Policy	Contractionary Fiscal Policy	Direct control measure

• OMO by selling the securities
 • Raise:
   •Reserve requirement (r.r)
   • Bank Rate/discount rate
   • Interest rate (r)
	• Lowering Government Spending (G)
	 • Increase Taxes (T)
		• Price control
		 • Compulsory savings
		 • Increase labor production
		 • Wages control
		 • Anti-hoarding campaign

MONETARY POLICY

Monetary policy:

Refers to actions central banks take to pursue objectives such as price stability and maximum employment

Monetary policy is a set of actions that can be undertaken by a nation's central bank to control the overall money supply and achieve sustainable economic growth. According to McConnell (2019): "Changing the money supply to assist the economy to achieve a full employment" This policy is adopted by the central bank of an economy in order and regulate the money supply in the country to stabilize the economy. The main function of monetary policy is to control and regulate credit money.

Types of monetary policies:

Expansionary Monetary Policy

Helps speed up the economy, or increase economic growth

Contractionary Monetary Policy

Helps slow down the economy, or slow economic growth

TOOLS OF MONETARY POLICY

Open market operation
The central bank can either purchase or sell securities issued by the government to affect the money supply. For example, central banks can purchase government bonds. As a result, banks will obtain more money to increase the lending and money supply in the economy.

Lowering the reserve requirement
Central banks usually set up the minimum amount of reserves that must be held by a commercial bank. By changing the required amount, the central bank can influence the money supply in the economy. If monetary authorities increase the required reserve amount, commercial banks find less money available to lend to their clients, and thus, the money supply decreases. Commercial banks can't use the reserves to make loans or fund investments into new businesses. Since it constitutes a lost opportunity for the commercial banks, central banks pay them interest on the reserves.

Discount rate
A central bank can influence interest rates by changing the discount rate. The discount rate (base rate) is an interest rate charged by a central bank to banks for short-term loans. For example, if a central bank increases the discount rate, the cost of borrowing for the bank increases. Subsequently, the banks will increase the interest rate they charge their customers. Thus, the cost of borrowing in the economy will increase, and the money supply will decrease.

Lowering the interest rate
The interest rate charged by Federal Reserve Banks to depository institutions on short-term loans.

FISCAL POLICY

Fiscal policy:

Refers to the government's revenue collection and spending decisions (Congress and the administration)

Fiscal Policy

Expansionary Fiscal Policy — Helps speed up the economy

Contractionary Fiscal Policy — Helps slow down the economy

- Fiscal policy refers to the use of government spending and tax policies to influence economic conditions, especially macroeconomic conditions, including aggregate demand for goods and services, employment, inflation, and economic growth. Fiscal policy is often contrasted with monetary policy, which is enacted by central bankers and not elected government officials.

- According to Samuelson (2004): "Fiscal policy is concerned with all those activities which are adopted by the government to collect revenues and make the expenditures so that economic stability could be attained without inflation and deflation"

Fiscal Policy Types, Objectives, and Tools

EXPANSIONARY FISCAL POLICY VS CONTRACTIONARY FISCAL POLICY

Government spending — Taxes

Government spending — Taxes

DIRECT CONTROL POLICY

A control that is directly imposed upon the manufacturing, pricing, and distribution of specific goods in contrast with an indirect or general control (such as credit and fiscal policy) that affects the economy in its entirety and specific goods only indirectly.

TOOLS OF DIRECT CONTROL POLICY

Providing training and technical education.

Policy suggestions to reduce structural unemployment include providing government training programs to the structurally unemployed, paying subsidies to firms that provide training to displaced workers, helping the structurally unemployed to relocate to areas where jobs exist, and inducing prospective workers to continue or resume their education.
Examples: unemployed graduates are given free short courses to learn computer skills & language.

Development of new land

The development of new land is through government agencies such as FELDA, RISDA & FELCRA. This agency's function is to carry out projects of land development and agricultural activities, and industrial and commercial social economy.

Job creation in various sectors in an economy.

Creating jobs in various sectors in an economy helps the economy by increasing gross domestic product (GDP). When an individual is employed, they are paid by their employer. This results in them having money to spend in society; on food, clothing, entertainment, and a variety of other areas.
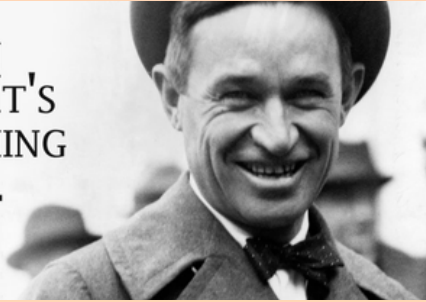
INFLATION

INVEST IN INFLATION. IT'S THE ONLY THING GOING UP.

Will Rogers

WHAT IS Inflation?

Definition

- According to C.CROWTHER, **"Inflation is State in which the Value of Money is Falling and the Prices are rising."**
- In Economics, the Word inflation Refers to General rise in Prices Measured against a Standard Level of Purchasing Power.

FIVE FACTS ON INFLATION

1 The Federal Reserve defines inflation as the "increase in the prices of goods and services over time."

2 Inflation can be caused by many factors, including "too many dollars chasing too few goods."

3 The inflation rate for the 12 months ending January 2021 was 1.4%.

4 The Federal Reserve uses the federal funds rate to modulate inflation.

5 The Federal Reserve adopted an inflation target of 2% in 2012 following the global financial crisis.

Walking Inflation
prices rise 3–10% a year

Creeping/Mild Inflation
prices rise 3% a year or less

THE FOUR MAIN TYPES OF
INFLATION

Hyperinflation
prices rise >50% a mon[...]

Galloping Inflation
prices rise >10%

MEASURES OF INFLATION

INFLATION RATE = **CPI THIS YEAR – CPI PREVIOUS YEAR**   X 100
CPI PREVIOUS YEAR

Example : CPI for the year 2020 was 172 and year
2021 was 175.
Calculate the inflation rate.

Solution: = <u>175 – 172</u> x 100 = (3/172) x 100
172
= 1.74%

INFLATION

WHAT

PRICES RISING OVER TIME

PRICES UP

MEASURED BY
CPI = CONSUMER PRICE INDEX

GOOD OR BAD

POSITIVES
- HIGHER PAYCHECKS
- CAN HELP ECONOMY GROW
- HELPS BORROWERS

NEGATIVES
- HIGHER EXPENSES
- TOO MUCH = BAD FOR GROWTH
- BAD FOR LENDERS

CAUSES

STRONG ECONOMY

ENERGY PRICES

GOVT POLICY

FUN FACT
BIG MAC INDEX: ALTERNATE MEASURE THAT TRACKS PRICE CHANGES IN BIG MACS AROUND THE WORLD

WHAT CAUSES INFLATION

Cost-push Inflation:
When production costs rise and the producers pass the increase on to consumers.

Demand-pull Inflation:
When demand for goods increases and exceeds production capacity.
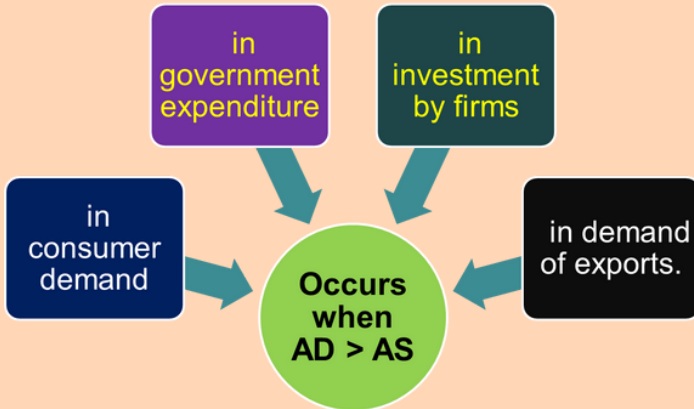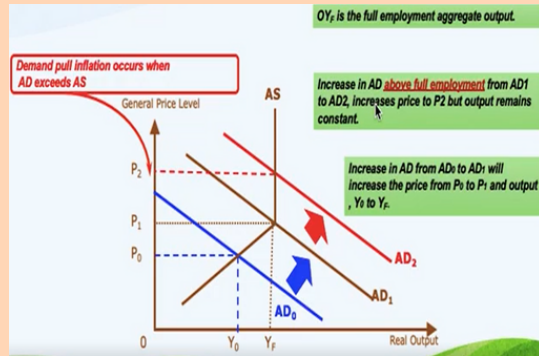
Price

Value of money

77

CAUSES OF INFLATION
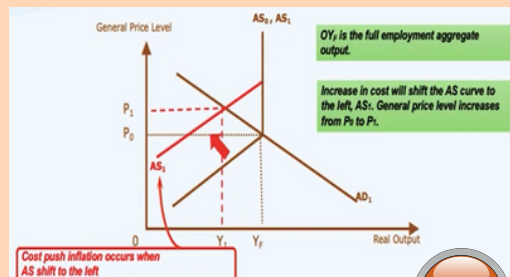
1 DEMAND PULL INFLATION

Inflation which arises due to various factors like rising income, exploding population, lead to aggregate demand and exceed aggregate supply and tend to raise price of good and services,.

OY$_F$ is the full employment aggregate output.

Demand pull inflation occurs when AD exceeds AS

Increase in AD above full employment from AD1 to AD2, increases price to P2 but output remains constant.

Increase in AD from AD$_0$ to AD$_1$ will increase the price from P$_0$ to P$_1$ and output , Y$_0$ to Y$_F$.

in government expenditure

in investment by firms

in consumer demand

in demand of exports.

Occurs when AD > AS

2 COST PUSH INFLATION

Cost-push inflation is a type of inflation that is caused by the increase in the cost of labor and materials throughout a supply chain. When this inflation happens, it causes prices for goods and services to go up, resulting in decreased supply. This can be contrasted with demand-pull inflation, which occurs when there is simply an increase in demand that drives prices up.

should I ask for a RAISE???

OY$_F$ is the full employment aggregate output.

Increase in cost will shift the AS curve to the left, AS$_1$. General price level increases from P$_0$ to P$_1$.

Cost push inflation occurs when AS shift to the left

EFFECT OF INFLATION

Positive effects	Negative effects
• Benefit to inflators	• Hoarding
• Early and first recipients of the inflated money	• Distortion of relative prices
• Big cartels, destroys small sellers	• Increased risk - Higher uncertainties
• Borrowers	• Income diffusion effect
• Inflation may reduce the severity of economic recessions	• Existing creditors will be hurt
• Tobin effect (can increase investment)	• Fixed income recipients will be hurt
	• Increased consumption ratio at the early stages of inflation
	• Lowers national saving
	• Illusions of making profits
	• Causes mal-investment, tax bracket & business cycles
	• Currency debasement
	• Rising prices of imports

CONTROL OF INFLATION

To control demand-pull inflation	Monetary measures	• If the supply of money in the economy can be decreased, prices will fall. • If the government withdraws paper notes and coins from circulation, the money supply will decrease. • The lion's share of the total money supply is bank deposits or bank credit. • If we can reduce the rate of lending by banks, we can reduce the total supply of money significantly. • The Central bank of a country can reduce the lending of commercial banks by raising the bank rate and reserve requirements of banks, by open market sales of securities, etc

	Fiscal policy	• The policy of changing tax rates or the rate of Government expenditure.
		• An inflationary gap arises when aggregate demand exceeds the maximum potential supply in an economy.
		• To overcome, the following types of fiscal measures can be undertaken—
		  • A decrease in the Government expenditure; or,
		  • A decrease in the Government transfer payments; or
		  • An increase in taxes imposed by the Government; or,
		  • A combination of all these measures.
		  — These are regarded as contractionary fiscal policies.

To control cost-push Inflation	Direct control	such measures as wage freeze, putting upper limits on the prices of such important inputs as electricity, coal, steel, etc.
Other measures		These measures are: • augmenting the supplies of commodities in the domestic market by increasing imports. • increasing domestic production, etc.

Name:	Matrix No:	Date

TEST YOUR ✰UNDERSTANDING

List down types of unemployment....

State the phases in business cyc;es

What is inflations?.

Tools of direct control to control unemployment

What are the causes of cost pull inflation

Demand pull inflation are

What is the negative effect of inlation

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CHAPTER 6
MONEY &
BANKING

LEARNING OUTCOME:

🌐 **Explain the role of money in economy**

🌐 **Interpret the money demand**

🌐 **Interpret the money supply**

🌐 **Explain the banking system**

ROLE OF MONEY IN ECONOMY

For the savings and other economic aspects, banks are the most reliable option for us where we can save, invest or borrow money by given terms and conditions. That's why we can easily say that money and banking are the most important segment in the economic circumstances

DEFINITION OF MONEY

Money is any object that is generally accepted as payment for goods and services and repayment of debts in a given country or socio-economic context. The main functions of money are distinguished as a medium of exchange; a unit of account; a store of value; and, occasionally, a standard of deferred payment.
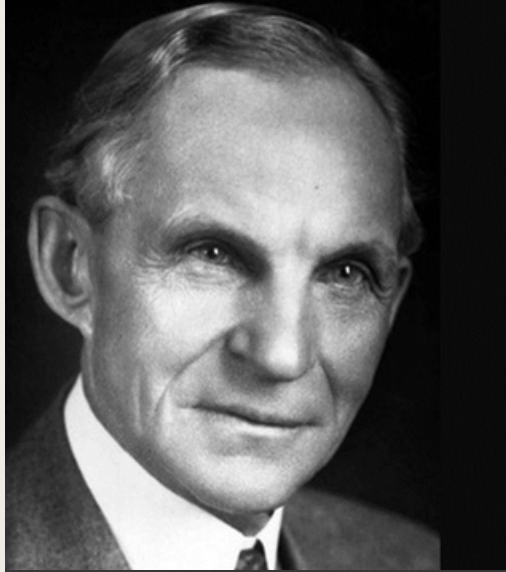
Economy has frequently nothing whatever to do with the amount of money being spent, but with the wisdom used in spending it.

— Henry Ford —

Barter

No Money

Deal!

"I can trade 10 hours of plumbing per month if you supply me with 2 liters of milk per day."

Exchange goods and services with goods and services

Before the evolution of money, a system of barter was used. A system barter is an old method of exchange to directly exchange goods and services for other goods and services without using a medium of exchange such as money.

THE FUNCTION OF MONEY

01 A medium of exchange

The function of money as a medium of exchange to buy goods and services has solved the barter systems problem of double coincidence of needs..

02 Measure of value as a unit of account

A tool to determine the value of goods in economic activities. For example, the currency in RM & cent in Malaysia

03 Store of value or wealth

A tool for accumulating wealth for a long time. Money can be a store of value due to its stability and durability

04 Standard of deferred payment

A tool to encourage credit card use in economic activities. Many economic activities expand due to credit and loan facilities from commercial banks.

CHARACTERISTICS OF MONEY

|	
Acceptability	The public must accept money as a measure of exchange
Stability	Have a stable value so that it can be used as a precise measure of value
Durability:	An item to be used as money must be a duration. Not damaged or spoiled.
Uniformity	Must be uniform so that the public is assured of its value.
Divisibility	Must be easily divided into smaller units without affecting the value
Portability	Money must be portable and not big or heavy in order to be transferred.
Recognition	Must be easily recognized by the public to avoid confusion,
Limited supply	A sufficient supply of money will stabilize the value of money.
No counterfeit ability	As a security measure, money must be difficult to counterfeit

TYPES OF MONEY

COMMODITY MONEY

Money that has a face value equal to its metallic value, as well as has full support value. (Gold, mental, silver and dinar money.

FIAT MONEY

Issued by central bank or declared To be money. Must be accepted by the public as medium of exchange (includes coin and paper money

LEGAL TENDER

Legal tender is paper money that government has approve to be accepted of any payment. All transactions in Malaysia will be in RM

This note is legal tender

Hu Zen Zau

MINISTER FOR FINANCE
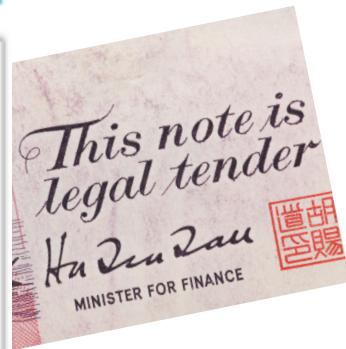
TOKEN MONEY

Token money is refer to money which has a lower metallic value than its face value. For example coin 5 cents, 10 cent, 20 cent and 50 cent

DEMAND DEPOSIT

Bank money is demand deposits deposited in the commercial banks. Consist of funds held in an account from which deposited funds can be withdrawn at any time .

DIGITAL CURRENCY

Form of currency that is available only in digital or electronic firm and not in physical form. Its also can called digital money, electronic currency or cyber cash.

DEMAND FOR MONEY
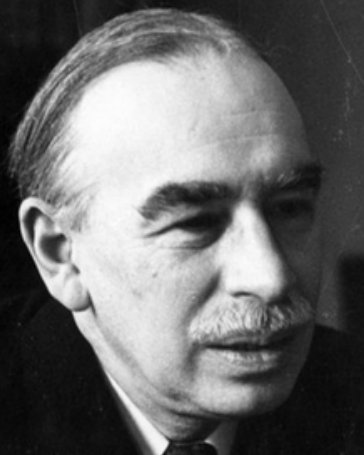
The destruction of the inducement to invest by an excessive liquidity-preference was the outstanding evil, the prime impediment to the growth of wealth, in the ancient and medieval worlds.

— *John Maynard Keynes* —

Definition

In monetary economics, the demand for money is the desired holding of financial assets in the form of money: that is, cash or bank deposits rather than investments.

Keynes Preferences Liquidity Theory

People will still prefer to hold their assets in the form of cash, even though money deposited in the bank will earn interest.

Keynes was of the opinion that the demand for cash in an economy is influenced by three main motives, i.e. transaction motive, precautionary motive and speculative motive.

WILLINGNESS TO PAY

Demand money curves

The demand curve for money is downward sloping, which means that people want to hold less of their wealth in the form of money the higher that interest rates on bonds and other alternative investments are.

Draw the demand money curves

Transaction and Precautionary Demand for Money (M_1)

Speculative Demand for Money (M_2)

Total Demand for Money ($M_1 + M_2$)
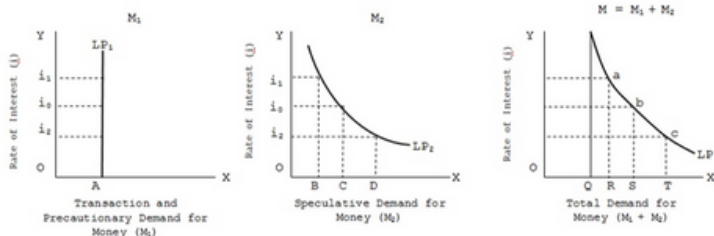
DEMAND OF MONEY

KEYNES LIQUIDITY PREFERENCE THEORY OF INTEREST

The **Liquidity Preference Theory** says that the demand for money is not to borrow money but the desire to remain liquid. In other words, the **interest** rate is the 'price' for money. John Maynard Keynes created the **Liquidity Preference Theory** in to **explain** the role of the **interest** rate by the supply and demand for money. Feb 14, 2018
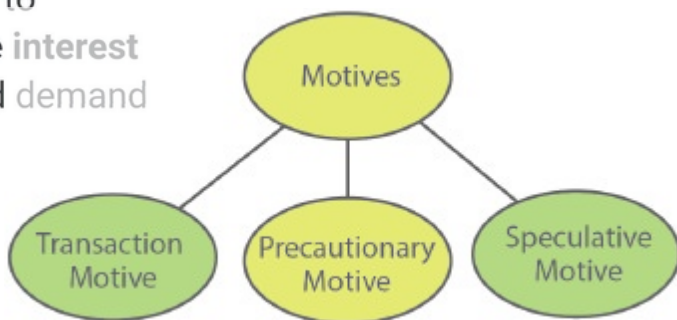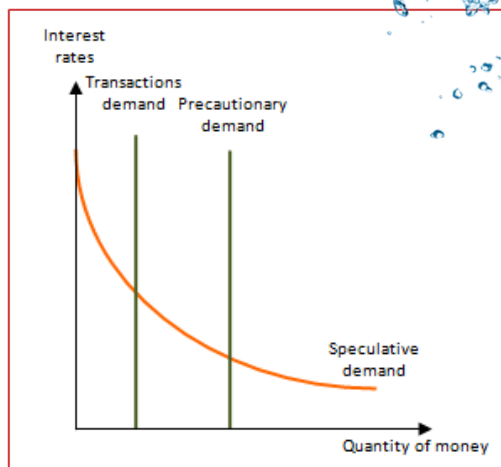
The demand for cash in an economy is influenced by 3 major motives;

Transaction motive	Precautionary motive	Speculative motive
Household need cash to buy good and service	Household need cash to pay unexpected expenses- For example hospital bill	People need cash for speculative activities. Speculative activities refer to future predictions of bond and stocks.

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SUPPLY OF MONEY

Thus, our national circulating medium is now at the mercy of loan transactions of banks, which lend, not money, but promises to supply money they do not possess

— *Irving Fisher* —

Irving Fisher

Has developed a study on the relationship between money supply and the general price level.

Any changes in the total money supply in an economy will produce the same rate of changes in the general price level.

Define

is the total value of money available in an economy at a point of time.
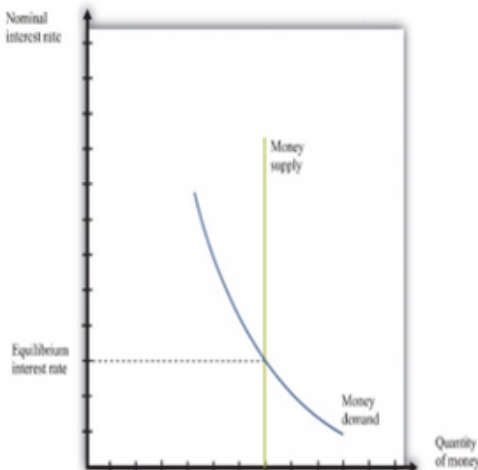
Draw the supply of money curve

In drawing the supply curve of money as a vertical line, we are assuming the money supply does not depend on the interest rate.

3 TYPES Of Money
Supply of Money

M1 (Narrow Money)

M1 = Consisting of coin, currency notes and demand deposits (bank money or cheques)
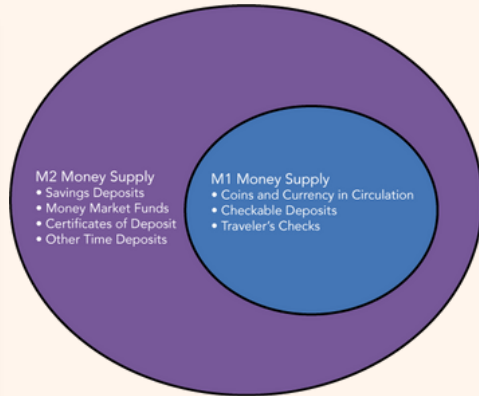
- M1 is transaction money or money which can be directly used for transactions.
- M1 is the narrowest definition of the supply of money and it comprises the most liquid assets.
- The most liquid assets are coins, notes and demand deposits (current accounts) at commercial banks that are easily convertible into cash.
- M1 is the most liquid asset since it can be used as payments and settlements of debts directly without any conversion.

Narrow Money

Coins | Banknotes

Travelers checks | Checking accounts | Liquid assets held by the central bank

M2 (M1 + Near Money)

M2 = M1 + Fixed and saving deposits in commercial banks, negotiable instruments deposits (NID), negotiable certificates of deposit (NCD) and BNM certificates + Repos + Foreign deposits in commercial banks

- M2 is a broader and less liquid definition of the money supply.

- M2 functions as a store of value and part of our wealth.

- It can be quickly converted into a medium of exchange, but the liquidity is lesser than M1 because it needs to be turned into cash first.

- Near or quasi-money are highly liquid financial assets, such as savings deposits, fixed deposits, NIDs and NCDs.
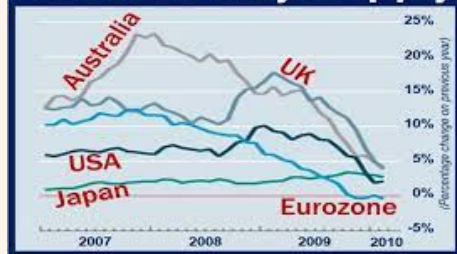

M2 Money Supply
• Savings Deposits
• Money Market Funds
• Certificates of Deposit
• Other Time Deposits

M1 Money Supply
• Coins and Currency in Circulation
• Checkable Deposits
• Traveler's Checks

M3 (Broad Money)

M3 = M2 + Saving and fixed deposits in other banking institutions +NCDS + repos in other financial institutions.

- M3 is the broadest definition of the supply of money with the lowest liquidity.

- M3 is used by economists to estimate the entire supply of money within an economy.

- M3 includes savings, fixed deposits, NCDs and Repos in other financial institutions, merchant banks, and discount houses.

- Broad near money/broad quasi money = M3 – M1

Broad Money Supply

Australia | UK | USA | Japan | Eurozone
2007 | 2008 | 2009 | 2010
(Percentage change on previous year)

Narrow Near Money (quasi-money)
= M2 – M1
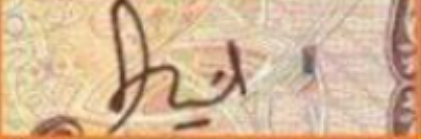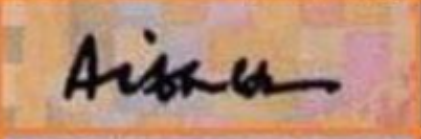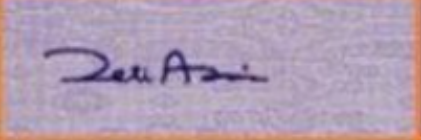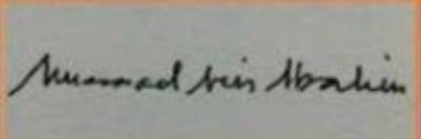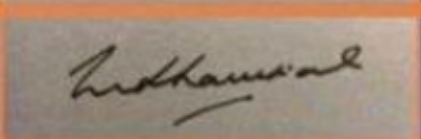
Broad Near Money (broad quasi-money)
= M3 – M1

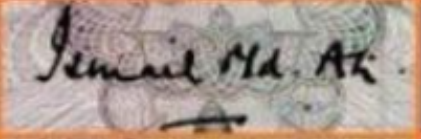# BANKING SYSTEMS

A banking system is **a group or network of institutions that provide financial services for us.** These institutions are responsible for operating a payment system, providing loans, taking deposits, and helping with investments.

GABENIOR BANK OF MALAYSIA

		Tan Sri William Howard Wilcock Gabenor Pertama 3 Tahun Januari 1959 - Julai 1962
		Tun Ismail bin Haji Mohamed Ali Gabenor ke 2 18 Tahun Julai 1962 - Julai 1980
		Tan Sri Abdul Aziz bin Haji Taha Gabenor ke 3 5 Tahun Julai 1980 - Jun 1985
		Tan Sri Dato' Jaffar bin Hussein Gabenor ke 4 9 Tahun Jun 1985 - Mei 1994
		Tan Sri Dato' Ahmad bin Mohd Don Gebenor ke 5 4 Tahun Mei 1994 - Ogos 1998
		Tan Sri Dato' Seri Ali Abul Hassan bin Sulaiman Gabenor ke 6 2 Tahun September 1998 - April 2000
		Y.M. Tan Sri Dato' Ungku Dr. Zeti Akhtar binti Ungku Abdul Aziz Gebenor ke 7 16 Tahun Mei 2000 - April 2016
		Dato' Muhammad bin Ibrahim Gabenor ke 8 Sejak Mei 2016
		Datuk Nor Shamsiah Binti Mohd. Yunus Gabenor ke 9 Sejak Julai 2018

Classification of Bank

THE FINANCIAL SYSTEM

BANKING SYSTEM
- Central Bank
- Commercial Bank

NON-BANK FINANCIAL INSTITITIONS
- Finance Companies
- Islamic Banking
- Merchant Banks
- Discount Houses

NON – BANK FINANCIAL INTERMEDIARIES
- Employees Provident Fund
- Development Financial Institutions
- Other Financial Bodies
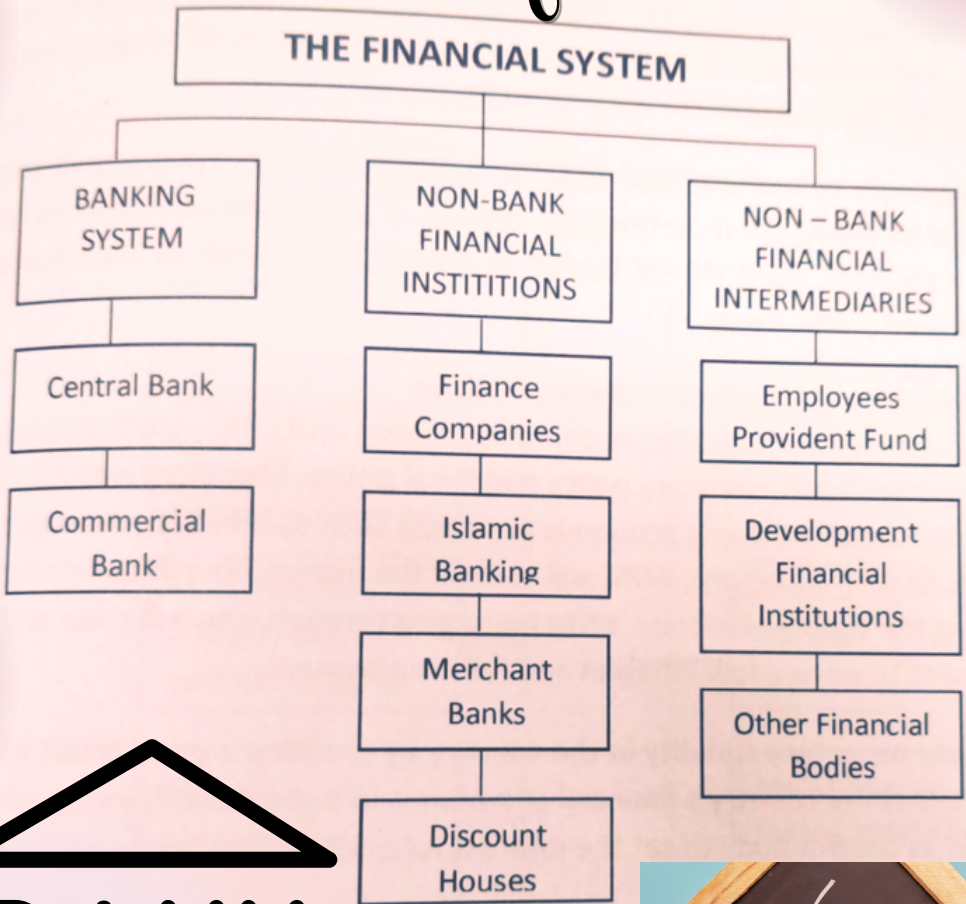
BANK

Functions of Central Bank

IN MALAYSIA, THE CENTRAL BANK IS CALLED BANK NEGARA MALAYSIA (BNM). BNM WAS FORMED ON 26 JANUARY 1959. IT IS OWNED AND CONTROLLED BY THE GOVERNMENT OF MALAYSIA. IT IS A NON-PROFIT INSTITUTION.

TO ISSUE CURRENCY AND SAFEGUARD THE VALUE OF CURRENCY — 01

Only BNM has the right to print money and safeguard the value of the currency to ensure currency uniformity and stability. BNM arrange for the printing of currency notes and minting of coins according to the Bank Negara Malaysia Ordinance 1958. The ringgit Malaysia printed has security has security features to avoid any attempt to print false currency.

KEEP SUFFICIENT RESERVES TO SAFEGUARD THE VALUE OF CURRENCY — 02

BNM manages the country's foreign exchange reserves and implements the exchange rate system and balance of payments policy. Therefore, BNM must have sufficient foreign reserves of currencies from countries that constantly do business with Malaysia to ensure the value of RM is stable and does not undergo much change compared to other main currencies around the world.

TO ACT AS BANKER AND FINANCIAL ADVISER TO THE GOVERNMENT — 03

BNM acts as the banker and financial adviser to the government on all important financial matters of the country. BNM keeps the government's principal bank accounts, receive taxes and other revenues, make payments of government expenditure and manages the national debt.

IMPLEMENTATION OF NATIONAL MONETARY POLICIES — 04

Two main policies in controlling economic activities and influence the country's economic growth are monetary policy and fiscal policy. Monetary policies carried out by BNM aims at overcoming economic problems such as inflation, unemployment, recession. In such situations, BNM will control the money flow in the market by controlling the supply of money. BNM managing through interest rates and reserve requirement to ensure low inflation and full employment.

TO PROMOTE MONETARY STABILITY IN THE COUNTRY BY CREATING A GOOD CREDIT SITUATION — 05

To ensure that the country's financial situation is in a good condition, government uses BNM as control body to set the interest rates and other terms and conditions in borrowing-lending activities.

BEING A BANKER TO THE BANKS — 06

As the bankers' bank, BNM keeps cash reserves of commercial banks and acts as the custodian of the cash reserves to support credit and banking system. Banks also keep their deposits with the central bank.

CONTROL AND SUPERVISE ALL ACTIVITIES OF BANKING SECTOR AND FINANCIAL INSTITUTIONS — 07

BNM promote a sound financial structure, licensing of banks and non-banks, banking relationship, currency distribution and inspection and investigation of bank and non-banks.

Functions of Commercial Bank

COMMERCIAL BANKS IS FINANCIAL INSTITUTION OWNED BY THE PRIVATE SECTOR TO PROVIDE FINANCIAL SERVICES WITH THE OBJECTIVE OF MAKING PROFITS. EXAMPLE OF COMMERCIAL BANKS IN MALAYSIA ARE MALAYAN BANKING BHD., RHB BANK BHD. AND PUBLIC BANK BHD. BELOW ARE FUNCTIONS OF COMMERCIAL BANK.

RECEIVE DEPOSIT OR SAVING — 01

Commercial banks receive deposits and saving from individuals and businesses. There are few types of deposit received by the bank such as current deposit, savings deposit, fixed deposit and others. Commercial banks do not give interests for currents savings but the account holder has the right to withdraw his savings by using cheques.

PROVIDE LOAN — 02

The activity of providing loans is one of the commercial bank's important functions. The loans are differentiated based on time, either short time or long term. Generally, commercial banks provide loans through three methods - current account, overdraft facility and discounted bills of exchange.

MAKING AND RECEIVING PAYMENT ON BEHALF OF CLIENTS — 03

Current account holders can make payment using cheques. When the cheque is issued, the bank will pay the cheque holder based on the amount stated on the cheque. On the other hand, if the account holder issuing bank makes the payment to him. Once the cheques have been cleared, the banks will credit the total value of the cheque from other banks into client's current account.

ISSUE CASHIER'S CHEQUE AND BANK DRAFS — 04

Commercial banks can issue cashier's cheque and bank drafts to its clients. Cashier's cheques are issued by the bank and can be exchanged to cash.

CARRYING OUT INVESTMENT ACTIVITIES — 05

Commercial banks carry out investment through asset purchase that results in returns in the form of interests in the open market with the aim of making profits. For example, commercial banks in Malaysia invest in treasury bills and Malaysia government securities.

PREPARING OTHER SERVICES AND FACILITIES — 06

Besides all the functions mentioned earlier, commercial banks also provide other different services. Commercial banks can offer advice to clients who wish to invest. The banks can also manage your car loan instalments and insurance premiums Commercial banks also act as trustee to administer client's property. The banks are also safe vaults to keep valuable things and important document in their safe deposit boxes.

Exercise 1

The following table shows the money supply for country SODA in the year 2015.

ITEMS	RM Million
Paper money	7,800
Coins	1,500
Demand deposits in commercial banks	11,500
Negotiable certificates issued by commercial banks	20,800
Bank Negara certificates	5,660
Negotiable certificates issued by Bank Simpanan Nasional	8,787
Fixed and saving deposits in other financial institutions	14,300

Calculate:

a)   Total fiat money.

(2marks)

b)   Money supply, M1.

(2 marks)

c)   Money supply M2.

(3 marks)

d)   Money supply, M3.

(3 marks)

Exercise 2

The table below shows the list of money supply components in a country in the year 2013.

Items	RM million
Paper money	2,050
Coins	1,900
Fixed and saving deposits in commercial bank	560
Fixed and saving deposits in other banking institution.	840
Current account	3,200
Repurchase agreement in commercial bank	4,500
Negotiable certificates in commercial bank	698
Bank Negara certificates in commercial bank	324

Calculate :

a)   M1.

(3 marks)

b)   M2.

(3 marks)

c)   M3.

(2 marks)

d)   Narrow money.

(1 mark)

e)   Broad money.

(1 mark)

Exercise 3
Match the correct anwer

Recognition	Must be uniform so that the public is assured of its value.
Stability	Must be easily recognize by the public to avoid confusion,
Uniformity	Must be easily recognize by the public to avoid confusion,
Acceptability	An item to be used as money must be duration. Not damaged or spoiled.
Durability	the public must accept money as a measure of exchange
Divisibility	A sufficient supply of money will stabilize the value of money.
Limited supply	Must be easily divided into smaller unit without affect value

Answer for Exercise 1

	Paper money	7800	0.5m
	Coins	1500	0.5m
a)	TOTAL FIAT MONEY	9300	1m
	demand deposit in commercial banks	11500	1m
b)	Money Supply M1	20800	1m
	NCD by commercial banks	20800	1m
	BNM certificates	5660	1m
c)	Money Supply M2	47260	1m
	NCD by BSN	8787	1m
	Fixed deposit in other financial institution	14300	1m
	Money Supply M3	70347	1m

Answer for Exercise 2

Paper money	2050
Coins	1900
current account	3200
M1	7150
Fixed & savings deposit in commercial bank	560
repurchase agreement in commercial bank	4500
negotiable certificates in commercial bank	698
bank negara certificates in commercial bank	324
M2	13232
Fixed & savings deposit in other financial institution	840
M3	14072
M2	13232
minus M1	-7150
narrow money	6082
M3	14072
minus M1	-7150
Broad Money	6922

CHAPTER 7

INTERNATIONAL TRADE

LEARNING OUTCOME:

- Explain the international Trade

- Explain the protectionism policies

- Explain the components in the balance of payments

- Explain exchange rate

International trade:

Refers to the exchange of goods and services between the people of two countries of the world.

Internal trade

Refers to exchange of goods and services within the political boundaries of a country.

Increases world production

Gives consumers more products

DOMESTIC TRADE VS INTERNATIONAL TRADE

ASPECTS	INTERNATIONAL TRADE	DOMESTIC TRADE
Size of Market	Large	Small
Currency	Different countries have different currencies with different values	All transactions will be in local currency
Documentation	Import /export licences, travellers cheques, etc.	No documentation needed
Laws and rules	Labour standards, education and legislation will be different in different countries	Business is only concerned with domestic trade laws
Protectionism	Tariffs, quotas, embargoes and non-tariff barriers	Protectionism is not practiced
Factors of Production	Immobility on labour between countries due to financial constraints, language barriers and cultural differences	Mobility where labourers are free to move within the country

MERITS AND DEMERITS OF INTERNATIONAL TRADE

MERITS

Leads to specialization	Shares knowledge and acquires modern technology
Utilizes resources	Acquires goods that cannot be produced locally
Produces quality products at cheap prices	Diversifies products and widening markets
Sets up new industries and employment opportunities	Builds relationships between trading partners
Develops communication and transport facilities	Generates higher income and economic growth

DEMERITS

Complicated procedures

Economic and political dependence

Adverse effect on domestic industries

Exhaustion / depletion of natural resources

Cost of transportation

ABSOLUTE ADVANTAGE VS COMPARATIVE ADVANTAGE

occurs if one of them has an absolute advantage in producing one product, while the other has an absolute cost advantage in producing another product.

ABSOLUTE ADVANTAGE

refers to the ability of a country to produce a product more efficiently than another country.

occurs when a country has absolute advantage over both products.

COMPARATIVE ADVANTAGE

refers to a country's ability to produce products with lower relative cost compared with other countries. It looks at relative efficiency, taking into account the production with the lowest opportunity costs.

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ABSOLUTE ADVANTAGE

☐ Underlying assumptions in the absolute advantage theory:

Absolute Advantage Theory

- Only two countries in the world
- Only two goods are produced
- Free trade exists between these two countries
- No transportation costs are involved
- Production under the law of constant costs
- Identical production functions between trading countries

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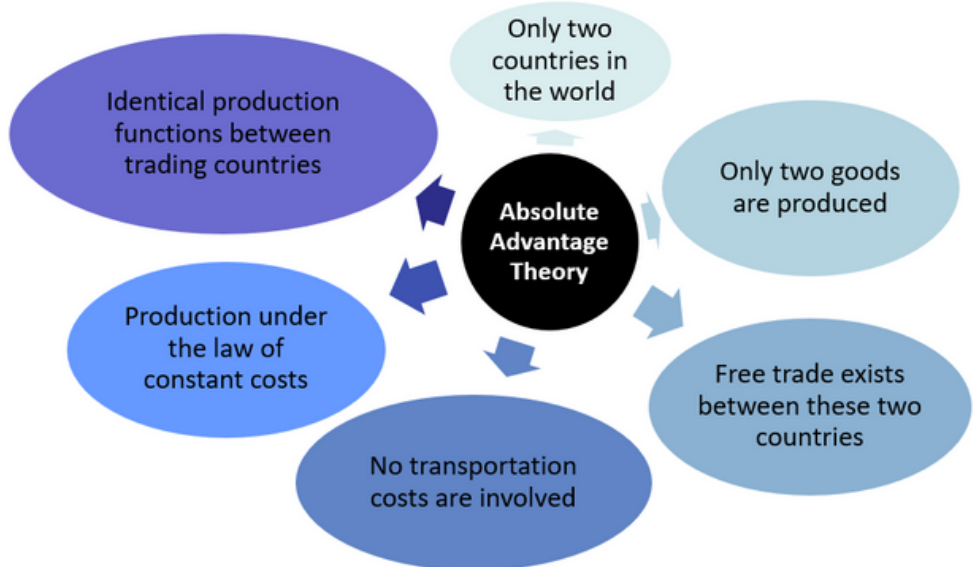
ABSOLUTE ADVANTAGE

Table 1: Production before specialization

Country	Rice (X)	Flour (Y)	Total
Thailand (A)	60	20	80
Malaysia (B)	20	40	60
Total	80	60	140

❑ Table 1 shows the output quantity produced by each country using the same resources. Country A (Thailand) can produce 60 rice or 20 flour using this resources. Country B (Malaysia) can produce 20 rice or 40 flour. Country A (Thailand) is more efficient at producing rice and Country B (Malaysia) is better at producing flour. So, each country has an **absolute advantage**.

❑ Analysis:
  • Thailand has **absolute advantage** in producing rice (X) because Thailand can produce more rice than Malaysia.
  • Malaysia has **absolute advantage** in producing flour (Y) because Malaysia can produce more flour than Thailand.
  • In short, Thailand should have *specialization* on rice (X), and Malaysia should have *specialization* on flour (Y).

❑ Malaysia uses 50% of the given resources to produce flour and 50% to produce rice. Malaysia can produce 20 tons of rice and 40 tons of flour. While Thailand can produce 60 tons of rice and 20 tons of flour with equally divided resources for the production of flour and rice.

❑ Table 1 shows that Malaysia has an **absolute advantage** in producing flour, and Thailand has an **absolute advantage** in producing rice.
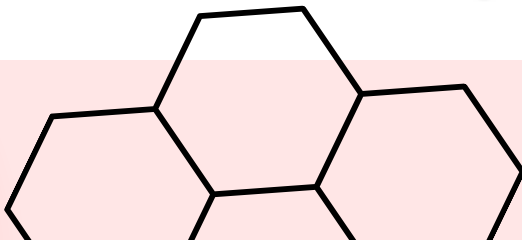
ABSOLUTE ADVANTAGE

Table 2 : Production after specialization

Country	Rice	Flour
Thailand (A)	60 X 2 = 120	0
Malaysia (B)	0	40 X 2 = 80
TOTAL	120	80

Table 3 : Production after International Trade takes place

Country	Rice	Flour
Thailand (A)	120 - 20 = 100	0 + 20
Malaysia (B)	0 + 20	80 – 20 = 60
TOTAL	120	80

COMPARATIVE ADVANTAGE

Table 4: Production before specialization

Country	Rice (X)	Flour (Y)	Total
Thailand (A)	10	5	15
Malaysia (B)	15	30	45
Total	15	35	60

❑ Malaysia (Country B) has *absolute advantage* in producing rice (X) and flour (Y) as she can produce both these goods more than Thailand (Country A).
❑ In short, Malaysia (Country B) should have *specialization* on both of this products for being efficient in producing them.

Table 5 : Calculation of opportunity cost

Country	Rice (X)	Flour (Y)	Total
Thailand (A)	10 (5/10) = 0.5	5 (10/5) = 2	15
Malaysia (B)	15 (30/15) = 2	30 (15/30) = 0.5	45
Total	25	35	60

COMPARATIVE ADVANTAGE

Table 6: Specialization takes place

Country	Rice (X)	Flour (Y)
Thailand (A)	10 X 2 = 20	0
Malaysia (B)	0	30 X 2 = 60

❑ Since both countries have a mutual absolute advantage in the production of flour and rice, specialization can take place.
❑ Thailand will channel all its resources to rice production and Malaysia will channel all its resources to flour production.
❑ This would yield 20 tons of rice and 60 tons of flour respectively.

Table 7: After International Trade

Country	Rice (X)	Flour (Y)
Thailand (A)	20 - 10 = 10	0 + 10 = 10
Malaysia (B)	0 + 10 = 10	60 - 10 = 50

PROTECTIONISM

Also known as **international trade barriers** or trade restrictions. Protectionism is an effort made by a country to restrict or reduce the total imported goods from other countries.

It's not a free trade agreement. It has virtually nothing to do with free trade... It's a protectionist agreement; it's anti free-trade.

— Noam Chomsky —

PURPOSE OF PROTECTIONISM POLICIES

National security argument	Protect resources
Protect new industries	Anti-dumping argument
Domestic employment argument	Improve the negative balance of payments
Low foreign wage argument	Increase national income
Diversify economic activities	Independent economy

TYPES OF PROTECTIONISM

1. TARIFFS	·Specific tariff ·Ad valorem tariff

2. NON-TARIFFS	·Quotas ·Embargo ·Import licence ·Foreign currency control ·Export industry subsidies ·Health and safety standards ·Other restrictions

TARIFF

EXPORT SUBSIDY

QUOTAS

TOOLS OF PROTECTIONISM

EXCHANGE COTROL

EMBARGOES

IMPORT LICENCE
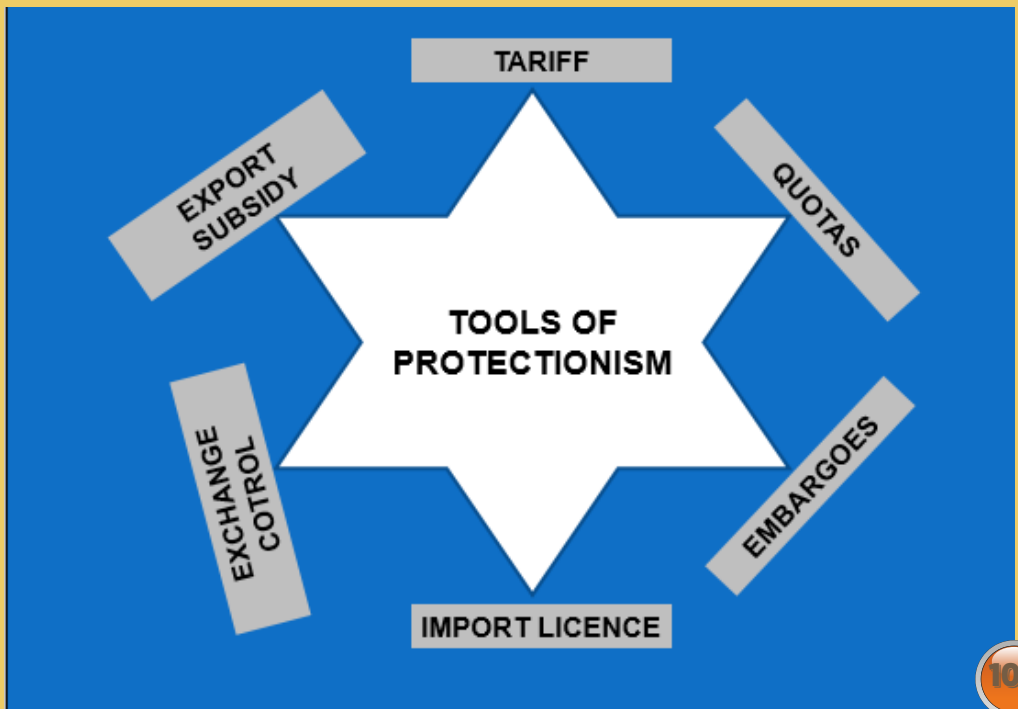
TYPES OF PROTECTIONISM

1. TARIFFS	There are two types of tariff:
	Specific tariff: a fixed tariff imposed on a unit of imported goods
	Ad valorem tariff: imposed on imports based on the value of the goods, and not on the basis of its quality, size, weight or other factors

2. NON-TARIFFS

Quotas

Health and safety standards

Import licence

Non-tariff

Export industries subsidies

Foreign currency control

Other restrictions

Embargo

2. NON-TARIFFS

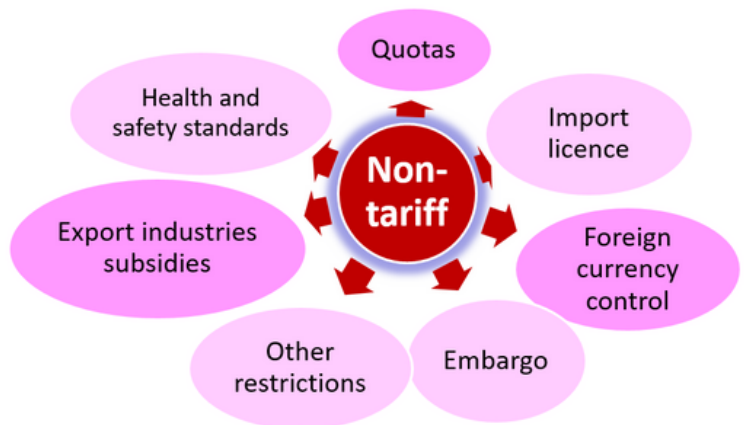| NON-TARIFF	EXPLANATION
Quota	• The limitation on the volume of imports; limitation of supply • Doesn't generate revenue for government • No effect on the price of imported goods
Embargo	• A law that bars trade with another country • The strongest limit on trade; also known as direct control • May include a ban on goods from countries with different ideologies; e.g. Malaysian bans goods from Israel
Import Licence	• Issued to specific and identified importers only • In practice, works like a quota • Means of restricting outflow of foreign currency to improve a country's balance of payments position • Protects the domestic industry from foreign competition; e.g in Malaysia, a limited number of imported licences are given to firms to import cars from foreign countries
Foreign Currency Control	Regulation of exchange rates as well as restriction on the purchase and sales of foreign currencies; e.g. to buy goods from the US, the domestic producer in Malaysia needs to purchase them in US dollars. Restrictions on the amount of US dollars that can be used will reduce the ability to import.
Export Industry Subsidies	To protect domestic firms from foreign competition by reducing the costs of production, hence increasing the firm's revenue; e.g. the granting of export subsidies by the Malaysian government to exporters of palm oil in Malaysia has increased its exports of palm oil and reduced US soybean oil exports in the international market.
Health and Safety Standards	Trade restrictions can be done in the form of regulations that control the import goods. If the specific import goods fails to comply with health and safety standards set by the government, then the item is not allowed to be brought into the country.
Other Restrictions	• The government can also use other methods to reduce the usage of imported goods; e.g. direct all its departments to use only locally made products, such as the national car Proton. • The government can also direct financial institutions to reduce the giving of loans to support purchase of imported goods.

BALANCE OF PAYMENT

Definition: Balance of Payment

•A systematic record of a nation's total payments to foreign countries, including the price of imports and the outflow of capital and gold, along with the total receipts from abroad, including the price of exports and the inflow of capital and gold.

•Refers to the balance of financial records showing the total inflow of money into the country and the total money outflow paid to other countries.

❑ Balance of payments provides detailed information about the supply and demand of the country's currency.

❑ This data can be used to evaluate the performance of the country in international economic competition.

❑ Example: if a country is experiencing perennial balance of payments deficits, it may signal that the country's industries lack competitiveness.

Components:

• Current account
  ➢ Records the payment on goods and services, (goods/trade/merchandise, merchandise export, merchandise import, services, transportation, travelling, government transaction, other services) income (investment income, compensation of employees) and current transfer

• Capital and financial account
  ➢ Record the payments on capital account (capital transfer, non-produce and non-financial asset), financial account (direct investment, portfolio investment, other investment, errors and omission, reserve asset)

TYPES BALANCE OF PAYMENT

1

Types: Surplus (positive)
- Occurs when total financial receipts from abroad **exceed** total financial payments to abroad
- Example:

Total financial receipts	RM 1,500 million
Total financial payments	RM 1,350 million
Surplus	**RM 150 million**

2

Types: Deficit (negative)
- Occurs when total financial receipts from abroad **is less than** total financial payments to abroad
- Example:

Total financial receipts	RM 1,000 million
Total financial payments	RM 1,350 million
Deficit	**RM 350 million**

3

Types: Balance (equal)
- Occurs when total financial receipts from abroad **equals** total financial payments to abroad
- Example:

Total financial receipts	RM 1,350 million
Total financial payments	RM 1,350 million
Deficit	**RM 0**

BALANCE OF PAYMENT

	Item	Type of Account	Total
A	**Good and Services** Goods Services Merchandise Export Merchandise Import Transportation Travelling Government Transaction Other Services	Current Account	1
B	**Income** Investment Income Compensation of Employee		2
C	**Current or Net Transfer** Balance on Current Account (A + B + C)		
D	**Capital Account** Capital Transfer Non-produced Non-financial Asset	Capital and Financial Account	
E	**Financial Account Account** Direct Investment Portfolio Investment		
	Other Investment Financial Derivatives		
	Balance on Capital and Financial Account (D + E)		3
	Overall Balance		(1 + 2 + 3) = 4
	Reserve Asset		–4

EXAMPLE

TABLE 7.17 Malaysia balance of payments summary

Components	2019 (RM Million)	2020 (RM Million)
Current Account	52,918	60,007
Goods	124,738	138,709
Services	(10,875)	(47,448)
Primary Income	(39,496)	(28,584)
Secondary Income	(21,450)	(2,670)
Capital Account	371	428
Financial Account	(38,024)	(76,155)
Direct Investment	6,555	(2,756)
Portfolio Investment	(32,403)	(48,202)
Financial Derivatives	(478)	407
Other Investment	(11,697)	(31,116)
Reserve Assets	(8,416)	19,297
Direct Investment According to Directional Principle	6,555	2,756

Source: Department of Statistics Malaysia

Imbalance of payments:

Impact of imbalance in payments:
- Reduces the central bank's international reserves
- Worsen the foreign exchange rate
- Reduces economic growth
- Reduces the competitiveness of domestic prices
- Increases indebtedness

Ways to overcome deficit in balance of payments:

Deficit in Balance of Payments of Goods	Deficit in Balance of Payments of Services
- Discourage imports by having import tax - Direct control on trade - Export subsidies and promotions - Foreign exchange control - Devaluation - Use government reserves	- Improve shipping and insurance services - Encourage domestic tourism - Promote foreign direct investment - Promote reinvestment on profit and dividend

Exchange Rate

- Exchange rate can be defined as **the price of one currency in terms of another currency**.
- It shows the rate of exchange between foreign currencies and the currency of the country.
- Foreign exchange rate refers to the rate at which one currency may be **converted** into another currency.
- The foreign exchange rate is determined in the currency market.
- Importance of exchange rate:
  - Importing foreign goods and services
  - Paying the external debt
  - Making investments outside the country
  - Protecting the value of foreign currency

Determined solely by the forces of supply and demand on the foreign exchange market; fluctuating value

FLEXIBLE EXCHANGE RATE

FIXED EXCHANGE RATE

An exchange rate set by the government or the official exchange rate; fixed value
Aim: to improve the balance of payments and economic development

CALCULATION OF FOREIGN EXCHANGE

Case A

Mr Zayne wants to import petroleum products worth RM250,000 from Malaysia.

What is the price of the product in USD, if the exchange rate between RM and USD is USD 1.00 = RM3.80?

Solution:

USD 1.00 = RM 3.80

for RM250,000 = 250,000 / 3.8

= **USD 65,789**

Case

Mr Zay
RM250

If the e
RM 3,
import

ciate)

0,000

= **USD 83,250**

Case C

If the exchange rate between RM and USD decreases from USD 1.00 = RM 3.80 to USD 1.00 = RM 4.20, how much does Mr Zayne have to pay with the same import quantity?

Solution:

USD 1 (appreciate) = RM 4.20 (depreciate)

USD 1 = RM 4.20 or 1/4.20 X 1.00

= USD 0.238

for RM250,000 = USD 0.238 X 250,000

= **USD 59,500**

Exercise 1

Choose the best answer.

1. Which of the following **NOT** describes an **International Trade**?
   A. Larger size of market
   B. Practice protectionism
   C. Involves less documentation
   D. Labors are immobile between countries

2. _____refers to a situation in which a country can produce more products compared to another country ?
   A. Absolute advantage
   B. Monopolistic advantage
   C. Comparative advantage
   D. Perfectly competitive advantage

3. A quantitative **limit** imposed on **imported goods** is known as _____.
   A. embargo
   B. tariff
   C. quota
   D dumping

4. Which of the following describes an **embargo**?
   A. An export fee
   B. A tax on import.
   C. A limit on the quantity of import
   D. A law that bars trade with another country

5. Identify two types of tariff.
   A. Direct tariff and non-direct tariff
   B. Import duty and import license
   C. Specific tariff and ad valorem tariff
   D. Embargo and dumping

6. **Fix exchange rate** for a country, determined by_____.
   A. World Bank
   B. forces of supply and demand
   C. central bank
   D price of gold

Exercise 2

1. The following data shows the production possibilities of Japan and Korea before international trade.

Country\ product	Fruits	Car
Japan	120	180
Korea	100	60

   a. State which country has an absolute advantage in the production of car.

   b. Compare the opportunity cost of producing each product both country.

Country\product	Fruits	Car
Japan		
Korea		

   c. Explain which country will import fruits.

----

1. C
2. A
3. C
4. D
5. C
6. C

🕐 **Answer for Exercise 2**

1 a. Japan

b.

Country\ product	Fruits	Car
Japan	$\frac{180}{120}$ = 1.5	$\frac{120}{180}$ = 0.7
Korea	$\frac{60}{100}$ = 0.6	$\frac{100}{60}$ = 1.7

c. Japan. Japan will import fruits from Korea because the opportunity of cost producing fruits in Korea more expensive

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MACROECONOMICS