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A Level

Macroeconomics Notes
Book-2

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Contents

Preface

The idea of writing notes for Cambridge A-level Economics came to me in 2003, when, having already taught for a year, I realized that no single economics book available in the local and international markets covered all the topics with the depth and perspective required by the CIE syllabus. Both students and teachers had to consult 3 to 4 different books to find all the material that they needed—private candidates and new teachers had it even worse. Furthermore, it was really difficult for students to keep having to refer through different books when the exams were close and they were starved for time. I took on the challenge and decided to write a comprehensive text that explicitly followed the syllabus and exam pattern of the CIE. A year and a half later, in the middle of 2004, I had finally written and published four entire volumes of A-level economics notes. Part of them had been hand-written, and part of them had been typed. Soon, word of their usefulness spread, and they were bought all over Pakistan.

The notes had served their purpose well till the end of 2014. Till that point, there had only been minor changes in the syllabus. But now, there was a dire need to update them, for the new syllabus for the 2016 examination introduced some significant changes in course content.

In this new and improved edition, old topics have been revised and new topics have been added. At the end of each topic there is a relevant list of essay questions spanning from 1990 to 2015. These questions provide a clear guideline regarding how the examiners assess students' knowledge on the topics for Paper 2 and Paper 4, allowing the student to practice effectively. While writing these notes I kept in mind the way in which the examiner tests MCQs as well. The notes have been divided into four volumes to make it easier for those who are following the AS and A2 track separately and for those who are taking the composite exam; the syllabus division in the following pages has been provided for this express purpose.

I hope my efforts will help to contribute both to the learning of the student, as well as to the inquisitiveness of any teachers of A-level economics. Your suggestions will help me improve the quality of the content for later editions and will be highly appreciated.

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Book 2 (AS Level Macroeconomics)

UNIT 1: AGGREGATE DEMAND (AD) AND AGGREGATE SUPPLY (AS):

- the shape and determinants of AD and AS Curves
- AD = C + I + G + (X – M)
- the distinction between a movement along and a shift in AD and AS
- the interaction of AD and AS and the determination of the level of output, prices and employment

UNIT 2: MONEY AND INFLATION:

a. Money
- functions and characteristics in a modern economy
- barter, cash and bank deposits, checks, near money, liquidity

b. Inflation
- the definition of inflation
- degrees of inflation
- deflation and disinflation
- measurement of inflation
- the distinction between money values and real data (shifted to Book 2 Unit 1)
- the causes of inflation (cost-push and demand-pull inflation)
- the consequences of inflation

UNIT 3: INTERNATIONAL TRADE:

a. Specialization and division of labor

b. Principles of absolute and comparative advantage
- the distinction between absolute and comparative advantage
- free trade area, customs union, monetary union, full economic union
- trade creation and trade diversion
- the benefits of free trade, including the trading possibility curve

c. Protectionism
- the meaning of protectionism in the context of international trade
- different methods of protection and their impact, for example, tariffs, import duties and quotas, export subsidies, embargoes, voluntary export restraints (VERs) and excessive administrative burdens ('red-tape')
- the arguments in favor of protectionism

UNIT 4: EXCHANGE RATE:

a. Exchange rates
- definitions and measurement of exchange rates

- nominal, real, trade-weighted exchange rates

b. Exchange rate systems
   - the determination of exchange rates floating, fixed, managed float

c. Changes and effects
   - the factors underlying changes in exchange rates
   - the effects of changing exchange rates on the
   - domestic and external economy using AD, Marshall-Lerner and J curve analysis
   - depreciation/appreciation
   - devaluation/revaluation

d. The terms of trade
   - the measurement of the terms of trade
   - causes of changes in the terms of trade
   - the impact of changes in the terms of trade

UNIT 5: BALANCE OF PAYMENTS:

a. BOP accounts
   - the components of the balance of payments
   - accounts (using the IMF/OECD definition)
   - current account
   - capital account
   - financial account
   - balancing item

b. BOP equilibrium and disequilibrium
   - meaning of balance of payments equilibrium and disequilibrium
   - causes of balance of payments disequilibrium in each component of the accounts
   - consequences of balance of payments disequilibrium on domestic and external economy

UNIT 6: GOVERNMENT MACRO INTERVENTION:

a. Types of policy
   - fiscal policy
   - monetary policy,
   - supply side policy
     (instruments of each policy)

b. Policies to correct balance of payments disequilibrium
   - assessment of the effectiveness of fiscal, monetary and supply side policies to correct a balance of payments disequilibrium
     (expenditure-reducing an expenditure-switching)

c. Policies to correct inflation and deflation
   - assessment of the effectiveness of fiscal,
   - monetary and supply side policies to correct inflation and deflation

4 Glossary of command words

This glossary should prove helpful to candidates as a guide, although it is not exhaustive and it has deliberately been kept brief. The number of marks allocated for any part of a question is a guide to the depth required for the answer.

Command word	What it means
Calculate	Work out using the information provided
Define	Give the exact meaning of
Describe	Give a description of, explain the main features of
Identify	Name the key knowledge point
Illustrate	Give examples, use a diagram
Outline	Describe the key points without detail
State	Give a concise answer with little or no supporting argument required
Analyse	Explain the main points in detail, examine closely, separate into parts and show how all the parts connect and link
Compare	Explain the similarities and differences between
Explain/how	Give clear reasons or make clear the meaning of, use examples and explain the theory behind the question. This command word requires 'Knowledge and Understanding' as well as 'Application'
Consider	Give your thoughts about, with some justification
Assess	Show how important something is, give your judgement on
Comment upon	Give your reasoned opinion on, with explanations
Criticise	Give an opinion but support it with evidence
Discuss	Give the important arguments for and against, often requires a conclusion. This command word requires 'Analysis' and 'Evaluation'
Justify	Explain why the arguments for an opinion are stronger than the arguments against
Evaluate	Discuss the importance of, judge the overall worth of, make an attempt to weigh up your opinions
To what extent	Give reasons for and against, come to a conclusion with a justification of which arguments are strongest and which are weakest

UNIT 1

Aggregate Demand (Ad) & Aggregate Supply (AS)

AS Level
Macroeconomics
Notes Book 2

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Syllabus 2016 – 18

a. the distinction between money values and real data

b. Aggregate demand (AD) & Aggregate supply (AS)

- the shape and determinants of AD and AS Curves
- AD = C + I + G + (X – M)
- the distinction between a movement along and a shift in AD and AS

c. National income equilibrium

- the interaction of AD and AS and the determination of the level of output, prices and employment

Unit 1 Aggregate Demand (AD) and Aggregate Supply (AS)

Concepts of National Income

- Gross Domestic Product (GDP)
- Gross National Product (GNP)
- Disposable income (Y_d)
- Nominal GDP
- Real GDP

Gross Domestic Product (GDP):

Gross domestic product (GDP) is the monetary value of all final goods and services produced within the geographical boundaries of a country irrespective of whoever is producing it, in one year. Whereas **monetary value** means the value of a product expressed in terms of money. GDP will not include all those goods which are produced abroad, in previous year and/or goods that are unfinished.

$$\text{Monetary Value} = \text{Price} \times \text{Quantity}$$

$$GDP = P_1 Q_1 + P_2 Q_2 + P_3 Q_3 \ldots\ldots\ldots P_n Q_n = \sum PQ$$

"$P_1 Q_1$" is the monetary value of Good "1".
"$P_2 Q_2$" is the monetary value of Good "2".
"$P_3 Q_3$" is the monetary value of Good "3".

Gross National Product (GNP):

Gross national product (GNP) is the monetary value of all goods and services which are produced by the citizens of a nation, irrespective of wherever they are living in the world, in one year.

GNP = GDP + Net Property Income from Abroad
Net property income from abroad = Property income from abroad – Property payment to abroad

Disposable National Income (Y_d):

Disposable income (Y_d) is the income left after paying income tax (direct tax).

$$\text{Disposable income} = \text{National Income} - \text{Income Tax}$$

Nominal GDP:

Nominal GDP is the GDP figure measured at the current year prices and is not yet adjusted for inflation.

$$\text{Nominal GDP} = \text{Current Year Price index} \times \text{Current Year Output}$$

Example
Current Year Price index = $120
Current year output = 3,000 units
Nominal GDP (Current Year) = 120 x 3,000 = $360,000

Real GDP:

Real GDP is the GDP figure measured at constant or base pear price level and has been adjusted for inflation.

$$\text{Real GDP} = \text{Base Year Price Index} \times \text{Current Year output}$$

Example:

Year 2000:
Base year price index = $100
Base year output = 20 units

Current year:
Current year output = 30 units
Real GDP (Current Year) = 100 × 30 = $3,000

CONVERSION OF NOMINAL GDP TO REAL GDP

To convert nominal national income to real national income, the income deflator is used. The **income deflator** is a value that removes the effect of inflation from nominal national income. The following steps explain the procedure of the deflator.

$$\text{Real national income} = \frac{\text{Nominal national income}}{\text{Deflator}}$$

$$\text{Where Deflator} = \frac{\text{Current year price index}}{\text{Base year price index}}$$

Example:

Nominal NY=$200 million
Current year price index = 110
Base year price index=100

$$\text{Deflator} = \frac{\text{Current year price index}}{\text{Base year price index}} = \frac{110}{100} = 1.1$$

$$\text{Real national income} = \frac{\text{Nominal national income}}{\text{Deflator}} = \frac{200}{1.1} = \$182\text{m}$$

Sectors and Types of Economies:

HOUSEHOLDS	FIRMS	GOVERNMENT	FOREIGN
Expenditure on consumer goods	Expenditure on capital goods	Expenditure on merit and public goods	Expenditure on exports and imports
Consumption and saving	Investment	Government spending and taxation	Exports and imports
C, S	I	G, T	X, M

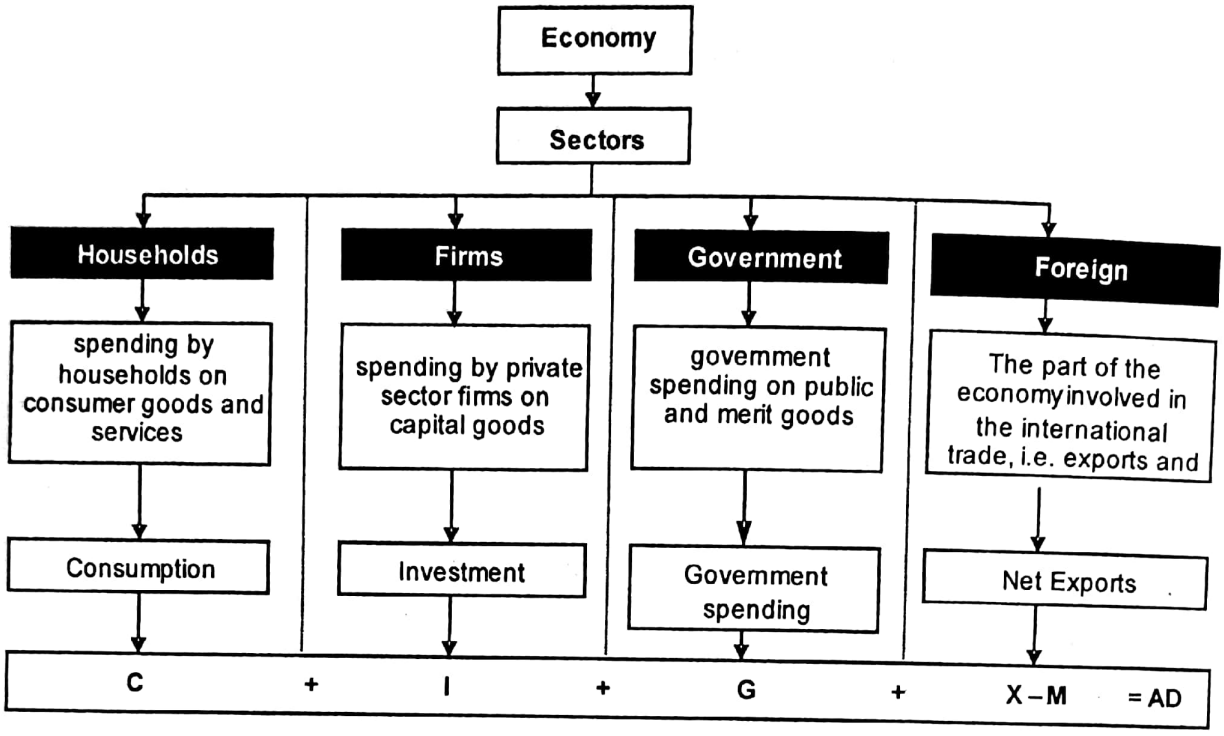
Types of Economies

Sectors	2-Sector Economy	3-Sector Economy		4-Sector Economy
		With Government	With Foreign Sector	
Households	✓	✓	✓	✓
Firms	✓	✓	✓	✓
Government	✗	✓		✓
International Trade	✗	✗		✓
Type of Economy	Closed	Closed	Open	Open

Aggregate Demand (AD):

Aggregate demand (AD) is the total spending on an economy's goods and services at a given price level in a given time period.

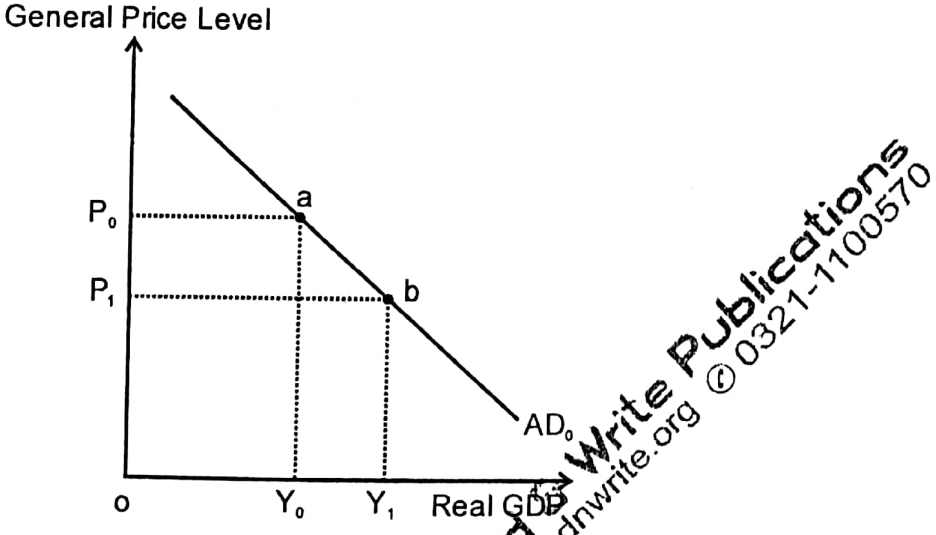
Demand for an economy's products, known as aggregate demand (AD), comes from households, firms, and the government within the country and from households, firms, and governments in other countries. Aggregate demand (AD) consists of four components:



The Aggregate Demand curve

The aggregate demand curve shows the different quantities of total demand for the economy's products (real GDP) at different price levels.

$$AD = C + I + G + X - M$$



A rise in the price level will cause a contraction in aggregate demand and a fall in the price level will result in an extension in aggregate demand. The downward sloping nature of the AD curve is shown in Figure above.

Why does the AD curve slope downward?

The relationship between aggregate demand and the price level might seem similar to the relationship shown in the demand curve for an individual product. There is, however, a significant difference.

A demand curve for a product shows the relationship between a change in the relative price of a product and the quantity demanded. The price of the product is changing but it is assumed that the prices of other products have not changed. More of the product is purchased when the price falls, in part because people switch away from rival products.

By contrast, in the case of the AD curve, the prices of most products are changing in the same direction. Why, then, does aggregate demand fall when the price level rises, and vice versa?

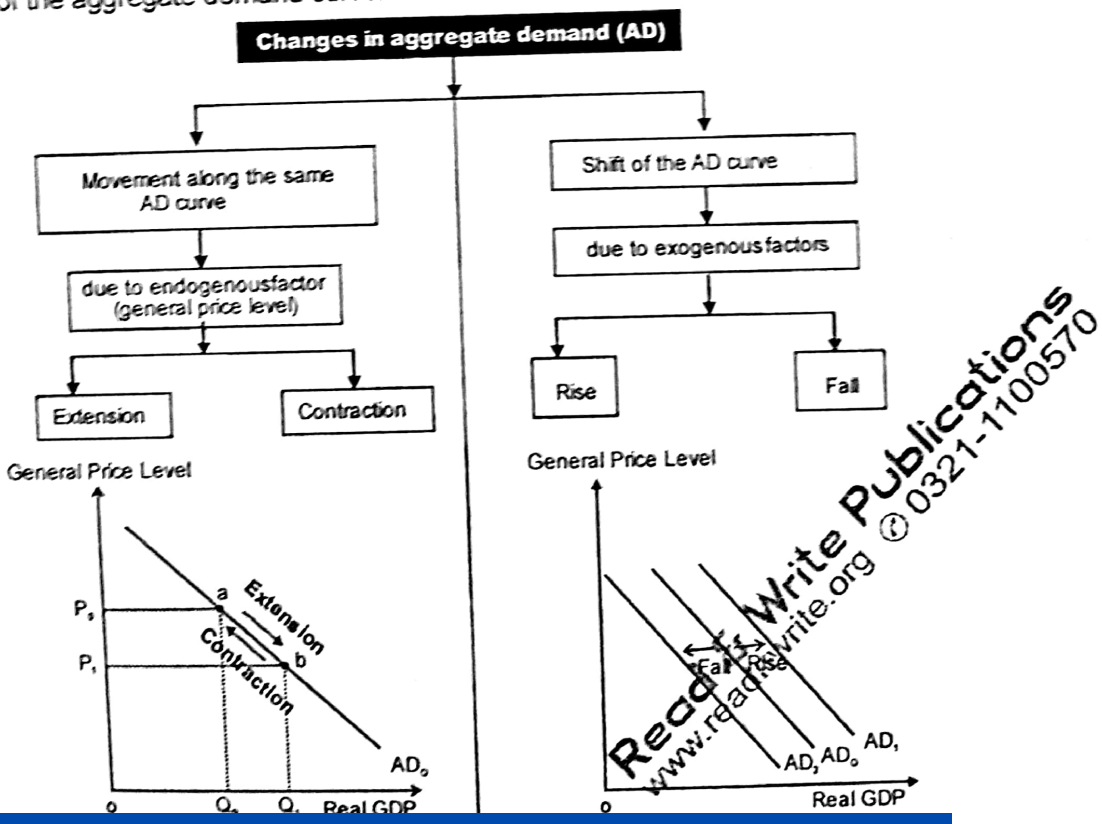
There are three reasons:

Price level	The wealth effect	The international trade effect	The interest rate effect
Decrease (↓)	Purchasing power of financial assets↑→real wealth↑ → C↑ → AD↑	Exports—more price competitive Imports—less price competitive Net exports (X–M) ↑ →AD↑	Demand for loans ↓→interest rate (ir)↓→cost of borrowing ↓ → C, I ↑→AD↑
Increase (↑)	Purchasing power of financial assets↓→real wealth ↓→C↓ →AD↓	Exports—less price competitive Imports—more price competitive Net exports (X–M)↓ →AD↓	Demand for loans ↑→interest rate (ir)↑ →cost of borrowing ↑→ C, I ↓→AD↓

Changes in Aggregate Demand

Aggregate demand can change in two ways:

- A movement along the same aggregate demand curve.
- A shift of the aggregate demand curve.



Shifts in the Aggregate Demand curve

A change in the price level causes a movement along the AD curve; but, if any factor other than the price level causes aggregate demand to change, then the entire AD curve will shift. A shift to the left indicates a decrease in aggregate demand (AD_0 to AD_2), whereas a shift to the right (AD_0 to AD_1) indicates an increase in aggregate demand, as shown in the figure above on the right.

A change in any factor other than the price level will influence consumption, investment, government spending, and net exports, shifting the AD curve. Examples that would cause an increase in aggregate demand include:

Consumption (C)	Investment (I)	Government Spending (G)	Net Exports (X–M)
- population - wealth - income tax - money supply - consumer confidence - age structure - range of products - interest rate - availability of credit - distribution of income - expectations regarding income in the future - expectations regarding prices in the future - government welfare spending	- interest rate - business expectations - corporation tax - subsidies - technology - law and order - political stability - cost of labor - cost of raw materials - foreign relations - infrastructure - profits - demand for consumer goods	- political objectives - level of economic activity - social objectives - need for merit and public goods	- relative prices - exchange rate - relative quality of domestically produced products - foreign & domestic economic growth - protectionism

Determinants of Consumption and Savings:

1. **Wealth:** A rise in wealth causes consumption to rise and saving to fall. Where as a fall in wealth causes consumption to fall and saving to rise.
2. **Income tax:** When income tax rises, consumption and saving fall. When income tax falls, consumption and saving rise.
3. **Age:** In an older population, consumption falls and saving rises. In a younger population, consumption rises and saving falls.
4. **Family size or population:** If the family is small, then consumption is low and saving is high. If the family is large, then consumption is high and saving is low.
5. **Range of goods and services:** When there is a wide range of goods and services in the market, consumption is high and saving is low. But, when there is a narrow range of goods and services, consumption is low and saving is high.
6. **Interest rate:** When the rate of interest is high, consumption is low and saving is high. But, when the rate of interest is low, consumption is high and saving is low.
7. **Availability of credit:** If credit is easily available, consumption is high and saving is low. If credit is not easily available, consumption is low and saving is high.
8. **Expectations regarding an increase in future income:** If people expect an increase in income, consumption rises and saving falls. If people expect a decrease in income, consumption falls and saving rises.
9. **Price level:** If the price levels falls, consumption rises and saving falls. If the price level rises, consumption falls and saving rises. However, if the price level is expected to rise further in the future, then current consumption rises and saving falls more rapidly.

Determinants of Investment:

1. **Technology:** Technological progress leads to an increase in investment. Technological regress leads to a decrease in investment.

2. **Cost of capital:** If there is a decrease in the cost of capital, investment rises. If there is an increase in the cost of capital, investment falls.
3. **Corporation tax:** If there is a decrease in corporation tax, investment rises. If there is an increase in corporation tax, investment falls.
4. **Subsidies:** An increase in subsidies causes investment to rise. A decrease in subsidies causes investment to fall.
5. **Profits:** An increase in profits leads to a rise in investment. A decrease in profits leads to a fall in investment.
6. **Infrastructure:** An improvement in infrastructure causes investment to rise. A worsening of infrastructure causes investment to fall.
7. **Political stability:** Politically stability leads to an increase in investment. Political instability leads to a fall in investment.
8. **Law and order:** A lower crime rate and strong legal institutions will lead to an increase in investment. High crime rates and weak legal institutions will lead to a decrease in investment.
9. **Business expectations:** High business confidence leads to an increase in investment. Low business confidence leads to a decrease in investment.
10. **Foreign relations:** Good foreign relations lead to an increase in investment. Bad foreign relations lead to a decrease in investment.
11. **Interest rate:** If the interest rate is low, investment is high. If the interest rate is high, investment is low.
12. **Demand for consumer goods:** An increase in demand for consumer goods leads to greater production, which, in turn, requires more machinery (an increase in investment). Similarly, a decrease in demand for consumer goods will lead to a decrease in investment.

Determinants of Government Spending:

1. **Political objectives:** Political seasons also affect government spending. Before elections government spending is high but after elections government spending is low.
2. **Level of economic activity:** Economic conditions are also an important factor. During recession government spending rises whereas during boom government spending falls.
3. **Social objectives:** Government may spend more to eradicate poverty and for more equitable distribution of income.
4. **Need for merit and public goods:** Need for merit goods such as education, healthcare, and public goods like street lights, etc.

Determinants of Exports and Imports:

1. **Foreign income:** If foreign income rises, exports will also rise whereas if foreign income falls, exports will also fall.
2. **Domestic income:** If domestic income rises, imports will also rise and when domestic income falls, imports will also fall.
3. **Relative quality:** If quality of imports is better than the quality of locally produced goods then imports will rise but if the quality of local goods is better than the imported goods than imports will fall. If quality of local goods is better than the quality of imported goods than exports rises but if quality of local goods is worse than the imported goods than exports fall.
4. **Tariff or duties (protectionism):** If tariff applied on imports increases imports will fall but if tariff applied on imports decrease than imports will rise. If tariff imposed on our exports by other countries increase than exports will fall but if tariff imposed on our exports by other countries decrease than exports will rise.
5. **Exchange rate:** If a currency depreciates, imports get expensive and exports become cheaper which leads to a rise in exports and a fall in imports. On the other hand if a currency appreciates, exports become expensive and imports become cheaper which leads to a rise in imports and a fall in exports.

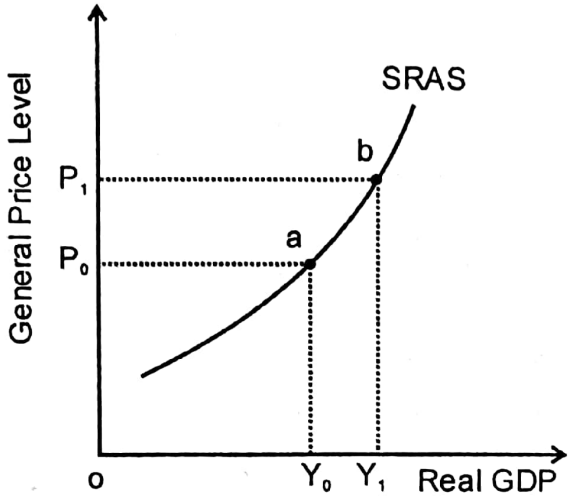
Aggregate supply (AS)

Aggregate supply (AS) is the total output (real GDP) that producers in an economy are willing and able to supply at a given price level in a given time period.

Regarding aggregate supply (AS), economists sometimes distinguish between short-run aggregate supply (SRAS) and long-run aggregate supply (LRAS).

The short-run aggregate supply curve

Short-run aggregate supply (SRAS): the total output of an economy that will be supplied when there **has not been enough time for the prices of factors of production to change**.
The short-run aggregate supply curve slopes up from left to right as shown in Figure below.



As the price level rises, producers are willing and able to supply more goods and services. There are three possible reasons for this positive relationship:

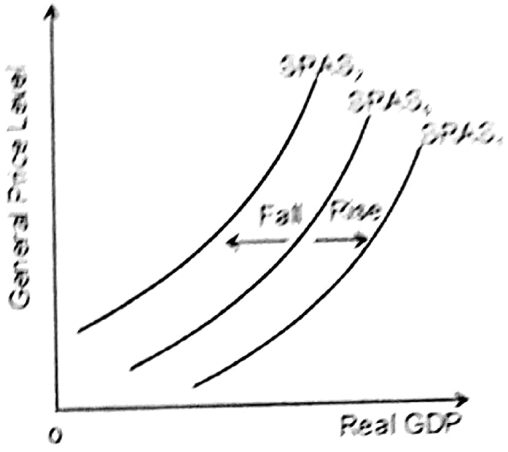
The profit effect	The cost effect	The misinterpretation effect
As the price level ↑ → wages do not change → gap between output and input prices ↑ → profit ↑→ AS↑	Although the wage rates and raw material costs remain unchanged in the short run, **average costs may rise** as output increases. This is because, for example, **overtime** payments may have to be paid and costs will be involved in recruiting more members. To cover any extra costs that may be involved in producing a higher output, producers will require higher prices → AS↑	Producers may confuse changes in the price level with changes in relative prices. They may think that a rise in the price they receive for their products indicates that their own product is **becoming more popular**. As a result they may be encouraged to produce more → AS↑

Shifts in the Short-run Aggregate Supply curve

While a change in the price level will cause a movement along the short-run aggregate supply curve, there are four main causes of a shift in the SRAS curve. These are:

1. **A change in the price of factors or cost of production:** A rise in wage rates, not matched by an increase in labor productivity, and raw material costs will cause a decrease in SRAS, shifting the curve to the left as illustrated in figure below.
2. **A change in taxes on firms:** A reduction in corporation tax or indirect taxes will cause an increase in SRAS.
3. **A change in factor productivity/quality of resources:** A rise in labor productivity and/or capital productivity will cause an increase in aggregate supply **both in the short run and long run**.

4. **A change in the quantity of resources:** In the short run the supply of inputs may be influenced by supply-side shocks, including natural disasters. Any change in quantity of resources will cause a change in aggregate supply **both in the short run and long run**



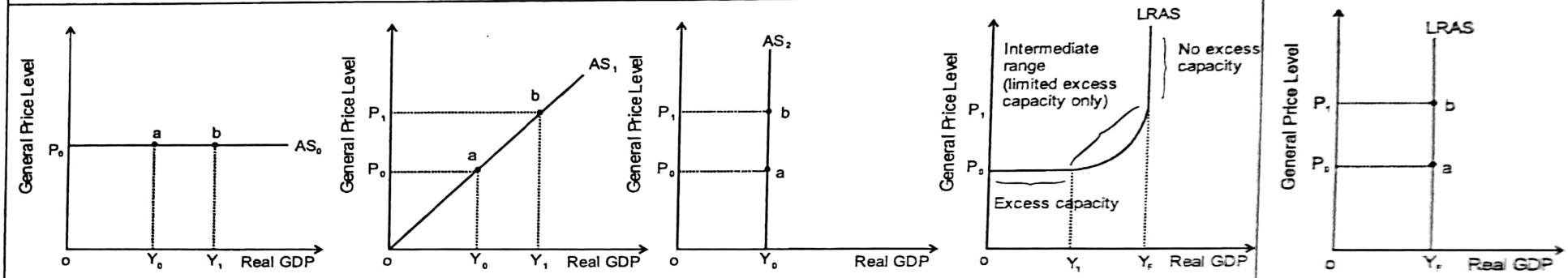
The shape of the long-run aggregate supply curve

The long-run aggregate supply curve shows the relationship between real GDP and changes in the price level when there has been time for input prices to adjust to changes in aggregate demand.

Keynesians are the followers of the economist John Maynard Keynes who maintain that government intervention is needed to achieve full employment.

New classical economists are the economists who think that the LRAS curve is vertical and that the economy will move towards full employment without government intervention.

Keynesian LRAS	New classical LRAS
Initially it is perfectly elastic at low rates of output, then upward sloping over a range of output and finally perfectly inelastic	Vertical
Believe that in the long run, an economy can operate at any level of output and not necessarily at full capacity	Believe that in the long run the economy will operate at full capacity only
In order to understand the true nature of the Keynesian long run aggregate supply curve, we have to examine three situations: (1) excess capacity, (2) full capacity, and (3) an intermediate range between the two.	



Excess capacity	Intermediate range	No excess capacity
When output and employment are low, firms can attract more resources and increase output without there being any pressure on prices. For example, when unemployment is high, the offer of a job may be sufficient to attract new workers. Hence, aggregate supply curve to be a horizontal line.	When there is some excess → shortages of inputs→ cost ↑ → firms react by raising their prices whenever they can. Hence, aggregate supply curve in this situation will be upward.	If absolutely no excess capacity → at full employment → at its production possibility curve → impossible to produce additional output → AS curve → vertical line → only the price level rises → perfectly inelastic. It is also a representation of long-run aggregate supply (LRAS)

Figure on right above shows that from O to Y_1, output can be raised without increasing the price level. There is time for input prices to change but, due to the low level of aggregate demand, they do not. As output rises from Y_1 to Y_F, firms begin to experience shortages of inputs and bid up wages, raw material prices and the price of capital equipment. When output reaches Y_F, the economy is producing the maximum output it can make with existing resources.

Shifts in the LRAS curve

Both Keynesian and new classical economists agree that the causes of a shift in the LRAS curve are a change in the quantity and/or quality of resources (factor productivity). Both of these will increase the productive potential of an economy.

The causes of an increase in the quantity of resources in the long run are:

1. A Change in the Quantity of Resources

Land:

Land may increase because of:

- Discovery of oil, metal or mineral reserves by active search.
- Eroded, water-logged land may be made usable for agricultural purposes (Reclamation of land)

Labour:

Labor may increase by:

- Increase in total population, especially in the working population.
- Change in structure of population from less dependent population to more working population, even without an increase in total population.
- Immigration is greater than emigration.
- Increased women-participation in jobs.
- Lower school-leaving age.
- Higher retirement age.

Capital:

- Net investment
- Rate of return on Capital
- Interest rate
- Business optimism and pessimism
- Government policies about taxation and subsidies
- Political stability
- Technology
- Infrastructure

2. Change in Quality (Productivity) of Resources:

Labour:

- Wage rate
- Education and training
- Technology
- Work conditions
- Length of working hours
- Fringe benefits\perks\non-monetary benefit\non-pecuniary benefits
- Bonuses and commissions
- Promotional opportunities
- Health

Capital:

- Technology
- Skilled labor
- Depreciation, etc.

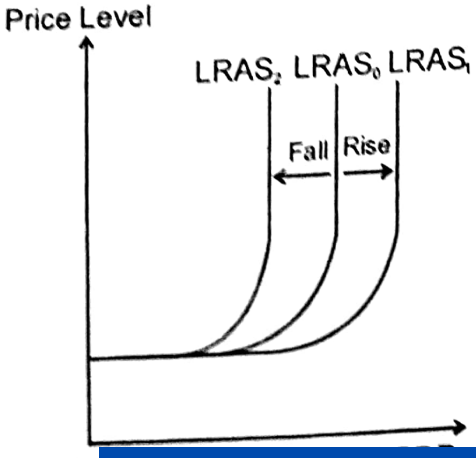
Land:

- Technology
- Skilled labor
- Fertility rates, etc.

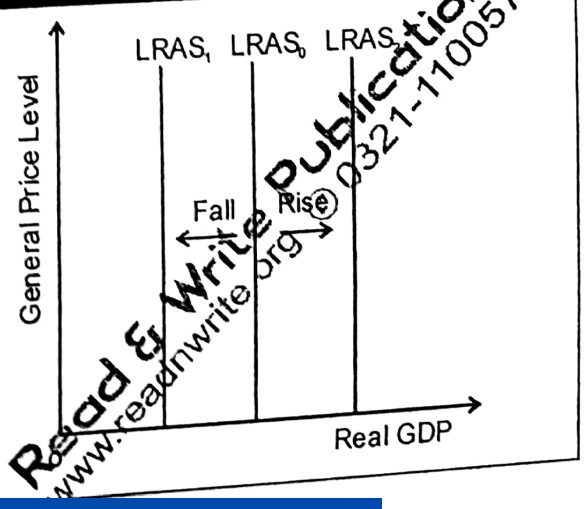
Entrepreneurship:

- Communication
- Management techniques, etc.

Shifts in Keynesian LRAS



Shifts in New classical LRAS

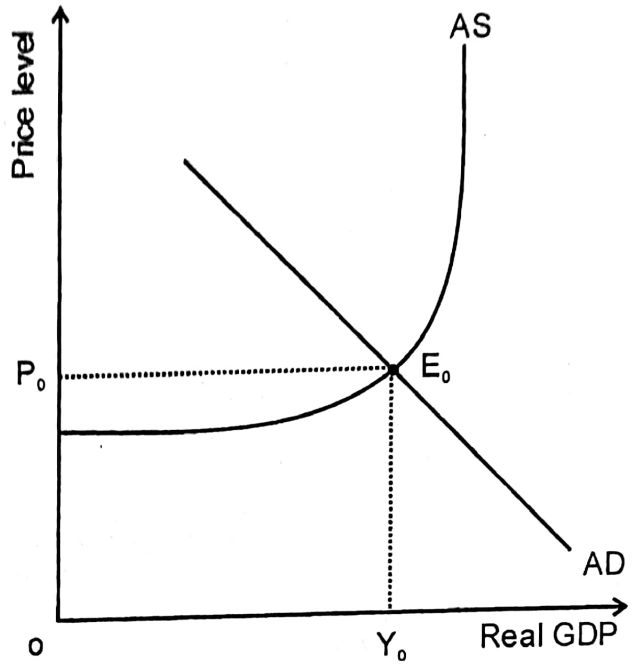


Factors that shift both AD and AS:

- investment
- net immigration
- government spending on education

Interaction of aggregate demand and aggregate supply and national income equilibrium

The equilibrium level of output or national income and the price level are determined where aggregate demand is equal to aggregate supply. The macroeconomic equilibrium is illustrated by the point where the AD and AS curves intersect, as shown in the diagram below.



If the price level was initially below P_0, the excess demand would push the price level back up to the equilibrium level. If the price level was above P_0, some goods and services would not be sold and firms would have to cut their prices.

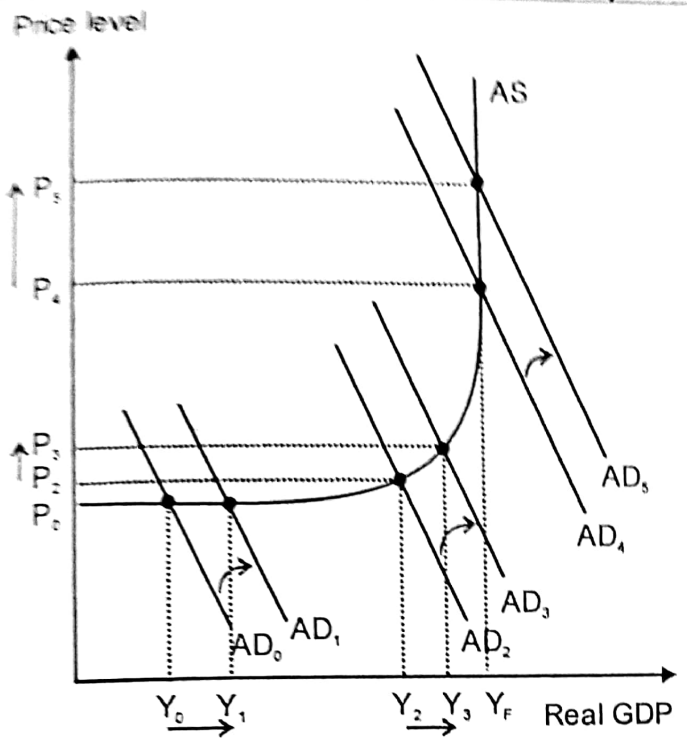
Changes in national income equilibrium

Changes in aggregate demand and aggregate supply will move the economy to a new macroeconomic position. Where that position will be will depend on the

- **cause** of change, i.e., AD or AS
- **direction** of the change
- **size** of the change
- **initial level** of economic activity

Shifts in AD

a. Rise in AD (Demand-pull inflation)



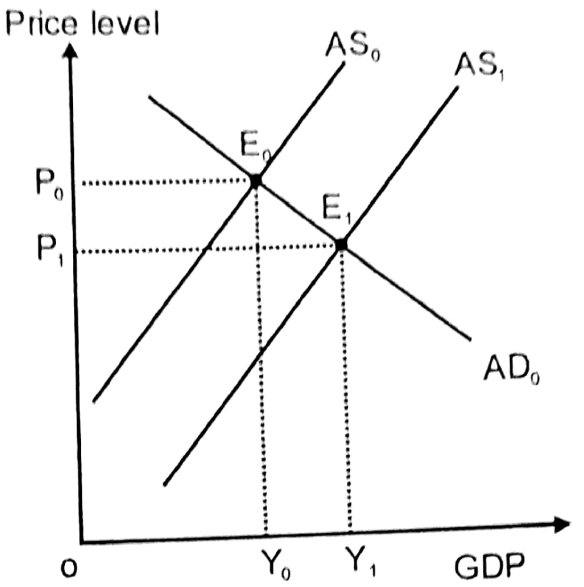
If the aggregate demand curve intersects the aggregate supply curve prior to output rate Y_1, then any increase in demand will not lead to a rise in the price level. Thus a shift from AD_0 to AD_1 leaves the price level unaltered at P_0. A shift from AD_1 to AD_2, however, will cause the price level to increase P_1. After output rate Y_2, any increase in demand will simply result in a higher price level since, by definition, at full capacity output no more output is physically possible.

b. Fall in AD (Deflation)

A fall in AD will lead to fall in general price level (deflation) if economy is at or close to full-employment. Effect of fall in AD on price level and GDP depends upon initial position of the economy.

Shifts in AS

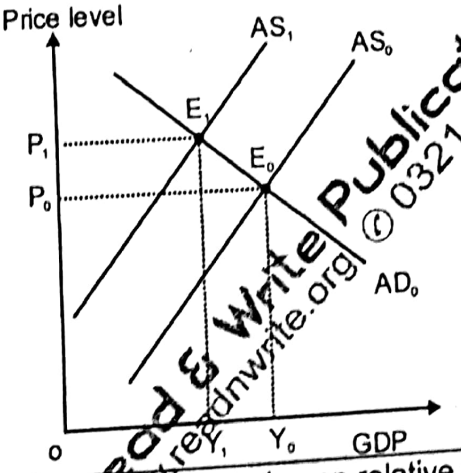
a. Rise in SRAS (Supply-side policies)



An increase in aggregate supply (AS) will shift AS from AS_0 to AS_1 causing the price level to fall from P_0 to P_1 and GDP increases from Y_0 to Y_1.

b. Fall in SRAS (Cost-push inflation)

A decrease in aggregate supply (AS) will shift AS from AS_0 to AS_1 causing price level to rise (cost-push inflation) from P_0 to P_1 and GDP decreases from Y_0 to Y_1.

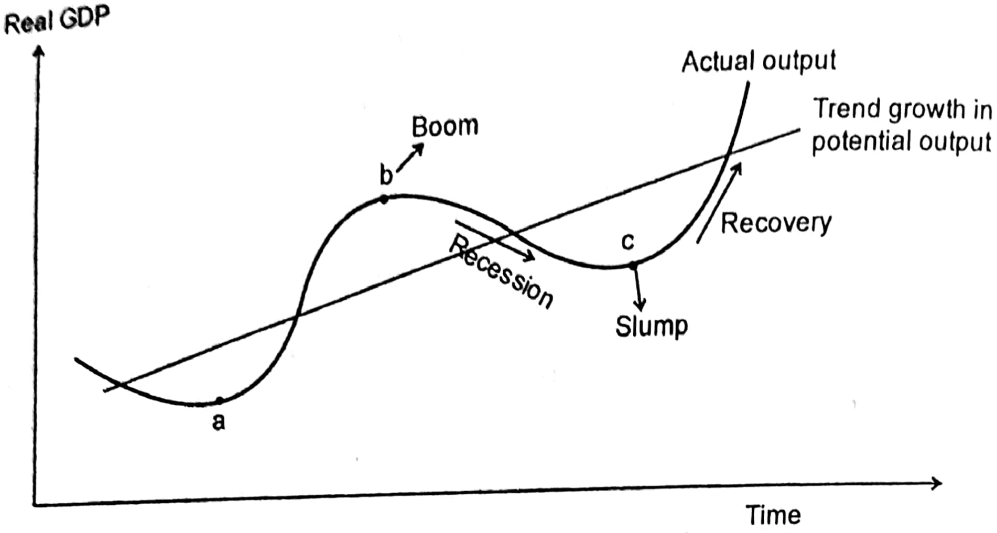


If both AD and AS shift together then effect on price level and GDP will depend upon relative size of shifts in AD and AS

Unit 1

Business (Trade) Cycle

The term trade cycle is defined as the periodic fluctuation of national output around its long term trend. It is used to describe the tendency for the volume of economic activity (GNP) such as employment, profits and prices to proceed in a succession of booms and slumps (also called troughs) as shown in diagram below.



Economic activity refers to the level of output, foreign trade, investment, share prices, employment and consumer spending. The different phases of the trade cycle are labeled as a, b, and c. Booms and recessions can last for several months or even years and then come to an end. No two trade cycles are quite the same. The interval between the peaks or between the troughs (which is also called the duration of a trade cycle) is not constant, and the intensity of the troughs varies, trade cycles show a rough pattern over time and display unpredictable deviations from the expected pattern.

Stages of the trade cycle

The trade cycle consists of four phases: boom (point b), recession (point H between b and c), trough (point a or c), and recovery (between a and b). Recovery follows a recession, then reaches a peak/boom and is succeeded by another recession. The length of a business cycle is measured by the interval between the peaks (or between any other pair of corresponding points). Some economists argue that the cycles are brought about by new inventions, population growth, mineral or oil discoveries, political factors, and war. The cycles tell us about the behavior of the economy as a whole.

Features	Boom	Recession	Slump	Recovery
Business pessimism	Lowest	Rises	Highest	Falls
Business optimism	Highest	Falls	Lowest	Rises
Investment	Highest	Falls	Lowest	Rises
AD	Highest	Falls	Lowest	Rises
GDP	Highest	Falls	Lowest	Rises
Employment	Highest	Falls	Lowest	Rises
Demand-pull inflation	Highest	Falls	Lowest	Rises
Current account	Deficit	Improves	Surplus	Worsen

Boom is a period when business activity is expanding, i.e., production increases, prices and wages rise, profits increase, unemployment declines and the current account is in deficit. This phase is characterized by high output, low unemployment, high inflation and a deficit current account.

Recession is a temporary falling off in business activity which may or may not develop into a trough. During a recession, the rate of inflation falls, exports will rise and imports fall; consequently, the balance of payments improves, consumption and investment are low and interest rates charged by banks are also low. In brief, this phase is characterized by low output, high unemployment, low inflation and a surplus current account.

Trough is when business activity is at the bottom.

In the **recovery** phase of the trade cycle, an attempt is made by the government to expand the economy either by monetary means (e.g., encouraging banks to increase their lending) or fiscal measures (e.g., cutting taxes). This phase is marked by a rapid rate of economic growth due to government policies such as easing of credit restrictions to encourage expansion of production and a reduction in cyclical unemployment. During this phase of the trade cycle, prices will rise, total transactions will increase and the national income will rise as well. Recovery may develop into a boom.

UNIT 2

Money and inflation

AS Level
Macroeconomics
Notes Book 2

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Syllabus 2016 – 18

a. Money
- functions and characteristics in a modern economy
- barter, cash and bank deposits, checks, near money, liquidity

b. Inflation
- the definition of inflation
- degrees of inflation
- deflation and disinflation
- measurement of inflation
- the causes of inflation (cost-push and demand-pull inflation)
- the consequences of inflation

Unit 2 Money and Inflation

Money

Money is anything that is generally acceptable as a means of payment. Normally, this is cash in the form of coins and notes but the definition also includes bank deposits (which can be accessed by cheques, debit cards and credit cards). However, money can also be in the form of a valuable commodity such as **gold**, **platinum** or **oil.**

History of specialization, trade, and money

1. Self-sufficiency:

In the very beginning of human civilization history, people used to relay on natural sources for food and shelter, etc. There were only hunter-gatherer societies and everyone was self-sufficient and therefore there was no specialization and trade.

2. Barter trade:

When human beings invented agriculture, they settled at certain places and learned specialization. Specialization resulted in production of surplus goods (in quantities greater than one needed). Surpluses then were to be exchanged or traded and required certain mechanism for that. Initially people relied on barter trade (the exchange of goods for goods or swapping).

- **Double coincidence of wants:** means both parties in a transaction actually have the goods or services that the other wants. The need to buy and sell the same time and at the agreed amount creates problems. This is very cumbersome and time-consuming process.
- **Exchange rate:** The exchange rate is arbitrarily determined In terms of units of account. There is no standard value to follow.
- **Divisibility:** Some goods cannot be divided into smaller units as this would destroy that particular good, e.g., part of a buffalo or half of a fruit.
- **Perishables:** Some goods are easily perishable, spoilt or will deteriorate, like fruit, vegetables, fish and eggs. In the cumbersome process of looking for the right buyer and seller to exchange the good, the good to be exchanged may have perished.
- **Portability:** The problem of having to carry those goods to find the right buyer to do transaction will always rise, e.g., bulky goods such as bags of rice and firewood.

Due to the difficulties faced with barter trade, man developed a new medium of exchange: Money.

3. Commodity money

A wide variety of commodities have served as money at one time or another. Commodities used include shells, cattle, tea, sheep, tobacco, etc.

4. Metallic money

Among the metals used were iron, tin, copper, silver, and gold. However, most metals were too scarce to serve the functions of a good medium of exchange.

5. Paper money

It has its origins in the receipts issued by goldsmiths to customers who deposited their money and other valuables to them for safe keeping. The receipts were issued in smaller denominations. This gave rise to bank notes. Today, we use paper money, e.g., dollar. Paper money is the predominant form of money in less developed economies.

6. Bank money

It refers to bank deposits, which are transferable using cheques, debit cards, credit cards or electronic transfers. Bank deposits are considered as money but not cheques, cards or electronic transfers. They are merely orders from the owner to the banker to transfer his or her money to someone else.
Developed countries are cashless societies and they have greater proportion of their money in the form of bank deposits.

Concepts

Intrinsic value: means a commodity, though serves as medium of exchange, still it has its own value. Commodities and metals were demanded for their own sake because of their intrinsic value, unlike paper money, which only serves the function of money.

Legal tender: notes and coins issued by the central bank must be accepted as the medium of exchange (as it is regulated by law). It is an offense to refuse to accept legal tender.

Liquidity is the extent to which there is an adequate supply of assets that can be turned into cash.

Near money: it is quite liquid but not totally liquid, i.e., non-cash assets that can be quickly turned into cash.
This would include foreign currencies, credit cards, traveler's cheques, fixed deposits, saving deposits, treasury bills, bonds etc. The public is not obliged to accept them. Near money can be converted easily into cash because it is fairly liquid.

Treasury Bills: they are short-term loans to the government (lasting for usually 90 days).Treasury bills can be taken to discount houses to be used as money. It is rather liquid because it can be easily converted into cash.

Bills of exchange: these are the bills drawn up by the creditor and presented to the debtor. It is quite liquid because it can be converted into cash easily (on payment).

Features of money

Here, we will consider what attributes, or characteristics, an asset should have to function as money and how these attributes facilitate trade and resolves the problems of barter trade.

1. **Scarcity:** The scarcity or limited supply of money helps to maintain its value and perform the basic function of money, i.e., act as a medium of exchange.
2. **Acceptability:** Money is generally acceptable legal tender (acceptability is enforced by law) and, therefore, resolves the problem of lack of general acceptability in barter trade.
3. **Divisibility:** Large and bulky goods may be difficult to divide, making it difficult to trade goods with different values (e.g., part of a buffalo or half of a fruit)—therefore, reducing the volume of trade and level of specialization. Money has different values in denomination and, therefore, makes it easier to buy and sell goods and services of different values.
4. **Durability:** In barter trade some goods like fruits are perishable and hard to store. Money, on the other hand, is durable and can easily be stored. This is a problem which may affect paper money and to a lesser extent coins. The chief form of money in a modern society, which is bank deposits, suffers no physical depreciation whatsoever as it exists only as numbers on a page or digits in a computer.
5. **Portability:** Commodity money and even coins suffer from the disadvantage that may be difficult to transport. A modern bank deposit, however, may be transferred electronically from one place to another.
6. **Uniformity:** Every unit of a product is not necessarily the same in size and quality, and, therefore, creates a problem in trade when goods are traded in bulk in a barter economy. Money, being homogeneous, allows the assigning of different prices for different sizes and qualities of the same product, eliminating the problem that this creates in barter, thereby stimulating trade.

7. **Stability of Value:** It is highly desirable that money should retain its value. In the past this was achieved by tying monetary value to something which was in relatively stable supply, such as gold. It is one of the most serious defects of modern money that it may be affected by inflation. The hyperinflation in Zimbabwe in 2008, for example, made its currency worthless.
8. **Difficult to Counterfeit:** Once a society uses money which has only exchange value and not intrinsic value, it is essential that possibility for fraud and counterfeit be kept to a minimum.

Functions of money:

There are four major functions of money which can be summarized in the following rhyme:

Money is a function of four
A medium, a measure, deferred, and a store

1. Medium of Exchange:

- Primary function
- Money splits a single transaction of barter into separate transactions of sale and purchase, both in time and place; thus, it **eliminates the need for a double coincidence of wants**. "Double coincidence of wants" means that both parties involved in the transaction must want to buy what the other is offering for sale. Money facilitates trade by making it easier to exchange.
- When money acts as a medium of exchange, it means that it is generally acceptable and gives us a good deal of economic independence and also perfects the market mechanism by **increasing competition and widening the market.**
- As a medium of exchange, money acts as intermediary. It helps production indirectly through **specialization and division of labor** which, in turn, increase **efficiency and output**.
- In the last analysis money **facilitates trade**. When acting as the intermediary, it helps one good or a service to be traded indirectly for others.
- The essential characteristic for anything to act as a medium of exchange is **scarcity**. Not anything, which is not scarce, can act as money.

2. Measure of Value or unit of account:

- In barter trade there may be hundreds of values for a product. Every time goods are exchanged with different products, people need to negotiate a new rate of exchange, and this makes trade extremely difficult and slow. The use of money as a standard of value eliminates the necessity of quoting price of apples in terms of oranges, the price of oranges in terms of nuts, and so on. Money expresses the value of each good or service in terms of **price**; therefore, the problem of "no exact value of a product" in barter trade is solved.
- In barter trade there is no single agreed unit of account to record sales, expenses, or to compute profits and losses; therefore, it is hard to determine the **relative profitability of different businesses**. Money as a unit of value also **facilitates accounting**. Assets of all kinds, liabilities of all kinds, income of all kinds and expenses of all kinds can be stated in terms of common monetary units to be added or subtracted. The unit of accounts function helps to run business activity more smoothly.
- Money as a unit of account helps in **calculation of economic importance** such as the estimation of the costs, and revenues of the business firms, the relative costs and profitability of various public enterprises and projects under a planned economy, and the gross national product.

3. Standard of deferred payments (credit payments):

- All debts are taken and repaid in money, as, in the absence of inflation, money provides greater **certainty of value** compared to other forms of assets.
- It **simplifies lending and borrowing transactions** for firms, businessmen, banks, and other non-bank financial institutions. On the other hand, it will be extremely difficult to make credit transactions and settle debt payments as there will be no common basis for settling debts between creditors and debtors.
- However, [illegible] benefit the debtors [illegible] ments.

To overcome this difficulty, some of the countries have fixed debt contracts in terms of a price index which measures changes in the value of money. Such contract overtime guarantees the future payment of debt by compensating the loser by the same amount of the purchasing power when the contract was entered into.

4. **Store of value/wealth:**
   - **Wealth** means the stock of assets that one possesses at a point in time. One can store the value for the future by holding bonds, shares, furniture, houses, land, or any other kind of valuable goods.
   - Money is also a store of wealth and has the advantages of **liquidity** (ease for being ready to use as medium of exchange) and **no storage cost** over the other forms of store of wealth, but a disadvantages of no income generated (e.g., interest, dividend or rents) and less chances of appreciation (only if there is deflation). Money rather depreciates in its value in the periods of inflation.

These functions of money are vital for the smooth operation of all economies. If any of the functions breaks down—as in the case of Zimbabwe, where money lost all meaning as a store of value or wealth—economic collapse is the inevitable outcome. It is therefore essential that a prudent government puts economic policies in place to ensure that this does not happen

Inflation

Inflation means a sustained increase in an economy's price level.

Inflation does not mean:

- price of a particular product is rising
- every product's price is rising
- all products prices are rising at the same rate

Degrees of inflation

Creeping inflation:
A low and stable rate, of for instance 2%, is generally regarded not to be a problem. Indeed, seeing a low and steady rise in prices may encourage firms to produce more. Such a rate of inflation is sometimes known as creeping inflation.

Hyperinflation:
Hyperinflation is an extreme form of inflation in which price level rises by, 100s, 1000s and million times in a year.

Effects of hyperinflation:
- Money value falls so rapidly that money loses its function of medium of exchange, and people start preferring barter as a system of exchange
- Other currencies might be used instead of domestic currency
- Economy may collapse

Example:
At the start of the twenty-first century, Zimbabwe experienced an inflation rate so high that economists had difficulty measuring it. It has been estimated that it reached in 2008 anywhere between 200 million per cent and 89 sextrillion per cent.

Zimbabwe's descent into economic catastrophe was a long, drawn-out affair. Following a drop in agricultural production after controversial land seizures, exports fell and foreign investors went elsewhere. The government sought to solve its liquidity problems by borrowing from foreign banks, knowing that it could not meet its loan repayments. The government made the situation worse by printing more money, much of which was used to pay the army, police, and civil servants. Eventually, inflation reached violence in the

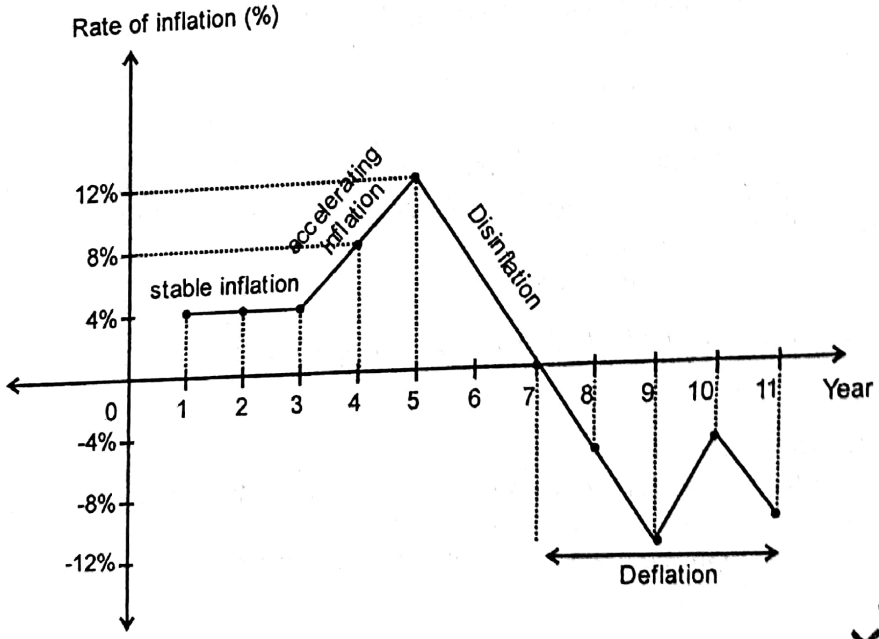
Zimbabwean dollar. More stability has come about since the country's decision in 2009 to use the South African rand, the Botswana pula, the pound, the euro and the US dollar tor all transactions.

Relationship between price level and rate of inflation:

	Stable Inflation		Accelerating inflation		Disinflation		Deflation	
Rate of Inflation (ROI)	Stable/constant		↑		↓		Negative	
Price Level (PL)	↑		↑		↑		↓	
Example	ROI	PL	ROI	PL	ROI	PL	ROI	PL
	–	100	–	100	–	100	–	100
	2 %	102	2 %	102	10 %	110	–10 %	90
	2 %	104.04	5 %	107.1	8 %	118.8	–5 %	85.5
	2 %	106.12	10 %	117.81	5 %	124.74	–20 %	68.4

- As long as rate of inflation is positive, price level increases even if rate of inflation is constant or falling.
- When inflation rate is zero, price level stays unchanged.
- When rate of inflation is negative, price level falls even if rate of inflation is constant or falling.
- As long as rate of inflation is positive, price level is lowest in first year and highest on last year.
- As long as rate of inflation is negative price level is highest in first year and lowest in last.

Example:



Question	Answer
In which year was the price level at its highest?	ⓘ 7
In which year was the rate of inflation at its highest?	5
In which year was the price level at its lowest?	1
In which year was the rate of inflation at its lowest? (ignoring sign)	7
In which year did the price level fall for the first time?	8
In which year di	

Measurement of Inflation / Value of Money / Cost of Living

Consumer price index (CPI) is an index that shows the average change in the prices of a representative basket of products purchased by households.
Cost of living means how much it costs to live in a country.
A country's price level indicates how much it costs to live in that country. A rise in the price level means that the cost of living has increased. To assess changes in the cost of living, governments construct consumer price indices. There are a number of stages in doing this:

1. Selecting a base year and current year:
- **Current year** is the one whose rate of inflation is to be measured.
- **Base year** is the standard year with which rest of years prices are compared.
- A normal economic year in which there are no political or economic balances should be taken as *Base Year*. Price level in base year is represented by 100.

2. Selection of basket of goods and services:
- To show the changes in general price level, it is simply **impossible** to record and calculate the price changes of all the goods and services (which are even more than millions) produced in a country.
- Therefore, by using the statistical technique of sampling almost a basket of **300 to 600** goods and services should be selected for indication in changes in general price level.
- Goods and services that an **average family uses** like fuel, clothing, food etc should be included in the selected basket of goods and services. Those goods and services which are used by a very limited group of people will not be taken in the selected basket of goods and services.

3. Collection of price data:
Statistical department of government collects information about the prices in base year as well as current year. This information about prices of selected basket of goods is collected from retail outlets, news papers, price lists and co-operative society's offices etc.

4. Calculating index:
Index (or price relatives) is calculated by:

$$\text{Index} = \frac{\text{Current Year Price}}{\text{Base Year Price}} \times 100$$

5. Assigning weights:
Consumers spend much more of their incomes on certain goods and services and these should be given greater importance in the index. For instance, if on average households spend $500 of their total expenditure of $2,000 on food, the category will be given a weight of 'A or 25%. Commodities should be given a weight which reflects their relative importance in the consumer spending.

$$\text{Weight} = \frac{\text{Expenditure on the good}}{\text{Total Expenditure}} \times 100$$

6. Calculating weighted index:
Weights are multiplied by indexes to calculate weighted indexes.

$$\text{Weighted Index} = \text{Index} \times \text{Weight}$$

7. CPI
CPI is obtained by taking sum of all weighted indexes and dividing it by total weights.

$$\text{CPI} = \frac{\text{Total Weighted Index}}{\text{Total Weights}}$$

8. Rate of inflation
Rate of inflation is calculated by taking percentage change in current year average prices (i.e., RPI of current year) to the base year average prices (i.e., RPI of base year).

$$\text{Rate of inflation} = \frac{CPI_2 - CPI_1}{CPI_1} \times 100$$

Where CPI_2 = CPI of current year and CPI_1 = CPI of the base year
As we know that CPI of base year is always 100, so we can write rate of inflation as:

$$\text{Rate of inflation} = CPI_2 - CPI_1$$

Example:
Suppose 600 goods are categorized into 3 broad groups', i.e., A, B and C. Their base year pieces were $5, $10, $5 respectively. In 2001, they changed $6, $11, $7. Average families in the country spend $4000 on goods A, $3000 on goods B and $3000 on C. Calculate rate of inflation.

Product	Base year Prices	Current Year Prices	Expenditure on goods	Weight	Index	Weighted Index
A	$5	$6	$4000	4000/10000 × 100 = **40**	6/5 × 100 = **120**	40 ×120 = 4800
B	$10	$11	$3000	3000/10000 × 100 = **30**	11/10 × 100 = **110**	30 ×110 = 3300
C	$5	$4	$3000	3000/10000 × 100 = **30**	4/5 × 100 = **80**	30 × 80 = 2400
TOTAL			= **$10000**	= **100**		= **10500**

CPI of Current year = 10500/100 =105
Rate of inflation = $CPI_2 - CPI_1$ =105 – 100 = **5%** (ANS)

Problems of constructing Consumer Price Index (limitations of the Price Index)

1. **Selection of base year:** The questions that arise are: "Normal to what extent?" "No inflation, no deflation, no high unemployment, no political instability?" "What is an ideal year?" It is not easy to decide. Hence, it is not an arbitrary selection.

2. **Selection of basket of goods:** Again, this depends on what is essential and what is not. Often the goods selected are normally reflective of a certain class, and hence they are not representative of the whole population. The views of upper class and the lower class will be different. Even within the same class, there are still differences in perception.

3. **Prices of the selected goods:** Prices fluctuate from day to day. The rage may be very wide, for example, $5 to $50. We will then have difficulty in determining the average price. Moreover, for some commodities, such as rice, there is a question of which grade to choose. Again, selection is arbitrary.

4. **Weights:** The relative importance of the goods, i.e., the proportion of income spent on that good. Different people have different scales of preference. Moreover, when a person's income increases, the proportion spent on different goods will change; more may be spent on entertainment than on necessities.

5. **Sampling Errors:** The consumer price index is not an exact measurement of price changes. It is subject to sampling errors which cause it to deviate somewhat from the results that would be obtained if actual records of all retail purchases could be used to complete the index. These sampling errors are unavoidable. They could be reduced by using much larger samples.

6. **Inaccurate Information:** People who give information do not always report accurately. The statistics bureau makes every effort to keep these errors to a minimum, and corrects them whenever they are subsequently discovered.

7. **Comparison overtime:** It is difficult to compare prices overtime. We cannot prepare the 2016 consumer price index with the 1980 consumer price index, i.e., between long period of times because:
   - **New products** may have entered the markets
   - **Necessities may have changed** and (mass rapid transit)
   - **Fashion and tastes** may have changed
   - **Spending habits** may have changed
   - **Quality** may have improved
   - **Income** changes
8. **Comparison between countries:** It is even more difficult to compare consumer price index of one county with another because of:
   - Base year differences
   - Differences in basket of goods
   - Prices of selected goods differ
   - Differences in weightage

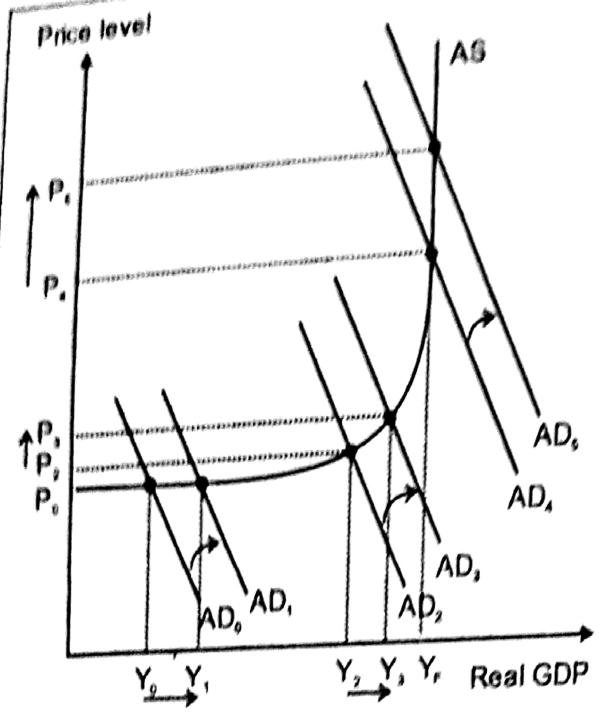
Conclusion

A price index is a mere approximation. Human error in compiling, recording and analyzing data can never be totally absent. However, despite these limitations, it is still the best yardstick available to measure changes in the general price level and the value of money.

The causes of Inflation

There are two causes of inflation:
- Demand-pull Inflation
- Cost-push Inflation

Demand-pull Inflation	Cost-push Inflation
Meaning: If there is too much demand in the economy relative to the supply of goods and services, prices will rise and this type of inflation is known as demand-pull inflation.	**Meaning:** Cost-push inflation describes a situation where the process of rising prices is initiated and sustained by rising costs which push the prices up.
Explanation: Demand-pull inflation can occur when: – Economy is below full employment – Economy is already at full employment When the economy is initially operating below full employment, increase in AD will lead to increased prices as well as real GDP. It can be shown by the following figure:	**Explanation:** If cost of production rises (say trade union demands for higher wages), fall in profit margin of producers will lead to fall in AS from AS_0 to AS_1 as shown in the figure below. Price level will rise from P_0 to P_1, and note that GDP will also fall from Y_0 to Y_1. Higher costs will force the producers to cut short their production resulting into co-existence of unemployment with inflation. This situation is known as stagflation or slumpflation.



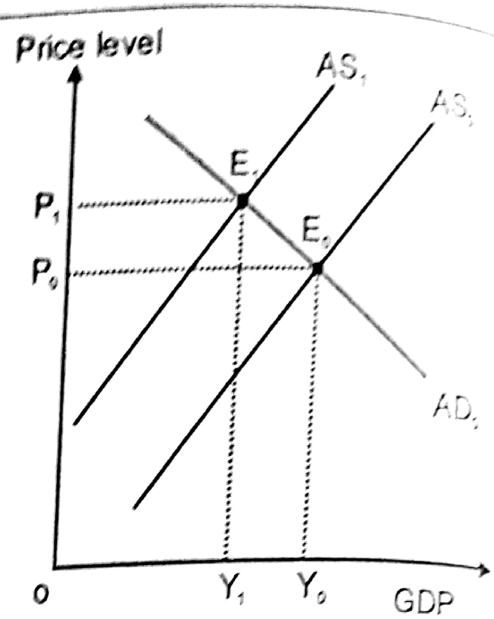
If the aggregate demand curve intersects the aggregate supply curve prior to output rate Y_1, then any increase in demand will not lead to a rise in the price level. Thus a shift from AD_0 to AD_1 leaves the price level unaltered at P_0. A shift from AD_1 to AD_2, however, will cause the price level to increase P_1. After output rate Y_2, any increase in demand will simply result in a higher price level since, by definition, at full capacity output no more output is physically possible.

A rise in aggregate demand will have a greater impact on the price level, the closer the economy comes to full capacity.

Determinants:

Excessive demand in the economy may be due to:

1. **Too much consumer spending** (because of excessive income, lower interest, more credit availability, more wealth, expected increase in future incomes and prices etc.)
2. **Too much capital investment** (because of lower interest rate, business optimism, better technology, political and social stability, government investment friendly policies etc)
3. **Too much government spending** on merit goods, public goods infrastructure etc and reduced taxation (Expansionary fiscal measures or budget deficit)



Determinants:

This may be due to increases in:

1. **Raw-materials** may become expensive if there is a shortage of raw-materials
2. **Wages** may rise because of powerful trade unions
3. Government may impose high **taxes** to cover its budget deficit. An increase in indirect taxation (i.e., tax on goods and services) is another way of giving the general price level on inflationary 'push'. Increase in sales tax, VAT etc will raise the cost of production and fall in AS, consequently a rise in general price level.
4. International prices of oil may rise which is the key input for all industries. Inflation caused by rising import prices is sometimes referred as **imported inflation**. Prices of imported raw materials and oil may also rise due to **depreciation** in their exchange rate.

However most of the economists argue that main cause of cost-push inflation is an increase in labor cost (i.e., wages). Wages are largest single element in total cost. When wages rise faster than productivity (output per unit of input) labor cost will increase and so will prices because of fall

4. **Sudden increase in demand for exports** and fall in demand for imports (e.g., because of fall in value of domestic currency, changes in quality, tastes and fashion and international economic activities etc) 5. **Monetarists** argue that the key cause of higher aggregate demand is increases in the money supply. They suggest that if the money supply grows more rapidly than output, the greater supply of money will drive up the price level.	in AS.
Effects:	**Effects:**
Demand-pull inflation is associated with low unemployment because excess demand in the economy leads to increased production and employment. There is a tradeoff between demand-pull inflation and unemployment.	A decrease in aggregate supply caused by higher costs of production pushes up the price level, causes a contraction in aggregate demand and reduces real GDP.

Wage-price spiral

Higher wages can cause a **wage-price spiral**. Workers gain a wage rise, which causes prices to increase, causing workers to seek higher wages to restore their real value, and so on. It can be explained as follows:

- When prices rise, people find that their real incomes are falling and thus, they will demand higher wages.
- If wages may increase more than labor productivity and so result in a rise in labor costs, the price of goods and services they produce would increase (cost-push inflation)
- With higher wages they have more spending power, so demand increases and demand-pull inflation occurs.
- Other groups will demand higher wages because they see prices rising and this will cause the cycle to re-instigate itself and known as wage price spiral.
- Everyone becomes accustomed to living with inflation and become anxious to maintain their standard of living.
- Eventually, prices and incomes may become indexed; every time prices rise by 10%, incomes, rents, pensions and so on would rise by 10%.
- This could turn into hyperinflation (if it gets out of control) and the economy would collapse as people lose confidence in their domestic currency.

Once inflation is underway, it is difficult to determine its cause. For instance, wages and consumer expenditure may be increasing but it may be hard to tell which occurred first and so whether inflation is the result of demand-pull or cost-push factors.

The consequences of Inflation

Costs:

Inflation affects different people differently. When price rises or the value of money falls some groups of the society gain, some lose and some stand in between. The effects of inflation depend on:

- The rate at which it is rising
- Whether the rate is accelerating or stable
- Whether the rate is the one which had been expected
- How the rate compares with that in other countries

1. Effects on the distribution of income:

One of inflation's major effects is on the redistribution of income and wealth. There are many groups of people which suffer due to inflation.

- Firstly, due to rising prices, **creditors lose**. Although they will receive the same amount of money which they lent but in real terms, they will receive less as the value of money has fallen.
- **Salaried persons** such as clerks, teachers and other white collar people also lose when there is inflation as their salaries are slow to adjust when prices are rising.
- Another group which is negatively affected by inflation is **fixed income groups**. Such people are recipients of pensions, social security, interest and rent on fixed incomes etc. Pensioners receive fixed pension and renter class gets fixed payments of interest and rent. These persons lose in periods of inflation as the income they will receive now will be less in real terms as value of money falls in inflation.
- On the other hand, **businessmen, industrialists, traders, real estate holders, speculators** and others with variable incomes gain during rising prices
- **The government as a debtor** gains at the expense of households who are its principal creditors. This is because interest rates on the government bonds are fixed and are not raised to offset expected rise in prices and real interest falls. Also it is easier to pay back debt to general public as money has less real value.
- There can be a transfer of income from private sector to the government through fiscal drag and bracket creep. In a **fiscal drag**, those individuals who were previously in the tax exempted bracket would be dragged into tax brackets during times of inflation. In a **bracket creep**, those individuals who were previously in lower tax bracket would creep to higher tax brackets due to an increase in their nominal incomes in the period of inflation. It can be argued, however, that this is a cost of an inefficient tax system rather than a cost of inflation.

2. Effects on production:

Inflation has adverse affects on production.

- Firstly, there is misallocation of resources. Producers may divert resources from the production of **essential items to non-essential items** to expect higher profits. There may be reduction in production as expectation of rising prices alongside rising costs if inputs bring uncertainty.
- There will be **hoarding** and **black marketing**. Producers will create artificial shortages in the market by hoarding up stocks of commodities and consequently sell their products in the black market, which gives rise to inflationary pressures.
- Unanticipated inflation can create uncertainty and so make it more difficult for firms to plan ahead. This may dissuade firms from **investing**, which will have an adverse effect on **economic growth**.
- Inflation also **reduces foreign investment** because of rising costs of materials and other inputs.
- **Menu costs** are the costs involved in changing prices. For example, catalogues, price tags, bar codes and advertisements have to be changed. This involves staff time and is unpopular with customers. However, it is viewed as a small cost to the society.
- **Shoe leather costs** are the costs involved in moving money from one financial institution to another in search of the highest rate of interest.

3. External Effects (on exchange rate and balance of payments):

- Inflation affects adversely on the **balance of payments**. When prices rise in the home country than in foreign countries, domestic products become more costly than foreign products. This tends to increase imports and reduce exports, thus having an unfavorable balance of payments.
- When prices rise more rapidly in the home country than in foreign countries it **lowers the exchange rate** in relation to foreign currencies.

4. Inflationary noise or money illusion:

This arises when inflation causes **consumers and firms to confuse price signals**. Inflation can make it difficult to assess what is happening to relative prices. A rise in the price of a product may not

mean that it has become more expensive relative to other products. Indeed, the product may have risen in price by less than inflation and so may have become relatively cheaper. Inflationary noise can result in consumers and firms making the wrong decisions. For example, firms seeing the price of their products rising may increase output when the higher price is the result of inflation rather than increased demand for their products. This may result in a misallocation of resources.

5. **Inflation causing inflation:**

Inflation may generate further inflation as consumers, workers and firms will come to expect prices to rise. As a result, they may act in a way that will cause inflation. For example, workers may press for higher wages, firms may raise prices to cover expected higher costs and consumers may seek to purchase products now before their prices rise further. If prices start to rise at an abnormal rate creating a **hyperinflation** situation, then there is fear of an eventual collapse of the monetary system.

6. **Effects of inflation on functions of money:**

Inflation affects the functions of money in a number of ways.

- If the inflation rate is **slow**, that is there is mild or creeping inflation (1 % to 3 %) and it is also **anticipated** (expected), then **only the store of wealth function** of money will be weakened. It would not be beneficial for the people to save in terms of money .As the inflation rate is slow and anticipated, there would not be a greater instability in value of money and it will continue to be used as a standard of deferred of payments. People will continue to record their transactions in the same currency and will keep on using current money as medium of exchange.
- If inflation rate of the country is **high and unanticipated**, the function of money as a store of wealth will be weakened once again. Apart from this, the function of money as **a standard of deferred payment** will also be weakened. With high and unanticipated, the value of money would fall and the lenders would suffer. Thus, they would be discouraged to make transactions related to deferred payments.
- If the inflation rate of a country is extremely high, that is more than 100% and the country is facing **hyperinflation**, then **all the four functions** of money will be lost. The internal value of currency would fall at a great extent and this would deteriorate its function as a measure of value and medium of exchange. There would be no stability in its value and it would be stopped using as a standard of deferred payments. It would also not be used as a store of wealth. Thus the monetary systems would collapse and the economy might revert to barter trade or use foreign currencies.

Thus, the inflation affects the functions of money in a negative way but its deterioration will depend on the rate of inflation and its anticipations.

7. **Political and social effects:**

Inflation is also socially harmful.

- Rising prices also encourage agitations and **protests by political parties'** opposed to the government.
- With increase in **disparity between rich and poor** due to rising prices, there is increase in **discontentment** among the masses.
- With rising costs of living, workers resort to **strikes** which lead to loss in production.
- **Corruption** spreads in every walk of life.

However, it would be unjustified to say that inflation only has negative aspects. There are some conditions which prove that inflation is not always bad.

Benefits

The potential benefits include:

1. **Stimulating output:** A low and stable inflation rate caused by increasing demand may make firms feel optimistic about the future. In addition, if prices rise by more than costs, profits will increase which will provide funds for investment.

2. **Reduce the burden of debt:** During the period of inflation, **real interest rates** may fall or may even become negative. This is because nominal interest rates do not tend to rise in line with inflation. As a result, debt burdens may fall. For example, those who have **borrowed** money to buy a house may experience a fall in their mortgage payments in real terms. Likewise, a country's **national debt** repayments are reduced in real terms. A reduction in the debt burden may stimulate consumer expenditure that, in turn, could lead to higher output and employment.

3. **Prevent some unemployment:** Firms in difficulties may have to reduce their costs to survive. For many firms, wages form a significant proportion of their total costs. With zero inflation, firms may have to cut their labor force. However, inflation would enable them to **reduce the real costs of labor** by either keeping nominal (money) wages constant or by not raising them in line with inflation. During inflation, workers with strong bargaining power are more likely to be able to resist cuts in their real wages than workers who lack bargaining power.

4. Another group of people which gains from inflation are **businessmen** of all types, such as producers, **traders,** etc. When prices rise, the value of producers' stocks will increase in the same proportion so they will profit more when they sell stored commodities.

5. Further, inflation is **not as bad as deflation** is, i.e., opposite to inflation.

Factors affecting the consequences of inflation:

The effects of inflation depend on:

- its **rate** whether the rate is accelerating or stable
- whether the rate is the one that has been **expected**
- how the rate **compares** with that of other countries.

1. **The cause of inflation:** Demand-pull inflation is likely to be less harmful than cost-push inflation. This is because demand-pull inflation is associated with rising output whereas cost-push inflation is associated with falling output.

2. **The rate of inflation:** A high rate of inflation is likely to cause more damage than a low rate especially if the high rate develops into hyperinflation. Indeed, **hyperinflation** can lead to households and firms losing faith in the currency and may bring down a government.

3. **Stable or accelerating rate of inflation:** An accelerating inflation rate, and indeed even a fluctuating inflation rate, will cause **uncertainty** and may discourage firms from undertaking investment. They need to devote more time and effort to establishing future inflation will increase costs.

4. **Anticipated or unanticipated inflation:** Unanticipated inflation, which occurs when the inflation rate was different from that expected, can also create uncertainty and so can discourage some consumer expenditure and investment. In contrast, if households, firms and the government have correctly anticipated inflation, they can take measures to adapt to it and so avoid some of its potentially harmful effects. For instance, firms may have adjusted their prices, nominal interest rates may have been changed to maintain real interest rates and the government may have adjusted tax brackets, raised pensions and public sector wages in line with inflation.

5. **Relative inflation rate to trading partners:** It is possible for a country to have a relatively high rate of inflation but if it is below that of rival trading partners, its products may become more internationally competitive.

Anticipated and unanticipated inflation and indexation

Anticipated—expected rate of inflation
Unanticip

Index linked assets—whose real value does not change with inflation.

Much inflation is unanticipated; households, firms and government are uncertain what the rate of inflation will be in future. When planning, they therefore have to estimate as best they can the expected rate of inflation. It is unlikely that they will guess correctly and hence their plans will be to some extent frustrated. On the other hand, inflation may be anticipated. Inflation may be a constant 5% per year and therefore households, firms and government are able to build in this figure to their plans.

Unanticipated inflation imposes far greater costs than anticipated inflation. If inflation is anticipated, economic agents can take steps to mitigate the effects of inflation. One way of doing this is through **indexation**. This is where economic variables like wages or taxes are increased in line with inflation. For instance, a union might negotiate a wage agreement with an employer for staged increases over a year of 2% plus the change in the Consumer Price Index. The annual changes in social security benefits in the UK are linked to the Consumer Price Index.

Economists are divided about whether indexation provides a solution to the problem of inflation. One the one hand, it **reduces many of the costs of inflation** although some costs such as shoe leather costs and menu costs remain. On the other hand, it reduces the pressure on government to tackle the problem of inflation directly. Indexation **eases the pain of inflation but is not a cure for it**.

Moreover, indexation may hinder government attempts to reduce inflation because indexation **builds in cost structures**, such as wage increases, which reflect past changes in prices. If a government wants to get inflation down to 2% a year, and inflation has just been 10%, it will not be helped in achieving its target if workers are all awarded at least 10% wage increases because of indexation agreement.

Why it is important to have accurate statistics of inflation?

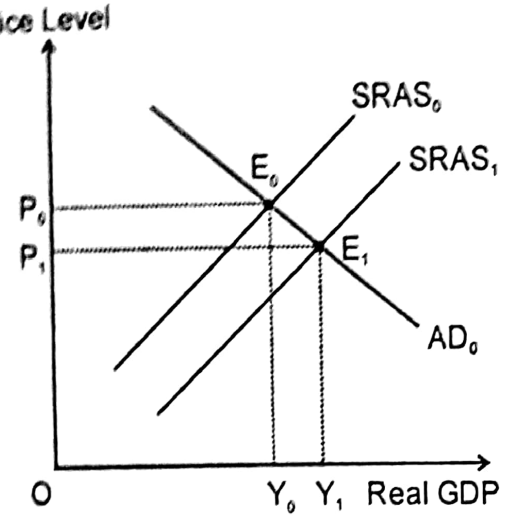
1. Inflation is a central economic target. If the statistics are inaccurate the direction and level of action **(macroeconomic policy) may be inappropriate** and may worsen the position.
2. Inflation figures are a means by which the **success of current policy** can be judged. Inaccurate figures of inflation may understate or overstate the success of government macroeconomic policy.
3. Lack of trust of the statistics may undermine the **acceptance of policies** and their effectiveness. Trade unions and firms may anticipate more than actual inflation, which my build wage-price spiral.
4. It is used to assess the effects on the distribution of income of the people in the country. Certain group of people will gain with rising prices at the expense of others. Among those who will gain with rising prices are the businessmen and the shareholders. Those who do not benefit are pensioners, salaried individuals and the bondholders. With such effect, the gap between the rich and the poor will be widened and the government should take positive steps to reduce such income **inequality**. However, inaccurate statistics will make it difficult for government to define appropriate **cost of living allowance**.
5. It is a basses for future contracts between **creditors and debtors**. With rising prices, the debtor will gain (i.e., they are losing less purchasing power). Hence, it should be maintained that the creditors are repaid with at least the same purchasing power, in terms of real income. To compensate for the loss in real income, the debtors are charged an interest, which includes inflation compensation. However, inaccurate inflation statistics will make either of the group losers.
6. With rising cost of living, the consumers' real income will fall. When the general price level increases, real income will decrease. The trade unions must step in to demand for more money income so as to offset the increase in general price level. Accurate inflation statistics will be needed for that purpose otherwise **trade unions** may end up with either too high or too low demands for the wage increase.
7. Errors may be made in planning and real values may not be maintained.
8. There will be a fall in business confidence resulting into fall in **investment**.

Causes and consequences of deflation

Deflation is a sustained fall in the price level. Deflation involves a negative inflation rate, for example, –5%. It results in a rise in the value of money, with each currency unit having greater purchasing power. Deflation can be good deflation and bad deflation depending upon the cause of deflation.

Good deflation

Good deflation occurs as a result of an increase in aggregate supply. Figure below shows an increase in aggregate supply resulting in a fall in the price level and a rise in real GDP.

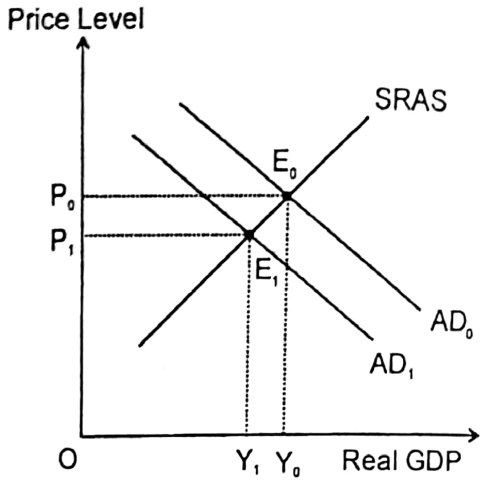


Effects:

Advances in **technology**, for instance, may create new methods of production and lower costs of production. As well as output increasing, employment may rise and the international competitiveness of the country's products may increase.

Bad deflation

Bad deflation takes place when the price level is driven down by a fall in aggregate demand as shown in figure below.



Effects:

1. Deflation causes **real wage to rise**, which tends to raise unemployment and reduce profit, which, in turn, triggers investment fall and thereby a fall in AD and income and increase in unemployment.
2. Deflation leads to an increase in **real interest rate**, which tends to raise the cost of debt and thereby discourages investment, causing income to fall and unemployment to rise.
3. Deflation causes the expected price to fall, which, in turn, causes consumption and investment to fall and aggregate supply to rise. The latter two events reinforce each other to cause price to fall further developing into a **deflationary spiral**.
4. May result in **menu costs**.
5. Deflation will increase the **burden of debt** for both borrowers and government.

The above factors are obviously very harmful to an economy and therefore all governments do their best to overcome the deflationary threat.

PAST PAPER QUESTIONS

Topic: Function or Characteristics of Money

(Nov 2015/P22/Q3/a)
Explain what is meant by the term 'money' and outline its characteristics in a modern economy. [8]

(Jun 2014/P21/Q4/a), (Jun 2014/P23/Q2/a)
Explain what is meant by the term 'money' and outline its characteristics in a modern twenty-first century economy. [8]

(June 2012/21/Q2/a)
Explain why all types of economic system benefit from the existence and use of money. [8]

(June 2010/21/Q2/b)
Discuss how the operation of a barter economy would be affected by the introduction of money. [12]

(Nov 2008/Q2/a)
Explain the characteristics required by money if it is to carry out its functions effectively. [8]

(June 1996/a)
Explain why economies make use of money. [8]

Topic: Causes of Inflation

(June 2016/P23/Q3/a)
Use aggregate demand and aggregate supply analysis to distinguish between cost-push and demand-pull causes of inflation. [8]

(Specimen Paper 2016/P2/Q3/a)
Define the components of aggregate demand and, with the help of a diagram, explain how an increase in spending in an economy might result in inflation. [8]

(Nov 2015/P21/Q3/a)
With the help of diagrams, explain how both cost-push and demand-pull inflation can be caused by a falling exchange rate. [8]

(June 2015/P23/Q4/a)
Define each component of aggregate demand and, using a diagram, show how a reduction in one of these components might reduce inflationary pressure in an economy. [8]

(June 2015/P21/Q4/a)
Explain what acts as money in a modern economy and what is likely to happen to the price level if the quantity of money increases significantly. [8]

(Nov 2014/P23/Q3/a)
Explain why an increase in the money supply and rising world energy prices are categorized as different causes of inflation in an economy.

(Nov 2014/P22/Q4/b)
Discuss whether inflation is more likely to be caused by a shift in an economy's aggregate demand or a shift in its aggregate supply.

(Jun 2014/P22/Q4/a)
Using diagrams, explain the difference between demand-pull and cost-push causes of inflation. [8]

(Jun 2014/P22/Q4/b)
Distinguish between the domestic and external consequences of inflation and discuss which is most damaging to an economy. [12]

(June 2013/P22/Q3/a)
Define the components of aggregate demand and, with the help of a diagram, explain how an increase in spending in an economy might result in inflation. [8]

(June 2013/P21/Q3/b)
With the help of diagrams, analyse the factors that will lead to an increase in aggregate demand in an economy, and discuss whether this increase is more likely to have an impact on inflation or unemployment in that economy. [12]

(Nov 2012/P21/Q3/a)
Explain, with the use of an aggregate demand (AD) and aggregate supply (AS) diagram, the different effect of cost-push and demand-pull inflation on real output. [8]

(June 2012/P23/Q4/a)
How does aggregate demand and aggregate supply analysis explain the existence of inflation in the short run? [8]

(Nov 2010/P23/Q3/b)
Discuss whether rapid inflation can be caused only by government actions. [12]

(June 2011/P22/Q4/b)
Discuss whether it is the behaviour of producers, consumers or governments that is most likely to cause inflation. [12]

(June 2010/23/Q3/b)
Discuss whether inflation is more likely to be caused by domestic or international influences. [12]

(June 2008/Q3/b)
Discuss whether a widespread shortage of labor might be a major cause of inflation. [12]

(Nov 2006/Q4/a)
Explain the difference between cost-push inflation and demand-pull inflation. [8]

(Nov 2001) (a)
Explain the different between cost-push inflation and demand-pull inflation. [10]

(Nov 2001/a)
Explain what causes inflation. [10]

(Nov 1999/a)
In recent year, the rate of inflation in many countries has been low. Suggest possible rezones why an inflation rate may be low.

(June 1998)
In the UK, the growth in retail sales in the year ending June 1996 was higher than expected.
(a) Would you support the implication of this statement than inflation is caused by consumer spending? [12]

(June 1994/a)
Explain the meaning of the phrase 'fall in inflation' and discuss what might cause a fall in inflation. [15]

(Nov 1992)
Explain why a country may experience a persistent rise in its general price level. [8]

Topic: Effects of Inflation

(Specimen Paper 2016/P2/Q3/b)
If an economy is experiencing inflation, discuss the view that its government should be more concerned about the external effects of inflation than its effects within the domestic economy. [12]

(Nov 2015/P21/Q3/b)
Distinguish between the domestic and external consequences of inflation and discuss which are the more damaging to an economy. [12]

(June 2015/P23/Q4/b)
Discuss the impact of a high rate of inflation on the consumers and producers in an economy and assess whether consumers or producers would suffer more [12]

(June 2013/P22/Q3/b)
If an economy is experiencing inflation, discuss the view that its government should be more concerned about the external effects than its effects within the domestic economy. [12]

(Nov 2012/P22/Q4/b)
Discuss whether it is better for a government to raise the economy's rate of productivity growth or to control its rate of inflation. [12]

(Nov 2012/P21/Q3/b)
Discuss whether the effect of the rate of inflation on the exchange rate is more or less important than the effect of the exchange rate on the rate of inflation. [12]

(June 2012/P23/Q4/b)
Discuss whether a period of inflation or a period of deflation is more economically desirable. [12]

(Nov 2010/P23/Q3/a)
Explain why a low and stable rate of inflation may be beneficial to an economy. [8]

(June 2010/23/Q3/a)
Explain why unanticipated inflation is often considered more of a problem than anticipated inflation. [8]

(June 2009/Q4/a)
Explain why there can be problems for an economy if the internal value of its money is unstable. [8]

(Nov 2008/Q2/b)
Discuss whether a country should welcome a period of deflation (negative inflation). [12]

(June 2007/Q3/b)
Discuss how a rapid rate of inflation might affect different groups within an economy. [12]

(June 2005/b)
Discuss whether stability in the domestic value of money is essential for a country's economic well-being. [12]

(Nov 2004/Q2/b)
Discuss the view that inflation is always a major problem. [12]

(June 2003/Q4/b)
Discuss whether inflation is necessarily harmful. [12]

(June 2002/b)
Discuss why reducing inflation is often the most important task for a government. [12]

(June 1999/a)
What are the advantages of a low rate of inflation? [10]

(Nov 1994/b)
Discuss why a high rate of inflation might have an adverse effect on output and employment. [13]

(Nov 1993/b)
Discuss why the government is concerned to keep the rate of inflation at a low level. [10]

(Nov 1990)
Distinguish between the domestic and external consequences of inflation. What do you believe to be more important for the United Kingdom?

Topic: Effects of Inflation on the Functions of Money

(June 2017/P23/Q4/a)

(June 2016/P23/Q3/b)
Distinguish between the domestic and the external consequences of inflation, and consider which you think is more serious for an economy. [12]

(Nov 2015/P22/Q3/b)
Discuss whether money is able to perform all its functions effectively in an economy that is experiencing a high rate of inflation. [12]

(Jun 2014/P21/Q4/b)
Discuss whether money is able to perform all of its functions in an economy that is experiencing a high rate of inflation. [12]

(Nov 2004/Q2/a)
Explain how inflation affects the function of money. [8]

(Nov 1993)
Describe the functions of money and discuss the effects of inflation on the ability of money to perform these functions. [12]

Topic: Measurement of Inflation

(Nov 2012/P22/Q4/a)
Explain why governments measure changes in the general price level and why they usually have more than one measure of these changes. [8]

(Nov 2010/P21/Q4/a)
Explain why it is important to have an accurate measure of inflation. [8]

(June 2007/Q3/a)
Explain how the rate of inflation is measured. [8]

(Nov 1992)(a)
How is the value of money measured? [12]

Topic: Problems with the Measurement of Inflation

(Nov 2010/P21/Q4/b)
Discuss the methods and problems involved in constructing an accurate measure of the rate of inflation. [12]

(June 2009/Q4/b)
Discuss whether it is possible to construct a consumer price index that is an accurate measure of changes in the cost of living for all households. [12]

(June 2003/Q4/a)
Explain the difficulties of measuring inflation accurately. [8]

(Nov 1992)
How substantial are the problems involved in measuring changes in the value of money? [13]

UNIT 3

International Trade

AS Level
Macroeconomics
Notes Book 2

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Read Write PUBLICATIONS

Syllabus 2016 – 18

a. **Specialization and division of labor**

b. **Principles of absolute and comparative advantage**

- the distinction between absolute and comparative advantage
- free trade area, customs union, monetary union, full economic union
- trade creation and trade diversion
- the benefits of free trade, including the trading possibility curve

c. **Protectionism**

- the meaning of protectionism in the context of international trade
- different methods of protection and their impact, for example, tariffs, import duties and quotas, export subsidies, embargoes, voluntary export restraints (VERs) and excessive administrative burdens ('red-tape')
- the arguments in favor of protectionism

Unit 3 International Trade

Domestic and International Trade

International trade involves the exchange of goods and services across international boundaries. It differs from domestic trade in a number of ways. There may be restrictions imposed by government and international organization on the movement of products into, and sometimes out of, countries.

Difficulties in international trade:

- Communication may be difficult during the trading process.
- Higher costs may be involved including possibly greater transport costs.
- There may be the need to translate advertising messages and related literature into other languages.
- It is necessary to keep up with changes in tastes in foreign markets.
- In some cases cash flows may have to be converted into different currencies
- Firms may have to deal with differences in technical and legal requirements in overseas markets.
- There are also extra risks involved in international trade including wars and changes in government policies.

However, the increased development of global market (globalization) with improved communication links throughout the world, increased global competition and increased similarity of tastes is reducing the differences between domestic and international trade.

Why do nations trade?

- The distribution of natural, human and capital resources among nations is uneven; nations differ in their factor endowment, i.e., quantities and productivities of economic resources. Differences in factor endowments will create the differences of comparative advantage.
- Not all the countries can produce everything they consume.
- Even domestic industries need raw materials, equipment and technology that are not available domestically and are to be imported.

Theories of international trade:

The basis of international trade and its gains to trading countries are based upon two economic theories, i.e., Theory of absolute advantage and theory of comperative advantage.

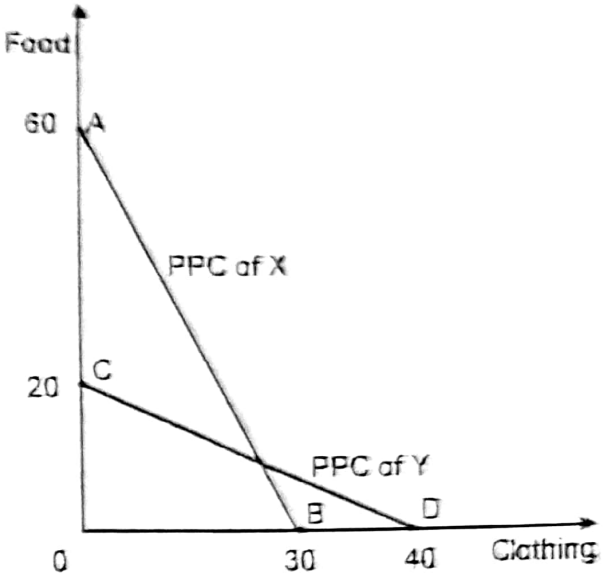
Assumptions:

- there are only **two countries** in the world (Country X and Y)
- only **two different goods** are being produced (food and clothing)
- zero **transport costs**
- **no trade barriers**
- **constant returns to scale** and homogenious resources (production possibility curve is a straight line)

Theory of absolute advantage

A country has an absolute advantage in producing a product if it can produce more of a product with the same quantity of resources than another country.

The diagram below shows the production possibility curves for two countries X & Y which utilize their resources in producing two goods, i.e., food and clothing.



It can be seen from the above diagram that country X can produce a maximum of 60 food or 30 clothing. While country Y can produce a maximum of 20 food or 40 clothing.

Therefore, it can be concluded that country X is capable to produce more food than country Y and has an absolute advantage in food production whereas country Y has an absolute advantage in clothing production and should specialize in it. So we can say that a country which can produce more output of a product than the other is said to have an absolute advantage in that product.

If each country specializes in the product in which it has an absolute advantage and then trades, based on opportunity cost ratios, total output will rise, and both countries will be able to consume more products. It can be explained by the following example.

If both countries decide to produce both goods and not to trade, i.e., to self-sufficient and each country distributes half of her resources in each good production then country X will produce 30 food and 15 clothing while country Y will produce 10 food and 20 clothing, i.e., half of what they maximum can produce of each good. According to theory of absolute advantage:

Country X → absolute advantage ⇒ Food
Country Y → absolute advantage ⇒ Clothing

If both countries decide to specialize completely in the product they have respective absolute advantage then after complete specialized country X will be producing 60 food but 0 clothing and country Y will be producing 0 food but 40 clothing as shown in the table below:

	Before specialization		After specialization	
	Food	Clothing	Food	Clothing
Country X	30	15	60	0
Country Y	10	20	0	40
World	40	35	60	40
Gains	–	–	60–40=20	40–35=5

World output increases in both food and clothing according to the above example. There will be an increase of 20 units in food production and 5 units gain in clothing production.

Gains from trade to each country depend upon the rate of exchange they will have in trade. A mutually beneficial rate of exchange always lies in between opportunity cost ratios of two countries for same product.

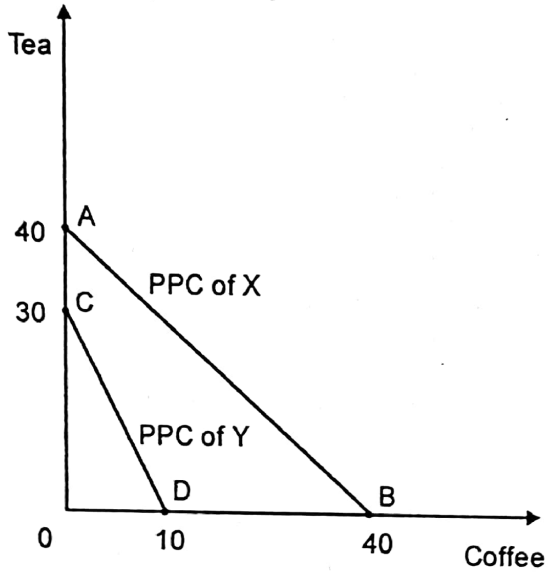
Theory of Comparative advantage

Although absolute advantage explains a small proportion of global trade, more trade is based on comparative advantage.

Comparative advantage exists when a country can produce a good at lower opportunity cost, meaning it has to give up less of another good compared to the other country.

For example, the country X may be more efficient than country Y at producing both tea and coffee. Nevertheless, both countries can still benefit from specializing and trading if the country X concentrates on producing the product it is more efficient at producing and Country Y specializes in the product it is not so relatively inefficient in producing

This theory can also be explained with help of a diagram as shown below:



From the above diagram, it can be seen country X is capable to produce more of both goods (40 units of tea and 40 units of coffee) than country Y (30 units of tea and 10 units of coffee). Therefore country X has an absolute advantage in both goods production country Y has no absolute advantage in any product. In this case, decision of specialization cannot be made on the total production or absolute advantage basis. We will have to consider their relative opportunity costs. Country which has a lower opportunity costs will have a comparative advantage in that product. It can be calculated from the above diagram as shown in the table below:

Opportunity cost of:	Country X	Country Y
	40 Tea = 40 Coffee	**30 Tea = 10 Coffee**
1 unit of Coffee	40/40 = 1 Tea	30/10 = 3 Tea
1 unit of Tea	40/40 = 1 Coffee	10/30 = 0.3 Coffee

Country 'X' ⇒ comparative advantage → Coffee
Country 'Y' ⇒ comparative advantage → Tea

Opportunity cost of country X for producing 1 unit of coffee is equal to 1 unit of tea whereas opportunity cost of country Y producing 1 unit of coffee is equal to 3 units of tea. On the other hand, opportunity cost of country X producing 1 unit of tea is equal to 1 unit of coffee while opportunity cost of country Y producing 1 unit of tea is equal to 1/3 units of coffee

Hence, it can be concluded that country X has a comparative advantage in coffee production and should specialize in coffee while country Y has a comparative advantage in tea production.

Absolute advantage	Comparative advantage
is based on total production.	is based on opportunity costs
a country can have an absolute advantage in both goods and therefore does not serve as basis of trade specialization in all cases	no country can have a comparative advantage in both goods and therefore serves as basis of trade specialization in all cases

Mutually beneficial rate of exchange:

A mutually beneficial rate of exchange always lies in between opportunity cost ratios of two countries for same product.

Continuing the example from comparative advantage, country X will have a specialization in coffee production and will export coffee and import tea. On the other hand country Y will export tea and import coffee. Trade will only be beneficial to a country if it can import more than it forgoes at home for its one unit of export.

Country	Specialize and export	Imports	Domestic opportunity cost	Looking from trade against its one unit of export
X	Coffee	Tea	1 Coffee = 1 Tea	More than 1 Tea
Y	Tea	Coffee	1 Tea = 0.3 Coffee	More than 0.3 Coffee

Let us consider three different rates of exchange and their suitability for both countries.

Beneficial for country:	Rate of exchange		
	1 Tea = 5 Coffee Or 1 Coffee = 0.2 Tea	1 Coffee = 4 Tea Or 1 Tea = 1/4 =0.25 Coffee	1 Coffee = 2 Tea Or 1 Tea = 1/2 = 0.5 Coffee
X	No	Yes	Yes
Y	Yes	No	Yes

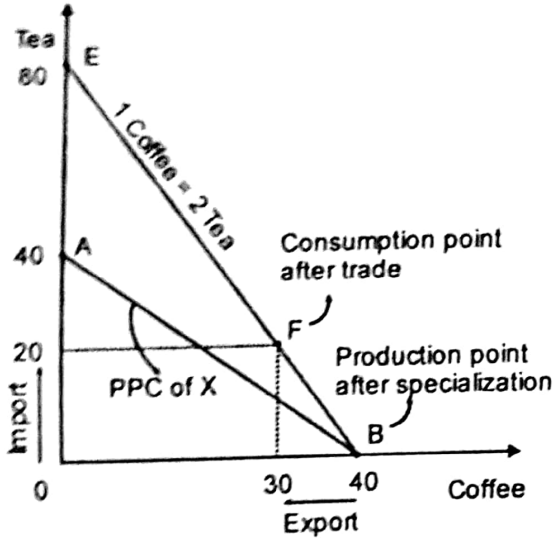
Hence, a mutually beneficial rate of exchange always lies in between opportunity cost ratios of two countries for same product. Such as,

1 Tea < 1 Coffee < 3 Tea or **0.3 Coffee < 1 Tea < 1 Coffee**

Trading possibility curve (TPC):

Trading possibility curve (TPC) is a curve that shows maximum possible quantities of imports a country can trade with given volume of exports at given mutually beneficial rate of exchange.

Continuing with above example, country X will choose to specialize in coffee and produce at point 'B' on its production possibility curve (PPC). Trading Possibility Line (curve) can be drawn by using international opportunity costs, i.e., rate of exchange. If it sells all the tractors at going rate of exchange 1 Coffee = 2 Tea, it will be able to have 80 units of tea in exchange. So trading possibility line will be a line that joins its maximum production point of coffee, i.e., point 'B' with maximum point of tea it can have by trade, i.e., point 'E' as shown in the diagram below. Slope of trading possibility line will show the mutually beneficial rate of exchange between the countries.



It is clear from the diagram that Country X gains from trading and specialization. When trading opportunities arise, Country X specializes in coffee and exchanges internationally at the rate of 1 Coffee = 2 Tea. If it exports 10 units of coffee and imports 20 units of tea, it consumes bundle 'F' (20 Tea +30 Coffee) after trade. Bundle 'F' was beyond its production possibility and therefore, is better off than before trade. Hence a country can consume more that it can produce in short run through international trade. Similar analysis can be applied to country Y and can be proved that it will also gain from trade by specializing according to its comparative advantage.

How comparative advantage explains the trade pattern of Pakistan

Trade Pattern of Pakistan	
Exports	**Imports**
Sports goods Textile Agricultural goods Tourism Surgical Equipment	Machinery Medicines Consumer goods Tourism Oil

The theory of comparative advantage is a satisfactory explanation of the trade pattern of a country to the extent that it predicts that gains will arise from the trade in line with a country's comparative advantage. For example, a country like Pakistan, which is a less developed country, is more efficient in the production of primary goods, but less efficient in the production of secondary and tertiary goods. Pakistan has a rich agricultural land and numerous farmers so it is comparatively cheaper for Pakistan to specialize in the products mentioned. It is also not to be ignored that our 62% population lives in rural areas (in 2014) and is dependent upon agricultural goods and to some extent manufactured goods at low opportunity cost as compare to its trading partner such at UAE, KSA, EU, Japan, and China. So trade pattern in based on the principle of comparative advantage because principle of comparative advantage says that each country will specialize in the product which it can produce at low opportunity cost. In the present world, most of less developed countries like Pakistan specialize and export agricultural goods, minerals, metals and other such type of goods which are land intensive. On the other hand, a country like UK, which is a developed country, specializes in secondary and tertiary sectors. It exports manufactured goods like electronics and machinery as well as services like insurance, banking, education etc.

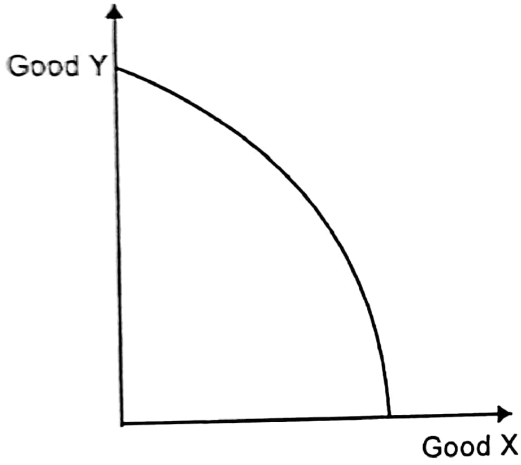
Limitations of absolute and comparative advantage theory:

Despite its importance, comparative advantage does not provide a full explanation of the pattern of global trade. There are a number of reasons for this.

1. There are never only two countries (**bilateral trade**) or only **two goods being produced in the world.** Real world trade is multilateral and countries produce millions of goods. In a world with many

countries and a vast number of products, it may be difficult to determine where a country's comparative advantage lies.

2. Some governments may want to avoid **overspecialization.**
3. **Rate of exchange** may not lie between the opportunity cost ratios of countries
4. Other governments may impose trade restrictions like **tariffs and quotas** which may modify or offset the gains from comparative advantage.
5. Comparative advantage theory assumes that resources are homogenous all over the country which is not true. No country receives constant returns, has **homogenous resources** or perfectly mobile resources. Productivity of resources (output per unit of input per unit of time), in reality, is varying over the country. Somewhere there is agricultural fertile land, at other places it in barren and some of it is covered by urban areas. Similarly productivity of labor and capital varies within a country. As resources vary, opportunity cost of production also vary as shown by the real PPC's which is curved outwards.



In the presence of non-homogenous resources and existence of outward bending PPCs, according to law of increasing opportunity cost, a country may lose its comparative advantage far before the complete specialization as opportunity cost will increase with increase in specialization in one product.

6. The distribution of resources, technology, and product distinctiveness among nations, however is not forever fixed. As national economies evolve, the size and quality of their labor forces may change, the volume and composition of their capital stocks may shift, new technologies may develop, and even the quality of land and quality of natural resources may be altered. As such changes occur; the relative efficiency with which a nation can produce specific goods will also change. Countries do not always adapt to **changes in comparative advantage**. For example, over time a country may continue to produce steel despite another country being relatively more efficient at producing it. In such a case, those involved in steel production in the country that has lost the comparative advantage may try to persuade their government to impose trade restrictions on steel imported from the country that has now gained the comparative advantage.
7. Countries may not trade according to comparative advantage due to **political and religious motives.**
8. Membership of **trading blocs** like SAFTA (South Asian Free Trade Association) may have different trade pattern than theory of comparative advantage.
9. **Changes in currency exchange rates**, i.e., appreciation or depreciation also affect trade but comparative advantage is based on barter trade

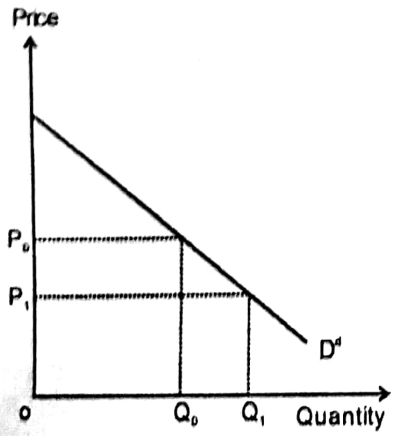
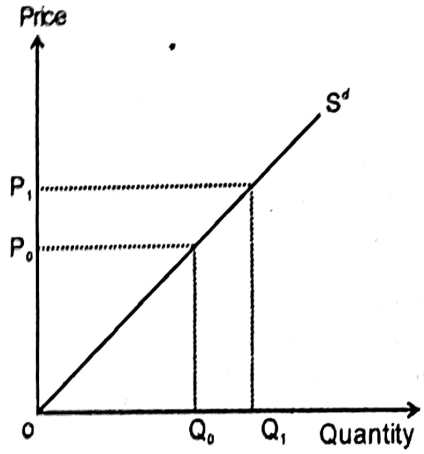
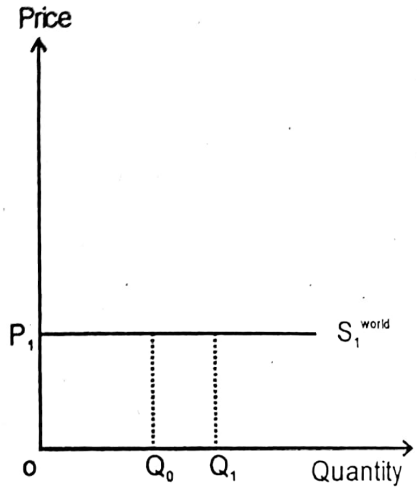
Hence pattern of trade of any country explained by the principle of comparative advantage satisfactory to some extent but there are other factors and assumptions of theory that limit its application in real world.

Protectionism

Protectionism refers to a trade policy which restricts imports and promotes domestic industries in order to give competitive advantage to domestic industry of an economy.

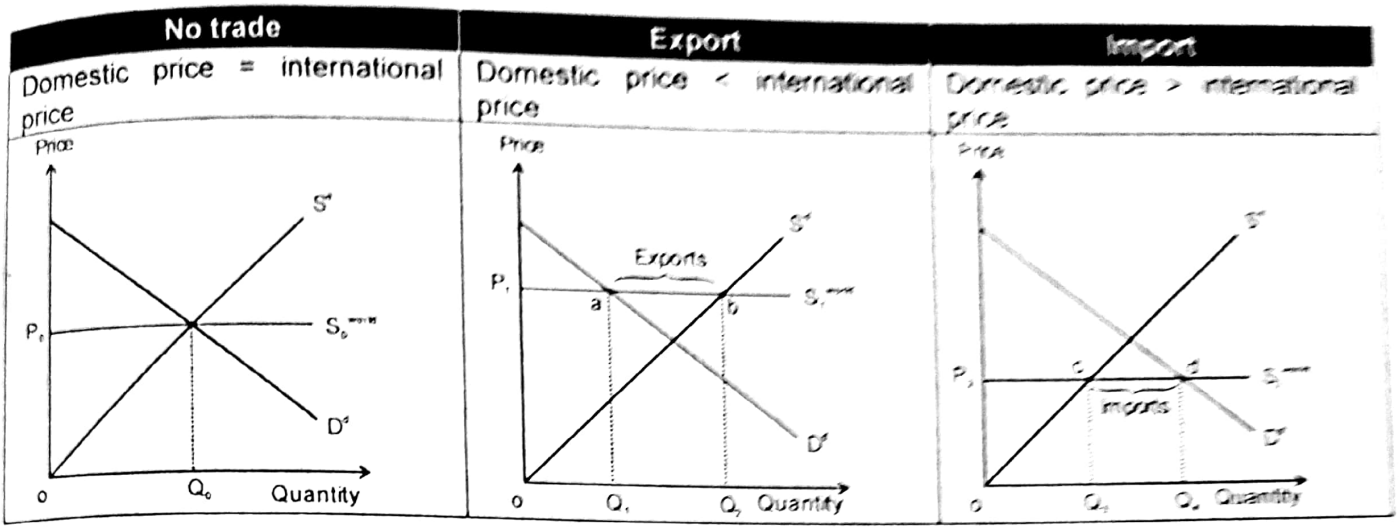
Methods of protection and their impact

Every country operates some form of restriction on its trade with the rest of the world. There are many methods that a government can use to protect its domestic industries. There are some concepts we need to understand first before we study the impact of protectionism in an economy.

Domestic Demand (D^d)	Domestic supply (S^d)	World supply (S^{world})
Means total demand of a product by local residents for both local and imported goods. Ceteris paribus, higher will be demanded at lower price and vice versa as shown in the diagram below:	Means total supply of a product by local firms in both local and international markets. With the ceteris paribus, higher price means greater profitability of domestic firms and therefore more supply leading to upward sloping supply curve as shown in the diagram below:	Means supply of a product by both local and foreign firms in international market. A single country will supply only a fraction of world market and therefore will not be able to create any shortage or surplus in international market. This will a country price taker and world supply for the country will be perfectly elastic as shown in the figure below:
		
		However, this may not be the case if country supplies a significant share of world market, e.g., KSA or OPEC supplying oil in world market.

Law of one price: With the absence of transport costs and protectionism between the countries, one product will have one price expressed in same currency at all locations.

No trade, export and Import: Whether a country will trade, export or import depends upon the international price relative to domestic price.
The following table and diagrams can also explain this:



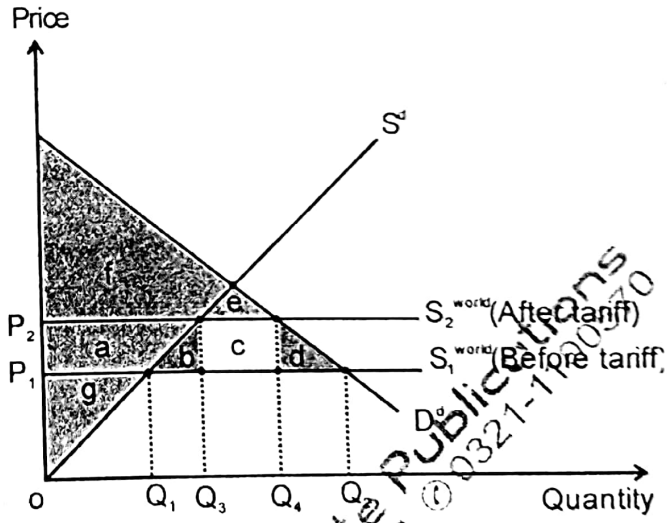
1. Tariffs

Tariffs are the best known method of protection and are sometimes referred to as customs duties. Tariffs are taxes usually on imports but may also be imposed on exports.

Tariff on imports	Tariff on exports
– to raise revenue – to discourage consumption of imports.	– to raise revenue – to increase supply of the product on the domestic market.

Tariffs may be **ad valorem**, i.e., the percentage of price of the imports, or **specific**, i.e., a tax per unit of weight or physical quantity. Tariffs, also called custom duties, act exactly the same way as a tax by artificially raising the price of foreign products as they enter the country. Instant effects of tariffs would be the rise in the price of imports which will reduce volume of imports, increase in government revenue and an eventual increase in domestic production. The effects of tariffs can also be analyzed through a diagram as shown below:

	Free trade	After tariff
Domestic supply (S^d)	S^d	S^d
World supply (S^w)	S_1^{world}	S_2^{world}
Domestic demand	D^d	D^d
Price	OP_1	OP_2
Domestic production	OQ_1	OQ_3
Domestic consumption	OQ_2	OQ_4
Imports quantity	Q_1Q_2	Q_3Q_4
Per unit tariff	–	P_1P_2
Total tariff revenue	–	c
Domestic Consumer's surplus	A+b+c+d+e+f	e+f
Domestic Producer's surplus	g	g+a
Dead weight loss	–	b+d



The figure above shows the effect of a specific tariff. Domestic demand is shown by the domestic demand curve (D^d) and the domestic supply curve (S^d). When the country engages in free trade the price is set

where domestic demand equals the world supply (S_1^{world}). In this situation, domestic consumers purchase OQ_2 quantity at a price of OP_1. Quantity OQ_1 is supplied by domestic producers and Q_1Q_2 quantity is imported.

The imposition of a tariff shifts the world supply to S_2^{world}. This raises the price to OP_2 and reduces the domestic consumption to OQ_3. However; domestic production increases from OQ_1 to OQ_3 and imports fall from Q_1Q_2 to Q_3Q_4.

2. Quotas

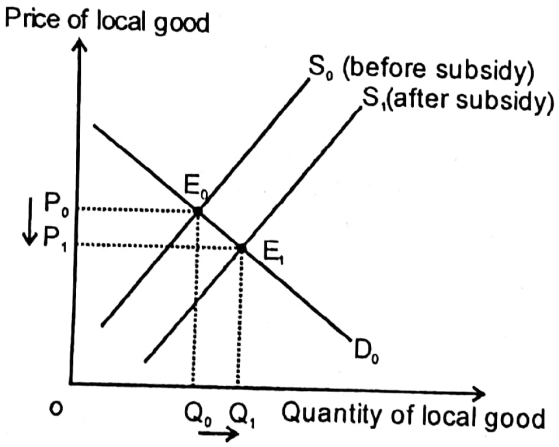
Quotas are limits on imports. The limits are usually imposed on the quantity of imports but are also sometimes imposed on the value of imports that can be purchased each year. Restricting the supply of imports is likely to drive up their price. So, as with tariffs, quotas are likely to disadvantage consumers as they result in them paying higher prices and consuming fewer products. Unlike tariffs, quotas usually do not raise revenue for the government. In this case, it is the sellers of the imports that will receive the extra amount per unit paid by consumers. In some cases, however, licenses are sold to foreign firms to sell some allocation of the quota.

3. Exchange control

Instead of limiting the imports directly, a government may place limits on the amount of foreign exchange that can be purchased in order to buy imports, travel abroad or invest abroad. This is known as exchange control.

4. Subsidies

Subsidies may be given to both exporters and to those domestic firms that compete with imports. In both cases domestic firms will, in effect, experience a fall in costs. This will encourage them to increase their output from OQ_0 to OQ_1 and lower their price OP_0 to OP_1 as shown in the diagram below. This may enable them to capture more of the markets at home and abroad.



The losers will be the foreign firms and domestic taxpayers. Domestic producers will gain. Consumers will also benefit in the short run. In the long run, however, they may lose if the more efficient foreign firms are driven out of business and the subsidized domestic firms raise their prices.

5. Embargoes

An embargo is a complete ban either on the imports of a particular product or on trade with a particular country. A government may want to ban the import of a product that it regards as harmful, e.g., non-prescription drugs or weapons. A ban on trade with a particular country may arise from political disputes.

6. Voluntary export restraints (VER)

A voluntary export restraint is an agreement between two countries where the government of the exporting country agrees to restrict the volume of its exports of a certain good or services. It may do this

to prevent tariffs or quotas being imposed on its product. Japan has entered into a number of VERs with EU members and with the USA in the export of its cars.

7. Economic and administrative burdens ('red tape')

Red tape means making import process more complex and slow by bureaucratic delay tactics. A government may seek to discourage imports by requiring importers to fill out **time consuming forms.** It may also set artificially high **product or health standards** to restrict foreign competition. Such measures restrict consumer choice.

8. Keeping the exchange rate below its market value

A government may manipulate the country's exchange rate in order to give its producers a competitive advantage. This may lead to other governments lowering their exchange rates.

9. Government preferential purchase policy

A government may have a policy of placing orders with domestic producers in preference to importers even if there goods and services are cheaper or of a better quality. In case the demand for imports is likely to fall

10. Patriotic campaigns

Governments can seek to switch consumption from imports to domestic products by running campaigns extolling the virtues of buying home produced goods and services and emphasizing the quality.

Effectiveness of protectionism:

- A tariff will be more effective in **raising revenue** if demand for imports is price **inelastic** whereas it will be more effective in **protecting the domestic industry** if demand for imports is price **elastic**.
- There is the possibility that the imposition of a tariff **may not make** domestic products more **price competitive**. This would be the case if the price of the import plus the tariff is still below the domestic price or if firms selling the imports absorb the tariff and do not raise their prices.
- If the UK imposes restrictions on, say, Japan, then Japan may **retaliate** and impose restrictions on the UK. The increased use of tariffs and other restrictions can lead to a **trade war**, with each country cutting back on imports from other countries. In the end, everyone loses.
- Countries may not be able to use protectionism measures against members of a **trading bloc.**
- Protectionism may not be effective if domestic firms do **not have a capacity to supply** enough for domestic consumption.

The arguments in favor of free trade and against protectionism

Free international trade is the exchange of goods and services across national borders without any government restrictions. When free trade exists:

- firms are free to export and import what they want in the quantities they want
- no taxes or limits are imposed on exports and imports
- no subsidies are given to distort cost advantages
- there is no unnecessary paperwork involved.

Benefits of free international include:

1. There is an increase in the **world output** and gains for the individual country as a result of specialization and trade. This has been illustrated earlier whereby even though a country could produce all commodities more cheaply than other, it would still gain as long as comparative advantage differs.

2. There is **wider consumer choice**. As a result of international trade, there is a greater variety of goods and services to choose from. Consumers can choose commodities that cannot be produced locally and those goods which are too expensive to be produced locally.

3. International trade generates **income and brings about higher economic growth** and hence, a higher standard of living. The expansion of output for export also creates **employment**.

4. International trade **promotes level and understanding through cultural exchanges**, visits and consultations such as trade fairs. This improves relationship among trading partners of the world. Examples include ASEAN, NAFTA (North American Free Trade Association), EU etc. Political differences could be minimized and compromise can be easily made among friends.

5. International trade brings about the sharing of **new knowledge and information**. New technology is acquired. Research and development programs from developed countries through trade.

6. With international trade, there will be keen competition which forces firms to be **cost effective and efficient**. They will have to produce at lower cost and they must also improve on their production techniques as well as the quality of their products. Inefficient firms will be forced to close down.

7. International trade can also solve **the problem of indebtedness**. When countries borrow from banks, other governments or from international institutions (IMF and World Bank), they are in debt. Through international trade, goods and services are imported thereby earning foreign exchange. Foreign reserves will increase and these additional reserves can be used to pay debts.

8. International trade will **prevent the formation of monopoly** in the country. Through international trade, foreign goods and services come into the country and this will create competition. Increased competition that may arise from free trade can put **pressure** on firms to keep their **prices** and **costs** down and raise the **quality** of their products. As a result, **consumers** may enjoy lower prices and better products than would have been the case in the absence of free trade.

9. **Firms** may also be able to buy **raw materials and capital goods at lower prices**. Having a global market to sell to may enable firms to produce a higher output and so take greater advantage of **economies of scale**.

10. **Efficient allocation of resources:** Free trade permits countries that have, for instance, fertile land and the appropriate climate to concentrate on growing oranges while other countries that have the financial institutions and well-educated workers to concentrate on banking. Countries will able to concentrate on producing those products that they have a comparative advantage in.

The arguments in favor of protectionism and against free trade

Despite the potential advantages of free trade, most countries impose import restrictions. There are a number of arguments that may be put forward for doing this.

1. **To protect infant industries:** Infant industries are new industries that have a low output and a high average cost. Firms in a new industry may find it difficult to survive when faced with competition from more established, larger foreign firms. This maybe because the foreign firms are taking advantage of economies of scale and benefiting from their names being well-known.

   Protecting a new infant industry may give it time to grow and so benefit from economies of scale and to gain a global reputation. If the infant (also called **sunrise**) industry has the potential to develop into an efficient industry in line with **comparative advantage**, then using trade restrictions may be justified. It is, however, difficult to identify which new industries will develop and gain a comparative advantage. It is, for example, very difficult to estimate the long-run average cost curves of firms in the industry. There is also the risk that an infant industry **may become dependent on protection.**

Knowing that rival foreign products are being made artificially expensive, it may not feel any pressure to lower its costs.

2. **To protect declining industries:** If **declining** (also called **sunset**) industries, which have lost their comparative advantage, go out of business quickly there may be a sudden and large rise in unemployment. If the industry is granted protection and that protection is gradually removed, unemployment might be avoided. As the industry reduces its output, some workers may retire and some leave for jobs in other industries.

   There is again, however, a risk that the industry may resist reductions in the protection it receives. This can lead to considerable **inefficiency**. For example, a country's steel industry may have lost its comparative advantage while its car industry does have a comparative advantage. If the government imposes tariffs on steel, it will disadvantage its car industry, which will now have to buy more expensive steel from domestic producers. This will raise the car industry's costs of production and so may lose it sales at home and abroad.

3. **To protect strategic industries:** Some governments seek to protect industries that produce products they regard as strategic, such as **weapons**, **fuel** and **food**. They may not want to be dependent on foreign supplies of these products. For example, a government may be worried that firms and households in its country would be seriously disadvantaged if fuel was cut off due to a trade dispute or a military conflict. As a result it may protect some home industries even if they are relatively inefficient.

4. **To prevent dumping:** There may be an economic justification for imposing trade restrictions in the case of dumping as this practice may he regarded as unfair competition. Dumping involves selling products at below their cost price.

   In the **short run,** home consumers will benefit from dumping as they will **enjoy lower prices**. In **the long run**, however, if the foreign firms drive out the domestic firms, they may gain a **monopoly** and then raise their prices. Indeed, foreign firms may engage in dumping with the specific intention of gaining control of a market in another country by destroying existing competition and preventing new domestic firms from becoming established.

   Foreign firms may be able to engage in dumping by covering losses with previous supernormal profits, by charging high prices in their home markets or because they receive subsidies from their governments.

   In practice, it can be difficult to determine if dumping is taking place or whether the foreign firms have gained a comparative advantage.

5. **To reduce reliance on goods with little dynamic potential:** Many developing countries have traditionally exported primary products: food stuffs and raw-materials. The world demand for these, however, is fairly income inelastic and grows relatively slowly. In such cases, free trade is not an engine of growth. Instead, if it encourages countries' economies to become locked in to a pattern of primary production, it may prevent them from expanding in sectors like manufacturing which have a higher income elasticity of demand. There may thus be a valid argument for protecting or promoting manufacturing industry.

6. **To improve the terms of trade:** If a country purchases a large proportion of another country or countries' exports of a product, it may be able to force down its price. By imposing trade restrictions, it can lower demand and as its demand is significant this may lead to a lower price. This will improve the country's terms of trade and allow it to purchase more imports for the same quantity of exports.

   Similarly, if a country accounts for a significant proportion of the world's supply of a product, quotas on its exports may improve its terms of trade. Restricting the supply of exports will drive up their price and so increase the purchasing power of exports.

Of course, such action distorts trade and is likely to reduce global output. It may also provoke retaliation.

7. **To improve the balance of payments:** A government may impose trade restrictions in order to improve its current account position. For instance, imposing tariffs may encourage consumers to switch from buying imports to buying domestic products.

   This again, however, may provoke retaliation. If foreign governments do retaliate by imposing their own trade restrictions then, while the country's imports may fall, so might its exports. International trade would decline and again global output would fall. In addition, if the country's products are not internationally competitive because of strategic problems, trade restrictions would only provide a short-term boost to the current account.

8. **To prevent the imports of demerit goods:** A country may want to ban or severely curtail the importation of things such as drugs, pornographic literature cigarettes and alcohol.

9. **To provide protection from cheap labor:** It is sometimes argued that trade restrictions should be imposed on products from countries where wages are very low. The view is that, in order to compete, wages and so living standards in the country would have to fall. This is not a very strong argument. Low wages do not always mean that a country will be able to produce products more cheaply as labor productivity may be low and so labor costs may actually be relatively high. If low wages are actually linked to low costs, it may indicate that the countries have a comparative advantage.

   There may be moral arguments for imposing trade restrictions on products produced using slave or child labor. Even here, however, other approaches may be more appropriate as trade restrictions may drive down wages even further in relatively poor countries.

10. **To raise revenue:** Tariffs may be used to raise revenue. This will be successful if demand for imports is inelastic.

11. **To persuade another government to reduce its trade protection:** A government may also engage in trade restrictions to try to persuade another government to reduce its trade protection. By retaliating against, for instance, another government imposing a quota on its exports, it may persuade the other government to remove its quota. There is, however, a risk that a trade war will develop.

12. **To avoid overspecialization:** A government may seek to protect a range of industries to avoid the risks attached to overspecialization. A highly specialized economy – Zambia with copper, Cuba with sugar – will be highly susceptible to world market fluctuations. Greater diversity and greater self-sufficiency, although may be leading to less efficiency, can reduce these risks.

Trade blocs or international economic integration

International economic integration or trade bloc means regional groupings of countries that have preferential trade agreements between member countries.

	Free Trade Area	Custom Union	Economic & Monetary Union	Full economic union
Free trade among members	✓	✓	✓	✓
Common external tariff with non-members	✗	✓	✓	✓
Common currency	✗	✗	✓	✓
Common monetary & exchange rate policy	✗	✗	✓	✓
Free mobility of resources	✗	✗	✓	✓
Common fiscal policy	✗	✗	✗	✓
Examples	North American Free Trade Agreement (NAFTA). This consists of the USA, Canada and Mexico.	The world's oldest customs union is the Southern Africa Customs Union (**SACU**). Its members include Botswana, Lesotho, Namibia, South Africa and Swaziland.	1. Mercosur is a South American trading bloc which has Argentina, Brazil, Paraguay, Uruguay and Venezuela as full members. 2. The European Union (EU)	In effect, the different economies become one economy. This occurred when the 13 original states formed the United States of America.

Monetary union: involves economies operating the same currency, as the members of the euro area do.
Economic union: a trade bloc where there is free trade between member countries, a common external tariff and some common economic policies, which may include a common currency.

Name	Membership
Association of Southeast Asian Nations (ASEAN)	Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam
Caribbean Community and Common Market (CARICOM)	Anguilla, Antigua and Barbuda, Bahamas, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago
East African Community (EAC)	Kenya, Rwanda, Tanzania and Uganda
Economic Community of West African States (ECOWAS)	Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
GCC (Gulf Cooperation Council)	Kuwait, Bahrain, Oman, Qatar, Saudi Arabia, United Arab Emirates

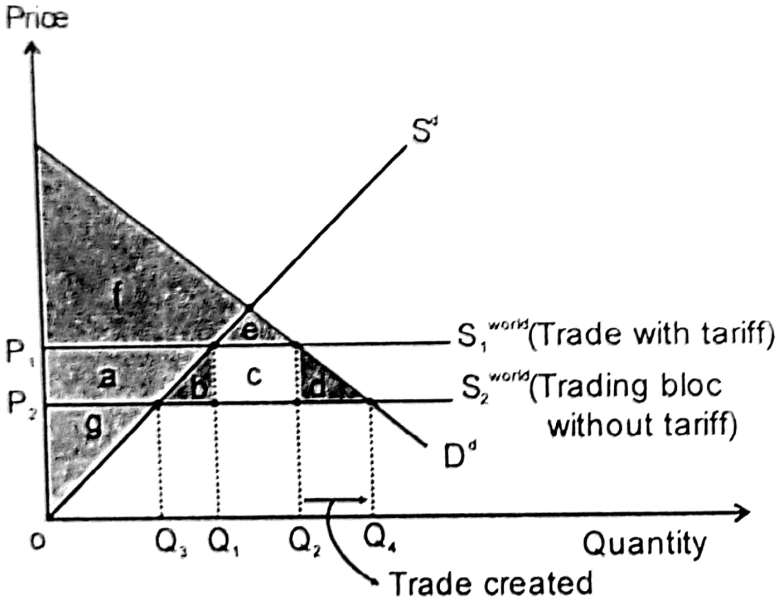
Consequences of formation of trading blocs:

1. Trade creation

Trade creation occurs where high-cost domestic production is replaced by more efficiently produced imports from within the trading bloc.

Membership of a trade bloc may give rise to trade creation. This occurs when the removal of tariffs allows members to specialize in those products in which they have a comparative advantage. More expensive domestic products can be replaced by imports from another member country that are lower in price. The efficient firms within the trade bloc will be able to sell to a larger market and this may enable them to lower prices even further because they will be able to take greater advantage of economies of scale.

Figure below shows the effect of trade creation. Before joining the trade bloc, the price of the product in the country is OP_1 and the quantity consumed is OQ_2. Of this amount, OQ_1 is supplied by domestic producers and Q_1Q_2 amount is imported. When the country joins the trade bloc, it can import the product without paying the tariff. This pushes down the price to OP_2 and the amount consumed increases to OQ_4. Consumers clearly gain from the lower price and the greater quantity consumed.



	Before trade creation	After trade creation
Domestic supply (S^d)	S^d	S^d
World supply (S^w)	S_1^{world}	S_2^{world}
Domestic demand	D^d	D^d
Price	OP_1	OP_2
Domestic production	OQ_1	OQ_3
Domestic consumption	OQ_2	OQ_4
Imports quantity	Q_1Q_2	Q_3Q_4
Per unit tariff	P_1P_2	–
Total tariff revenue	c	–
Domestic Consumer's surplus	e+f	A+b+c+d+e+f
Domestic Producer's surplus	g+a	g
Welfare gain	–	b+d
Trade created	–	Q_2Q_4

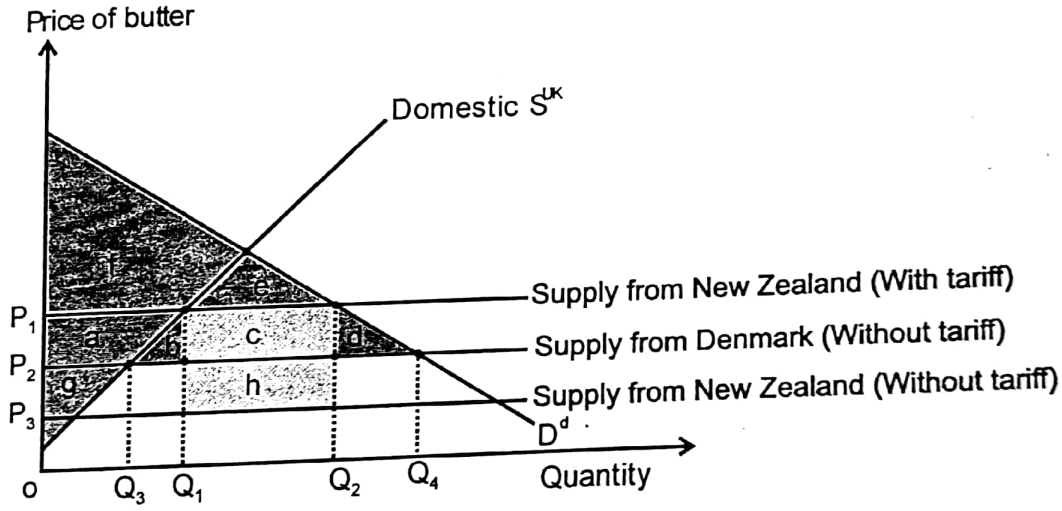
Domestic producers lose as their sales fall and they gain a lower price. They may, however, be shifting resources to making products that have now become more price competitive relative to those of member countries because of the removal of other tariffs, indeed, trade creation permits both imports to be purchased more cheaply but also additional exports to be sold as other members lose their tariff protection. The domestic government will lose out on tariff revenue but there is nevertheless a welfare gain. The lower price increases consumer surplus by a, b, c and d amount. Producer surplus falls by an amount of **a** and tariff revenue by an amount of **c**, giving a net gain of an amount equals to **b** and **d**.

2. Trade diversion

Trade diversion means where trade with a low-cost country outside a customs union is influenced by higher-cost products supplied from within.

Trade diversion occurs when membership of a trade bloc results in a country buying imports from a less efficient country within the trade bloc rather than from a more efficient country outside. This results in a less efficient allocation of resources. Efficient countries outside the trade bloc may lose as they are not now able to trade on equal terms. A country joining the trade bloc may also lose.

Figure below shows that originally the country (UK) buys a product (butter) from the most efficient country (New Zealand) and places a tariff on imports of the product.



	When trading with New Zealand	After trade with Denmark
Domestic supply (S^d)	S^d	S^d
Price	OP_1	OP_2
Domestic production	OQ_1	OQ_3
Domestic consumption	OQ_2	OQ_4
Imports quantity	Q_1Q_2	Q_3Q_4
Per unit tariff	P_1P_3	
Total tariff revenue	c + h	
Domestic Consumer's surplus	e + f	a + b + c + d + e + f
Domestic Producer's surplus	g + a	g
Welfare gain (in consumer surplus)	–	b + d
Welfare loss	–	H
Net welfare gain or loss	–	(b + d) – h

Before the UK joined the EU it had a common tariff on all butter imports, and bought from low cost New Zealand (at price P_1, including the tariff). The price paid is P_1, the quantity consumed is Q_2 and the tax revenue earned is c + h. When the country joins the trade bloc, trade is diverted to a member country like Denmark.

After it joins the EU it can benefit from tariff free imports from Denmark and other EU producers. The price to consumers falls to P_2 and the quantity consumed rises to Q_4. It gains consumer surplus of a + b + c + and UK dairy farmers lose producer surplus of a; the loss of tariff revenue from imports from New Zealand is c + h.

There will be a net loss from trade diversion in joining the EU if b + d (the net gain in consumer surplus) is less than h (the loss of tariff revenue from New Zealand imports). A net gain from trade diversion would arise
if b + d is greater than h.

PAST PAPERS QUESTION

Topic: Theory of Absolute & Comparative Advantage

(June 2016/P23/Q4/a)
Use production possibility diagrams to explain how specialisation and international trade can improve the standard of living of consumers in a country. [8]

(Nov 2015/P22/Q4/a)
In a two-country world, one country is more efficient at producing one product and the other country is more efficient at producing another product. Explain why specialisation and trade usually benefit both countries. [8]

(Nov 2015/P22/Q4/b)
Suppose one country is more efficient at producing both products. Discuss whether it is the case that specialisation and trade will always benefit both countries. [12]

(Nov 2015/P21/Q4/a)
Assume, in a two-country, two-product world, that one economy is more efficient at producing both products.
Explain how the efficient economy can benefit from specialisation and trade with the less efficient economy. [8]

(Nov 2014/P23/Q4/a)
Explain how comparative advantage shows that specialisation and international trade can improve the welfare of consumers in an economy.

(June 2013/P21/Q4/a)
In a two country world one country is more efficient at producing one product and the other country is more efficient at producing another product. Explain why specialisation and trade usually benefit both countries. [8]

(June 2013/P21/Q4/b)
Suppose one country were more efficient at producing both products. Discuss whether it is the case that specialisation and trade will always benefit both countries. [12]

(Nov 2012/P21/Q4/a)
Use economic analysis to explain the benefits of international trade. [8]

(Nov 2011/P21/Q3/a)
Explain what determines a country's comparative advantage in production. [8]

(Nov 2008/P2/Q4/a)
How might opportunity cost help to explain the pattern of international trade? [8]

(Nov 2006/Q3/a)
Explain the difference between absolute and comparative advantage. [10]

(June 2001/a)
Explain how a policy of protecting a domestic market denies an economy the full benefits of specialisation. [12]

(Nov 2000)
(a) Explain the theory of comparative advantage.
(b) Discuss how the concepts of opportunity cost may be useful in explaining why countries trade with each other. [15]

(Nov 1998)
Do you agree that the policy of protecting a domestic market denies an economy the benefits of specialisation and should, therefore, not be adopted? [25]

(Nov 1997)
Do you agree with the view that specialization and competition should be extended to all areas of the economy, both internal and international? [25]

(Nov 1996/b)
Trade union leaders in some developed countries have claimed that if tariffs are reduced labor-intensive industrials will concentrate on developing countries and their members will be unemployed. Does this claim have any substance to it? [15]

(June 1994/a)
Explain why there are gains from trade. [10]

(Nov 1993/a)
Outline the theory of comparative advantages as applied to international trade. [13]

Topic: Limitations of Theory of Absolute & Comparative Advantage

(June 2011/P23/Q4/a)
Explain the limitations of the theory of comparative advantage in accounting for a country's pattern of trade. [8]

(June 2010/22/Q2/b)
Discuss how well comparative advantage explains the pattern of international trade. [12]

(Nov 2009/21/Q3/b)
Discuss, with examples, how far the global distribution of factors of production determines what a country imports and exports. [12]

(Nov 2006/Q3/b)
Discuss whether the principle of comparative advantage is a satisfactory explanation of the trade pattern of an economy with which you are familiar. [10]

(Nov 2000/b)
To what extent does this theory explain the pattern of trade between Singapore and the rest of the world? [12]

(June 1994/b)
How far in reality might multilateral free trade be beneficial for either a developed or a developing country? [8]

Topic: Obstacles of International Trade

(Nov 2009/21/Q3/a)
Explain why it is usually more difficult to trade internationally than domestically. [8]

Topic: Meaning & Changes in Terms of Trade

(June 2016/P21/Q4/a)
Explain what might cause a favourable movement in an economy's terms of trade. [8]

(June 2015/P22/Q4/a)
Explain how a declining exchange rate and a high rate of inflation in an economy might affect that economy's terms of trade. [8]

(Nov 2012/P23/Q3/a)
Explain the factors that might cause a fall in a country's terms of trade. [8]

(Nov 2011/P22/Q4/a)
Explain what might cause an improvement in a country's terms of trade. [8]

(Nov 2003/a)
Explain what may cause a country's terms of trade to change. [8]

(Nov 1995/a)
Explain what is meant by the terms of trade and why it is an important economic statistic. [12]

(Nov 1990/a)
How would [illegible] [8]

(Nov 1990/b)
What may cause changes in your country's terms of trade? [8]

Topic: Effects of Changes in Terms of Trade

(June 2016/P21/Q4/b)
Discuss whether overall a favourable movement in an economy's terms of trade would be likely to have positive or negative effects on the economy. [12]

(June 2015/P22/Q4/b)
Discuss the advantages and disadvantages to an economy of a fall in that economy's terms of trade and consider whether the overall effects are likely to be beneficial. [12]

(June 2015/P21/Q4/b)
Explain how a significant rise in the general price level will affect the current account of the balance of payments of an economy and discuss whether this is likely to turn a deficit into a surplus. [12]

(Nov 2014/P23/Q4/b)
Discuss whether an economy would benefit more from an unfavorable rather than a favorable movement in its terms of trade. [8]
Explain the significance of a rise in the terms of trade for a country.

(Nov 2011/P22/Q4/a)
Discuss whether a country should be more concerned by a fall in its terms of trade or a fall in its domestic price level. [12]

(Nov 2009/22/Q4/b)
Discuss whether an improvement in a country's terms of trade always works to its benefit. [12]

(Nov 2003/b)
Describe whether a worsening in a country's terms of trade will cause a worsening of its balance of trade.

(Nov 1995/b)
What are the possible causes and consequences of a deterioration in the terms of trade of a developing country producing primary products? [13]

(Nov 1990/c)
How may changes in the terms of trade affect living standards in your country? [8]

Topic: Methods of Protectionism

(Specimen Paper 2016/P2/Q4/a)
Explain the meaning of the term 'protection' in the context of international trade and describe two methods of protection used by governments. [8]

(Nov 2014/P21/Q4/a)
Explain how tariffs and an undervalued exchange rate can operate to protect a domestic market from foreign competition. [8]

(June 2013/P22/Q4/a)
Explain the meaning of the term 'protection' in the context of international trade and describe two methods of protection used by governments. [8]

(June 2002/a)
Explain the method that a government might use to protect its domestic industries from foreign competition. [8]

(June 2000/a)
How can a domestic market be protected from international competition? [10]

(June 1992/a)
How can a domestic market be protected? [7]

(Nov 1991/a)
How may a country try to restrict imports? [8]

Topic: Advantages & Disadvantages of Protectionism

(June 2016/P23/Q4/b)
Discuss whether protection of domestic industries can ever be justified, given the benefits o specialisation and trade. [12

(Specimen Paper 2016/P2/Q4/b)
Discuss, with examples, how international trade protection may affect consumers and producers in ar economy and to what extent protection can be justified. [12

(Nov 2015/P21/Q4/b)
Evaluate the economic reasons that the less efficient economy might offer to justify protection of its industries. [12

(Nov 2014/P21/Q4/b)
Discuss whether protectionism disadvantages most people in the protected country. [12

(June 2013/P22/Q4/b)
Discuss, with examples, how international trade protection may affect consumers and producers in ar economy and whether on balance protection can be justified. [12

(Nov 2012/P23/Q3/b)
Discuss the view that unrestricted free trade has as many disadvantages as advantages. [12]

(Nov 2012/P21/4/b)
Discuss the possible economic effects of a global ban on all forms of trade protection. [12]

(June 2012/P21/Q4/b)
Discuss whether restrictions on international trade can ever be justified. [12]

(June 2011/P23/Q4/b)
Discuss whether the introduction of trade barriers against imports can always be justified. [12]

(Nov 2005/Q3/b)
Discuss whether free international trade in goods should be encouraged. [12]

(June 2002/b)
Discuss whether trade protection can ever be justified. [12]

(June 2001/b)
Discuss whether such protection may be justified. [13]

(June 2000/b)
Do you think that domestic market protection which benefits only a few makes most people in the country worse off? [15]

(Nov 1999)
The government of Namibia has made its policy one of economic diversification, moving away from traditional specialization. It is now encouraging manufacturing, tourism, shipping and energy.
(a)Explain the terms specialization and diversification. [10]
(b)Discuss whether you consider the policy of the Namibian government to be the best interests of the country. [15]

(June 1999)
May countries have both unemployment and a deficit on their balance of payments. Both of these problems can be cured if the countries produce goods at home whenever they can do so rather than purchase them from abroad. Explain this view and examine its economic justification. [25]

(June 1997)
In 1994 the USA banned American companies from trading with Iran.
Discuss the likely impact on each economy when a country bans another country. [25]

(Nov 1994)
Barriers to trade between countries result in inefficiency just as do barriers to entry in an industry.
Explain this statement and comment upon the likely benefits if both types of barrier were removed. [25]

(June 1993)
'The benefits of tariffs are all short-term, the drawbacks of tariffs are all long-term.' Elaborate and discuss this assertion. [25]

(June 1992)
(b) If a country had a protected domestic market what will be the likely effect on its balance of trade? [8]
(c) Do you think that domestic market protection is to the disadvantage of most people in the country? [10]

(Nov 1991/b)
Explain and evaluate the economic reasons for trying to import. [17]

Topic: International Economic Integration

(Nov 2012/P21/4/a)
Explain the different types of international economic integration. [8]

(June 2010/P23/Q4/a)
Explain
(i) the difference between trade creation and trade diversion [4]

(Nov 2009/22/Q4/a)
Compare the aims and features of a free trade area with those of an economic union. [8]

(Nov 2008/Q4/b)
Discuss whether the formation of regional trading groups, such as ASEAN and NAFTA, is desirable. [12]

UNIT 4

Exchange Rate

AS Level
Macroeconomics
Notes Book 2

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Syllabus 2016 – 18

e. Exchange rates
- definitions and measurement of exchange rates
- nominal, real, trade-weighted exchange rates

f. Exchange rate systems
- the determination of exchange rates in floating, fixed, managed float

g. Changes and effects
- the factors underlying changes in exchange rates
- the effects of changing exchange rates on the domestic and external economy using AD, Marshall-Lerner and J curve analysis
- depreciation/appreciation
- devaluation/revaluation

Unit 4 Exchange Rate

Definitions and measurement of exchange rates

Nominal exchange rate:

- The nominal foreign exchange rate is the price of one currency in terms of another currency
- It is the rate at which domestic currency is exchanged with other currencies in foreign exchange market.
- It is the amount of foreign currency which can be purchased by one unit of domestic currency in foreign exchange market
- It is sometimes referred as a **bilateral exchange rate**.
- Currencies are bought and sold on the **foreign exchange market**. This market does not exist in a single location but is made up of financial institutions that buy and sell foreign currency on behalf of private and business customers

Example
USA $1 = Pak Rs. 105, i.e., the exchange of USA $ in terms of Pakistani Rs.
Pak Rs. 1 = USA $ 1/105, i.e., the exchange rate of Pakistani rupees in terms of US dollars.

Trade-weighted exchange rate:

A trade weighted exchange rate is a measure, in index form, of the value of a currency against a basket of currencies. These are weighted according to the relative importance of the countries in the country's trade. A trade weighted exchange rate is also known as a **multinational exchange rate**.

Real effective exchange rate:

Real effective exchange rate is a currency's value in terms of its real purchasing power.

A real effective exchange rate takes price changes as well as exchange rate changes into account to assess changes in the competitiveness of a country's products in global markets. A real exchange rate shows the price of domestic products in terms of foreign products:

$$\text{The real exchange rate} = \frac{\text{nominal exchange rate x domestic price index}}{\text{foreign exchange rate}}$$

The real exchange rate may rise as a result of an appreciation or an increase in the country's relative inflation rate.

Exchange rate systems

External value of currency = exchange rate
Internal value of currency = price level

A system by which external value of domestic currency (exchange rate) is determined is known as exchange rate system.

External value of a domestic currency can be determined by:

- Market forces of demand and supply only, i.e., Free Float Exchange Rate System.
- The central bank keeps it fixed using foreign reserves, i.e., Fixed Exchange Rate System.
- Joint working of market forces and central bank's intervention at different time periods, i.e., Dirty Floating or Managed Floating Exchange Rate System.

Free Floating Exchange Rate System

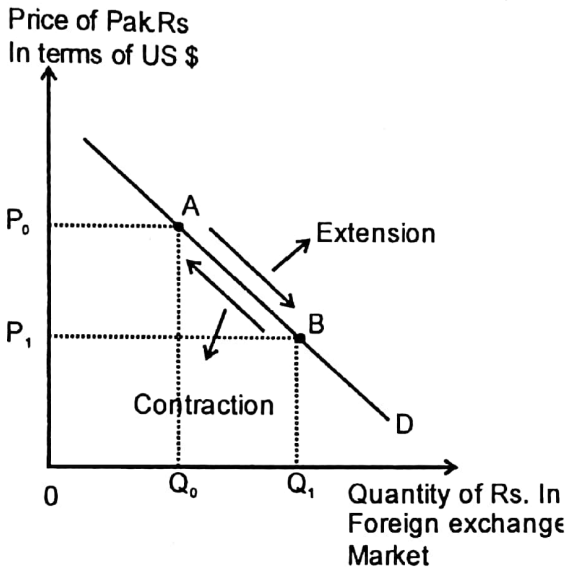
The exchange rate (the price of one currency), like the price of all other commodities, is determined by the forces of demand and supply.

Demand for Domestic Currency in Foreign Exchange Market

Like other goods and services, demand for domestic currency in foreign exchange market has a negative relationship with its price (i.e., exchange rate here). If we assume:

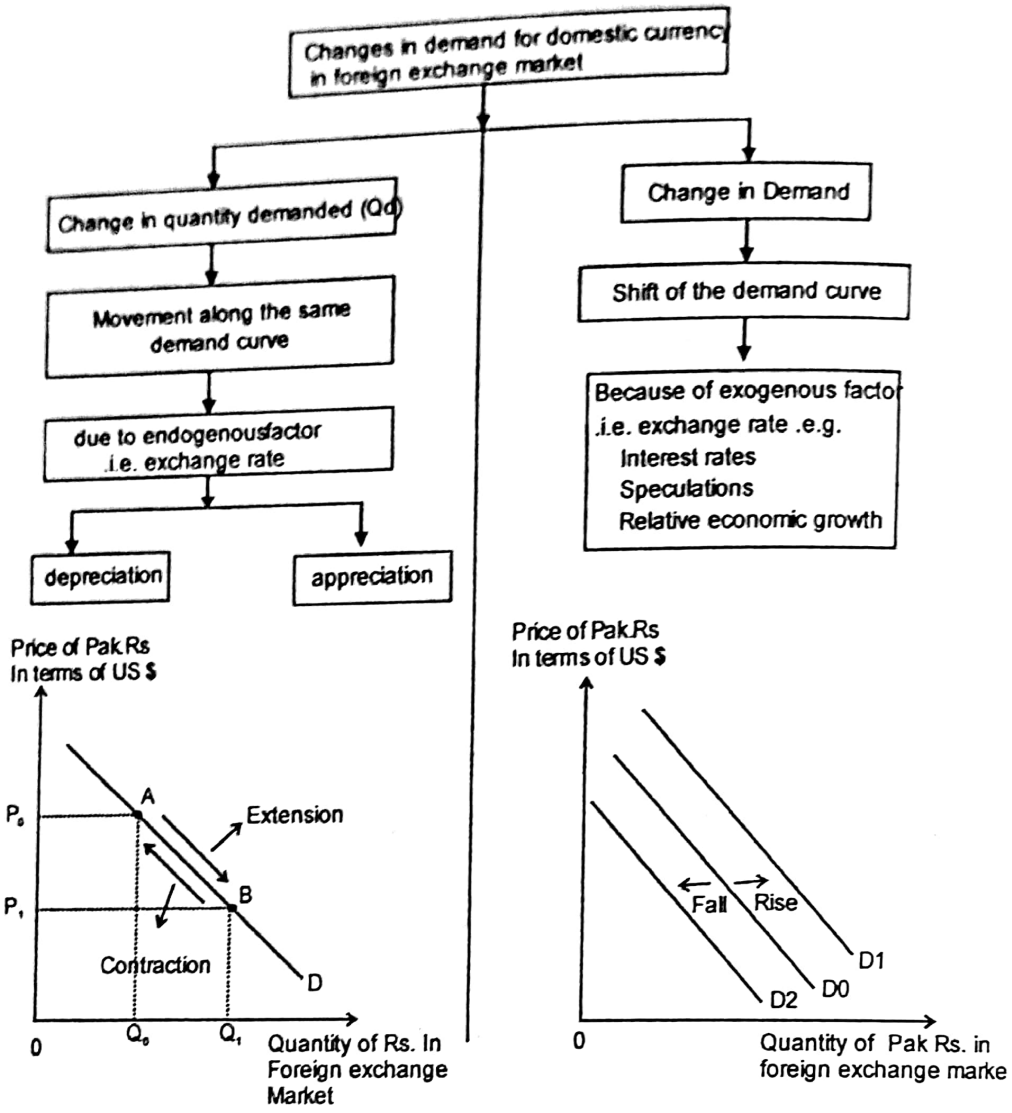
Domestic Currency = Pak Rs.
Foreign Currency = US $

Demand curve for Pak Rs. In foreign exchange market in terms of US $ is as follows:



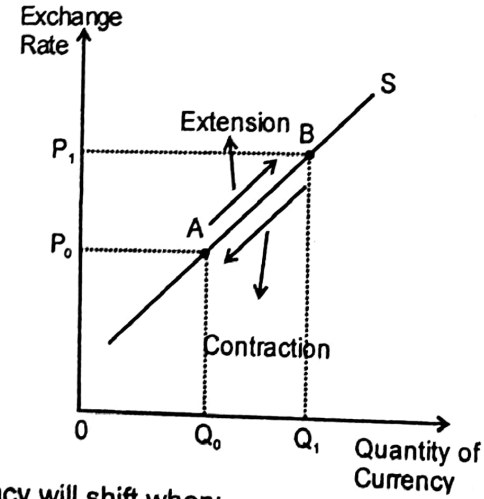
Foreigners demand for domestic currency (i.e., Pak Rs. here)

1. They want to buy our **exports**
   When
   - Our exports are price competitive
   - Our exports are of better quality
   - Our exports are popular in fashion/ trends
   - Foreign income grows etc.
2. They want to **invest** in our country
   - Domestic investment prospects are greater than foreign investment prospects.
   - Lower taxes specially corporation tax.
   - Greater subsidies
   - Better infrastructure
   - Easy and cheaper availability of raw material and labor.
   - Political stability.
   - Friendly relations with other countries.
3. They want to **save** in our country
   - This would happen if domestic interest rate is higher than rest of the world.
4. They **speculate:**
   - about rise in value of our currency in future



Supply of Domestic Currency in Foreign Exchange Market

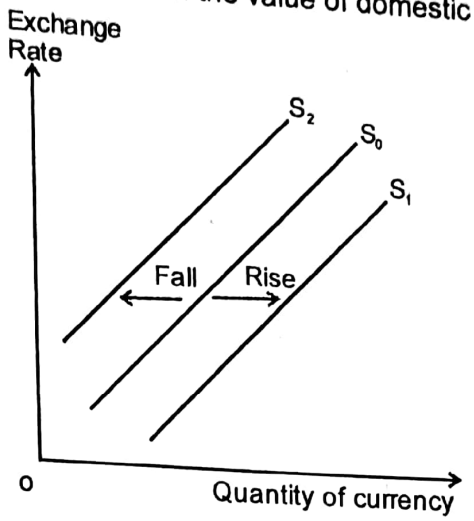
Domestic people supply more of their currency in foreign exchange market when its price (exchange rate or external value) is high and low when its price is down. Thus supply of currency has a positive relationship with its external value or price.



Supply curve for domestic currency will shift when:

i. Domestic people demand more or less for **imported** goods.
ii. Domestic people switch their **savings** from domestic to foreign or vice versa
iii.

iv. When **speculators** think about fall in the value of domestic currency in near future.

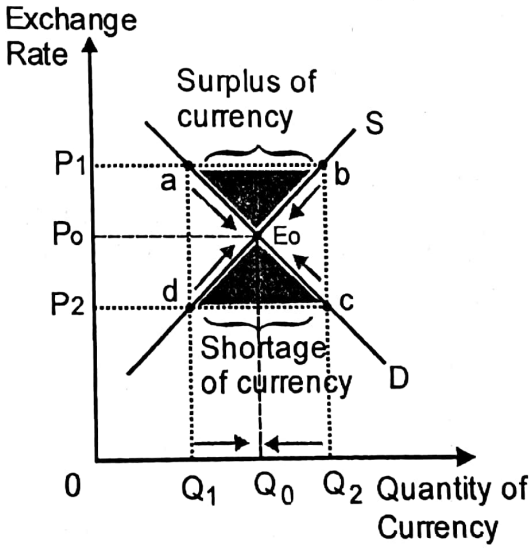


Under fixed exchange rate system, the government also causes a shift in the supply of currency when it buys foreign exchange from the foreign exchange market by selling domestic currency into the market. Government action to buy **foreign reserves** will thus shift the supply for domestic currency to the right.

Equilibrium Exchange Rate

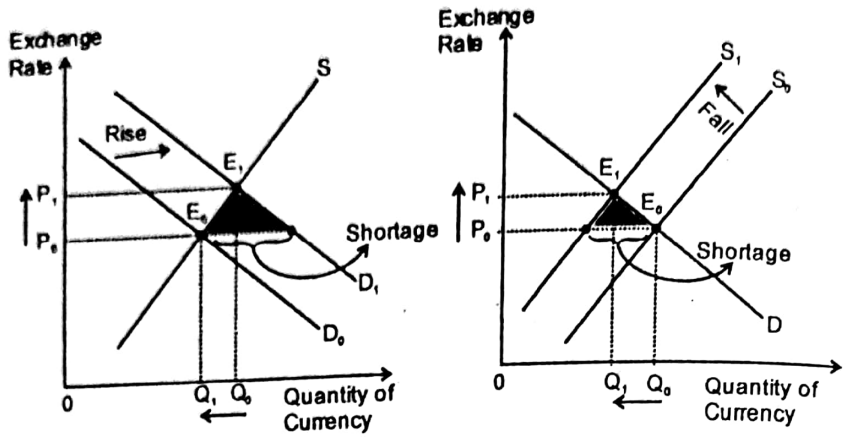
In free floating exchange rate system, sole forces o demand and supply determines the equilibrium. Exchange rate equilibrium is established where "Demand = Supply".

If the exchange rate is above the equilibrium rate, it will create excess supply of currency in foreign exchange market, putting downwards pressure on the value of currency and bringing it back to equilibrium.

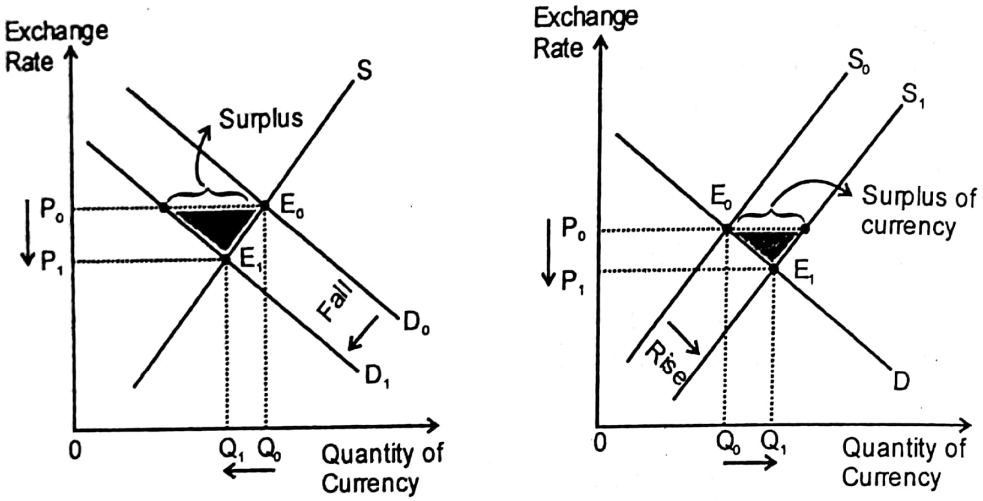


Similarly, if the exchange rate is below 'P_0', i.e., 'P_2', Q_d for currency exceeds Q_s of currency creating a shortage in the foreign exchange market; shortage of currency will push the value up until and unless equilibrium is restored.

Any shift of demand or supply of currency will shift the equilibrium point and currency may "Appreciate" (rise in value) or "Depreciate" (fall in value) according to the respective changes. A fall in the value of a currency caused by market forces is known as depreciation. A rise in the value of the currency, caused by an increase in demand and/ or a decrease in supply is known as an appreciation.
Domestic currency will appreciate when either demand rises or supply of the currency falls in the foreign exchange market.

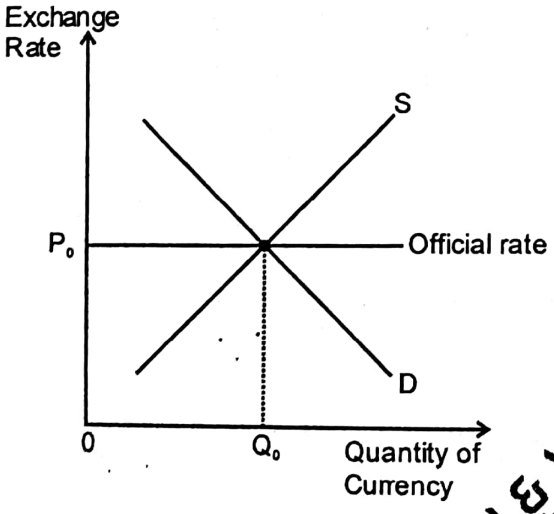


On the other hand, domestic currency will depreciate when either demand for currency falls or supply currency rises in foreign exchange market.



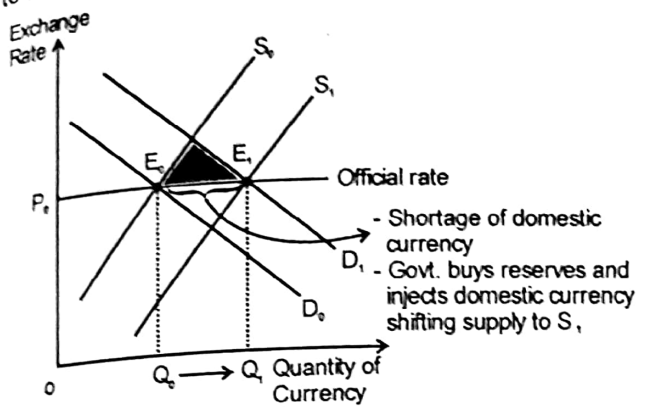
Fixed Exchange Rate System

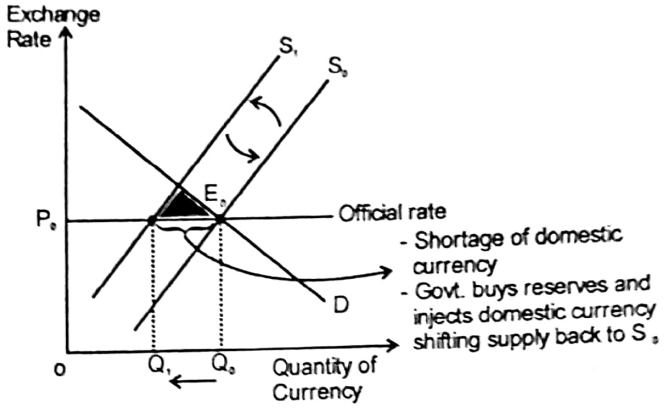
Fixed exchange rate is a system in which exchange rate is kept fixed by the constant intervention of central bank in the foreign exchange market. The rate which central bank keeps fixed is called an "Official Rate". It can be shown by the initial position of demand and supply of currency in the following diagram.



There is equilibrium in the market as at official rate, demand and supply of currency are intersecting each other. Any shift of demand or supply or currency can create shortage or surplus of the currency in the foreign exchange market but central bank prevents the changes in value of currency by using the tools of **reserves** or changing the

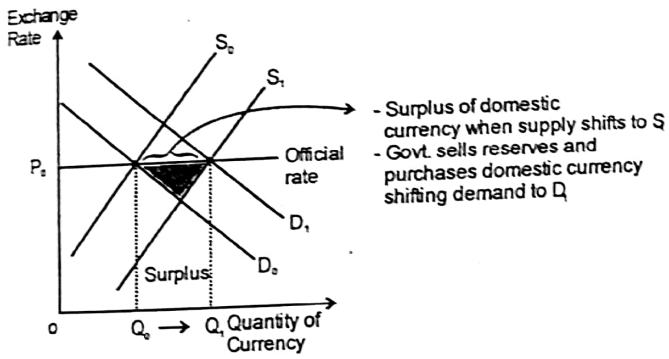
A rise in demand or fall in supply of currency will create a shortage at the official rate and currency tends to rise in its value.

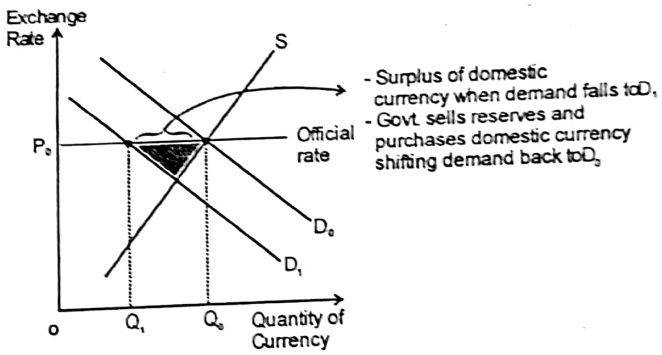




Central bank intervenes in the foreign exchange market and sells domestic currency to buy foreign reserves or lower interest rate to encourage net hot money outflows. **Hot money flows** means flows of money moved around the world to take advantage of changes in interest rates and exchange rates. Central banks action will shift the supply of currency to the right and equilibrium will be restored at the official exchange rate.

Similarly, fall in demand or rise in supply of domestic currency will create surplus of domestic currency at the official rate, and currency will tend to fall in its value.





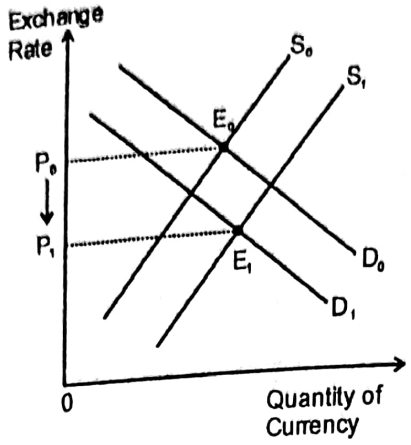
Central bank will prevent any fall in value of currency by buying surpluses of domestic currency in the foreign exchange market and selling the reserves or increasing interest rate to attract hot money flows.

To keep the exchange rates fixed, the central bank has to maintain foreign reserves stock to sufficient level. Over time, market pressures may mean that the rate at which the currency is fixed may have to be changed.

A reduction in the value of a fixed exchange rate to a lower level is known as devaluation. A revaluation occurs when the government raises the exchange rate to a new, higher fixed rate.

Causes of Exchange Rate Depreciation

1. **Relative interest rates (ir):**
   If domestic interest rate < interest rate abroad
   - Foreigners will be reluctant to save in our country → demand for domestic currency ↓
   - Domestic residents will be attracted to save abroad → supply of domestic currency↑
   - exchange rate depreciation as shown in the figure below:

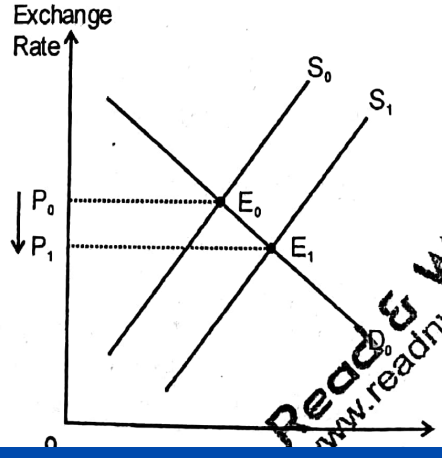


2. **Relative inflation rate:**
If domestic inflation rate > inflation rate abroad
   - Exports → loose price competitiveness → demand for exports and domestic currency ↓
   - Imports are more price competitive→ demand and expenditure on imports↑→ supply of domestic currency↑
   - exchange rate depreciation as shown in the figure above

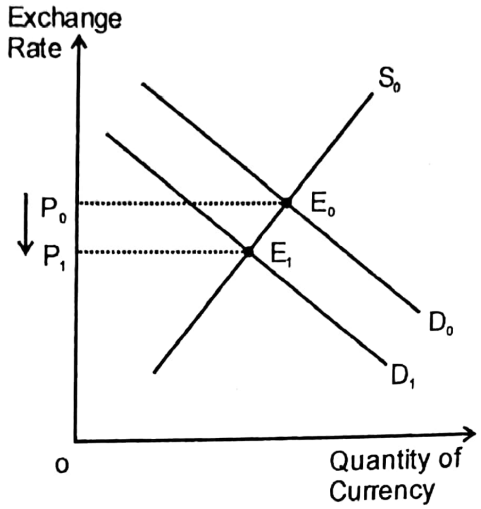
3. **Relative Investment Prospects:**
If domestic investment prospects < Foreign investment prospects
   - Foreigners will be reluctant to invest in our country → demand for domestic currency ↓
   - Domestic residents will be attracted to invest abroad → supply of domestic currency↑
   - exchange rate depreciation as shown in the figure above

4. **Speculation of fall in value of domestic currency:**
If Domestic currency is expected to depreciate
   - People will be reluctant to buy domestic currency → demand for domestic currency ↓
   - Those who posses already will be willing to sell domestic currency → supply for domestic currency ↑
   - exchange rate depreciation as shown in the figure above

5. **Domestic Economic Growth**
   - national income ↑ → demand and expenditure on imports↑→ supply of domestic currency↑
   - with higher national income, the country will move up in terms of world ranking. This will mean that the subscription rates to world organizations like World Trade Organization, United Nations, etc. will increase. The countries must convert their local currency to US dollars which is the universal dollar used now.
   - the country concerned is obliged to give financial assistance to the poorer countries and this will also mean that the supply of the local currency will increase.
   - exchange rate depreciation as shown in the figure below:



6. **Recession in trading partners:**
   - Slump in trading partner countries → Demand for our goods in these countries↓→ demand for exports and domestic currency ↓
   - exchange rate depreciation as shown in the figure below:

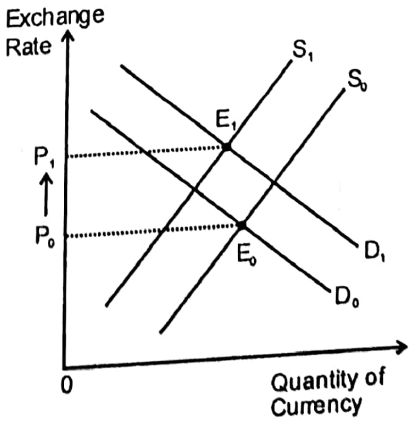


7. **Political Instability:**
Political uncertainty is always a risk that must be taken with every investor and speculator. A change in government will also mean a change in policies that may not favor the investors and speculators.

8. **War or terrorist activities:**
Nobody will feel safe to keep money in a country where the central bank can be bombed, e.g., Afghanistan. There will be outflow of currencies and nobody is interested in buying the Afghani rupees. This will definitely lead to the depreciation of the currency. Another example is sudden fall in value of US $ after the event of Nine-Eleven.

Causes of Exchange Rate Appreciation

1. **Relative interest rates (ir):**
If domestic interest rate > interest rate abroad
   - Foreigners will be attracted to save in our country → demand for domestic currency ↑
   - Domestic residents will be reluctant to save abroad → supply of domestic currency↓
   - exchange rate appreciation as shown in the figure below:

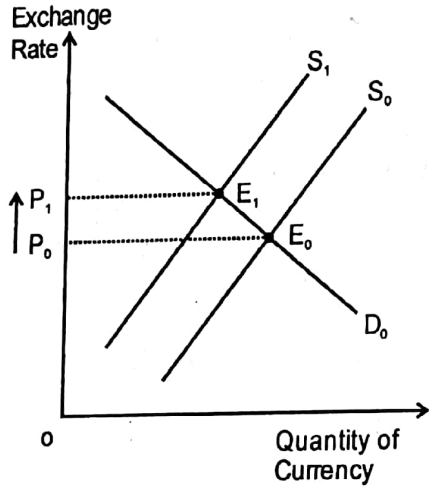


2. **Relative inflation rate:**
If domestic inflation rate < inflation rate abroad
   - Exports → more price competitive → demand for exports and domestic currency↑
   - Imports loose price competitiveness→ demand and expenditure on imports↓→ supply of domestic currency↓
   - e... shown in the figure above

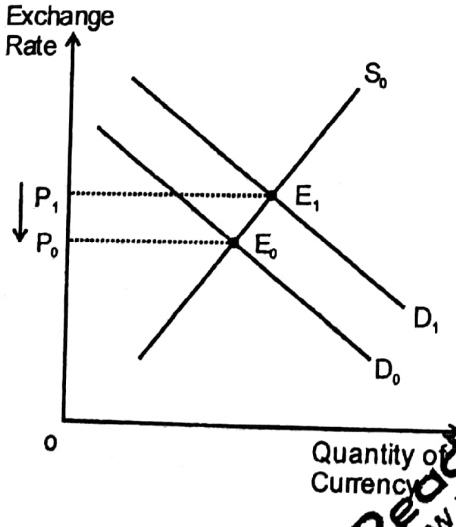
3. **Relative Investment Prospects:**
If domestic investment prospects > Foreign investment prospects
- Foreigners will be attracted to invest in our country → demand for domestic currency ↑
- Domestic residents will be reluctant to invest abroad → supply of domestic currency↓
- exchange rate appreciation as shown in the figure above

4. **Speculation of rise in value of domestic currency:**
If domestic currency is expected to appreciate
- People will be to buy domestic currency → demand for domestic currency ↑
- Those who posses already will not be willing to sell domestic currency → supply for domestic currency↓
- exchange rate appreciation as shown in the figure above

5. **Domestic economic recession**
- national income ↓ → demand and expenditure on imports↓→ supply of domestic currency↓
- with lower national income, the country will move down in terms of world ranking. This will mean that the subscription rates to world organizations like World Trade Organization, United Nations, etc. will decrease.
- exchange rate appreciation as shown in the figure below:



6. **Boom in trading partners:**
- Boom in trading partner countries → Demand for our goods in these countries↑→ demand for exports and domestic currency ↑
- exchange rate appreciation as shown in the figure below:

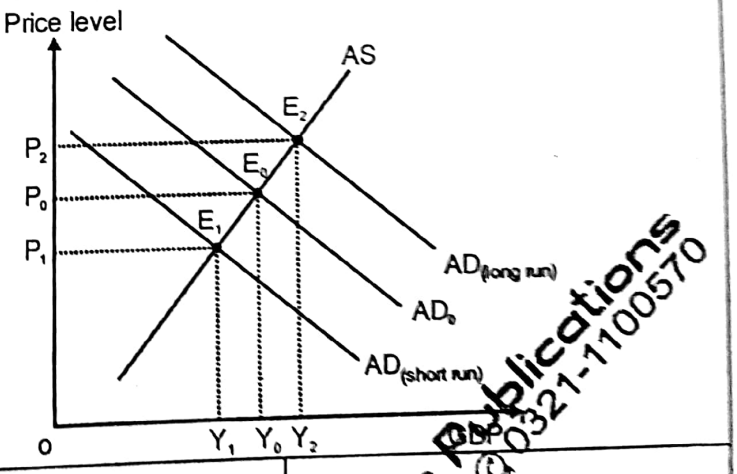


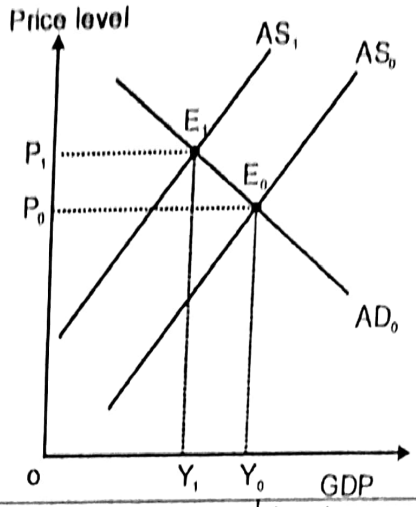
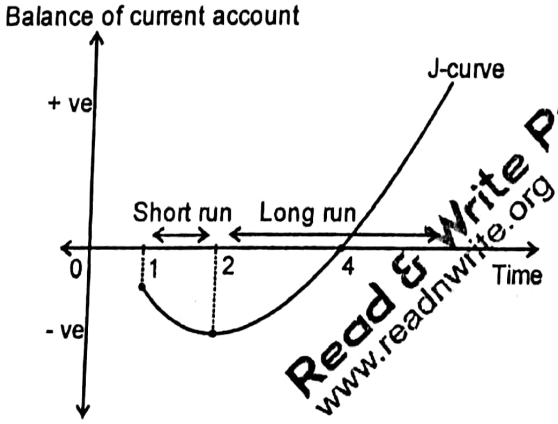
Effects of Depreciation/Devaluation

When exchange rate depreciates, assuming Rs. Price of Pakistani exports and $ price of American goods unchanged, $ price of exports falls (cheaper) and Rs. Price of imports from USA in Pakistan rises (expensive).
With exchange rate depreciation:

- External Price of exports (P_X) ↓→ Q_X ↑ → effect on exports revenue depends upon PED of exports
- Domestic Price of imports (P_M) ↑ → Q_M ↓→ effect on imports expenditure depends upon PED of imports

Effects of exchange rate depreciation would be different for short-run and long-run.

	In short run	In long run
1. Elasticity	Inelastic demand because it would not be easy to cancel present orders and find alternative immediately for importers and foreigners.	Elastic demand because both foreigners and importers have enough time to find substitutes.
2. Balance of current account	– Large % ↓ in Px→ small % ↑ in Qx → X ↓ – Large % ↑ in P_M→ small % ↓ in Q_M → M ↑ – X–M ↓	– Small % ↓ in Px→ large % ↑ in Qx → X ↑ – Small % ↑ in P_M→ large % ↓ in Q_M → M ↓ – X–M ↑
3. Effect on Aggregate Demand (AD)	(X–M) ↓ → AD↓ (shown in figure below)	(X–M) ↑→ AD↑ (shown in figure below)
4. Effect on demand-pull inflation	↓ (shown in figure below)	↑ (shown in figure below)
5. Effect on national income	↓ (shown in figure below)	↑ (shown in figure below)
		
6. Effect on employment	↓	↑
7. Effect on Cost-push Inflation	if a country is importing major raw-materials and energy sources, she have to pay greater amounts now and cost of imported raw-materials will rise leading to cost-push inflation	Imported raw-materials and energy sources demand is usually inelastic even in long run and therefore cost-push inflation is likely to increase in both short run and long run

		
8. Effect on Standard of Living	In short run, exchange rate depreciation ends into fall in exports earnings, rise in imports payments fall in AD, National Income, employment etc. Therefore depreciation of exchange rate would reduce the standard of living in short-run where demand for exports and imports is assumed inelastic.	In long-run, when PED of exports and imports is elastic, exchange rate depreciation results in rise in exports earnings, AD, national income and employment and therefore improves the standard of living. However, standard of living is not only dependent on above mentioned factor and therefore we cannot be sure unless we take ceteris paribus assumption.
9. Effect on terms of Trade	↓	↓
10. Effect on Investment	Like TOT, effect on investment of exchange rate depreciation is independent of time period concerned. – less overseas investment because it would be expensive to buy foreign currencies and therefore expensive to invest overseas. – more foreign investment in the country because foreign investors now feel that they need less of their currency to buy the same resources as before in the said country.	
11. J-Curve Effect	If we plot time on x-axis and balance of trade on y-axis, initially in short-run, when D_x or D_m is inelastic, exchange rate depreciation worsens the current account balance of a country but later on, in long-run, when D_x and D_m becomes elastic, it causes an improvement in balance of current account and move into surplus. 	

12. Marshal Lerner condition	According to Marshal Lerner condition, for depreciation of currency policy to be effective (i.e., to generate long-run outcomes) it is not necessary for exports demand and imports demand to be elastic individually. It is the combined price elasticity of demand of exports and imports that will play a decisive role in effectively of exchange rate depreciation policy. According to Marshal-Lerner condition, exchange rate depreciation will produce desirable outcomes, i.e., long-run effects if PED of exports + PED of imports) > 1 Higher the combined price elasticity of demand for exports and imports, more effective the depreciation or devaluation policy would be.
13. The extent to which an economy is open	More open→ strong effects of revaluation Less open→ weak effects of revaluation

Effects of appreciation/revaluation

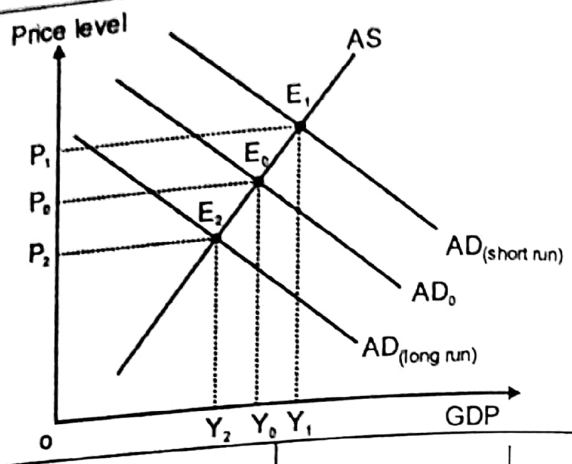
When exchange rate appreciates, assuming Rs. Price of Pakistani exports and $ price of American goods unchanged, $ price of exports rises (expensive) and Rs. Price of imports from USA in Pakistan falls (cheaper).

With exchange rate appreciation:

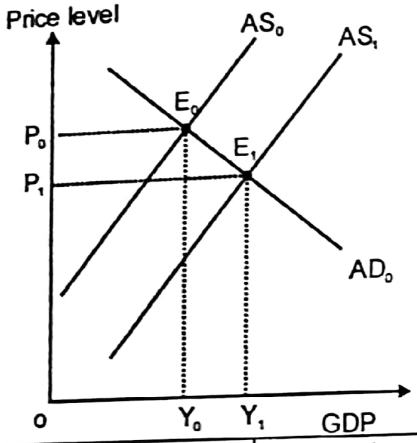
- External Price of exports (Px) ↑ → Qx ↑ → effect on exports revenue depends upon PED of exports
- Domestic Price of imports (P_M)↓ → Q_M ↑→ effect on imports expenditure depends upon PED of imports

Effects of exchange rate appreciation would be different for short-run and long-run.

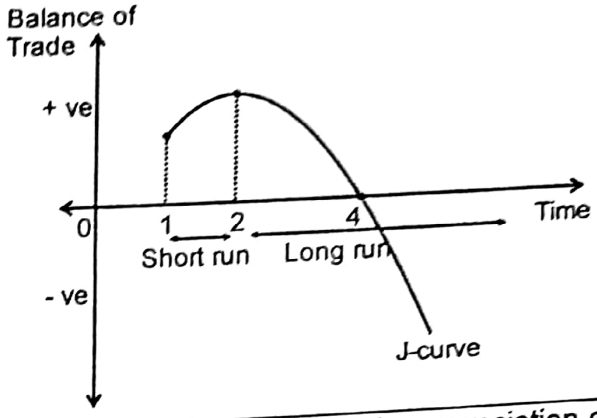
	In the short run	In the long run
1. Elasticity	Inelastic demand because it would not be easy to cancel present orders and find alternative immediately for importers and foreigners.	Elastic demand because both foreigners and importers have enough time to find substitutes.
2. Balance of current account	– Large % ↑ in Px→ small % ↓ in Qx → X ↑ – Large % ↓ in P_M→ small % ↑ in Q_M → M ↓ – X – M ↑	– Small % ↑ in Px→ large % ↓ in Qx → X ↓ – Small % ↓ in P_M→ large % ↑ in Q_M → M ↑ – X – M ↓
3. Effect on Aggregate Demand (AD)	(X–M) ↑→ AD↑ (shown in figure below)	(X–M) ↓ → AD↓ (shown in figure below)
4. Effect on demand-pull inflation	↑ (shown in figure below)	↓ (shown in figure below)
5. Effect on national income	↑ (shown in figure below)	↓ (shown in figure below)



6. Effect on employment	↑	↓
7. Effect on Cost-push Inflation	if a country is importing major raw-materials and energy sources, she have to pay lesser amounts now and cost of imported raw-materials will fall leading to reduction in cost-push inflation	Imported raw-materials and energy sources demand is usually inelastic even in long run and therefore cost-push inflation is likely to decrease in both short run and long run



8. Effect on Standard of Living	In short run, exchange rate appreciation ends into rise in exports earnings, fall in imports payments rise in AD, National Income, employment etc. Therefore appreciation of exchange rate would increase the standard of living in short-run where demand for exports and imports is assumed inelastic.	In the long run, when PED of exports and imports is elastic, exchange rate appreciation results in fall in export earnings, AD, national income and employment and therefore worsen the standard of living. However, standard of living is not only dependent on above-mentioned factor, and therefore we cannot be sure unless we take ceteris paribus assumption.
9. Effect on terms of Trade	↑	
10. Effect on Investment	Like TOT, effect on investment of exchange rate appreciation is independent of time period concerned. – more overseas investment because it would be cheaper to buy foreign currencies and therefore cheaper to invest overseas. – less foreign investment in the country because foreign investors now feel that they need more of their currency to buy the same resources as before in the said country.	
11. J-Curve Effect	If we plot time on x-axis and balance of trade on y-axis, initially in	

	short-run, when D_x or D_m is inelastic, exchange rate appreciation improves the current account balance of a country but later on, in long-run, when D_x and D_m becomes elastic, it causes an worsening in balance of current account and move into deficit. 
12. Marshal Lerner condition	According to Marshal Lerner condition, for appreciation of currency policy to be effective (i.e., to generate long-run outcomes) it is not necessary for exports demand and imports demand to be elastic individually. It is the combined price elasticity of demand of exports and imports that will play a decisive role in effectively of exchange rate revaluation policy. According to Marshal-Lerner condition, exchange rate revaluation will produce desirable outcomes, i.e., long-run effects if PED of exports + PED of imports) > 1 Higher the combined price elasticity of demand for exports and imports, more effective the appreciation or revaluation policy would be.
13. The extent to which an economy is open	More open→ strong effects of revaluation Less open→ weak effects of revaluation

Advantages and disadvantages of exchange rate systems:

Floating exchange rate system	Fixed exchange rate system
Advantages	**Advantages**
1. Automatic correction of BOP disequilibrium The government simply lets the exchange rate move freely to the equilibrium. In this way, balance of payments disequilibria are automatically and instantaneously corrected without the need for specific government policies. For instance, if a country has a current account deficit, demand for the currency will fall while its supply increases. This will lead to a depreciation, making exports cheaper and imports more expensive. Given elastic demand for exports and imports, this will result in a rise in export revenue and a fall in import expenditure. **2. No need to keep too much foreign reserves** Since there is no central bank intervention in the foreign exchange market, there is no need to hold reserves and can be used for other purposes.	**1. Certainty** With fixed exchange rates international trade and investment become much less risky, since profits are not affected by movements in the exchange rate. **2. Little or no speculation** Provided that the rate. is absolutely fixed, and people believe that it will remain so, there is no point in speculating. **3. Prevents the government from pursuing irresponsible policies** If a government deliberately and excessively expand aggregate demand- perhaps in an attempt to gain short term popularity with the electorate- the resulting balance of payments deficit will force it to constraint demands again (unless it resorts the import controls).

3. Government is free to choose their domestic policy

Under a floating rate the government can choose whatever level of domestic demand it considers appropriate, and simply leave exchange rate movements to take care of any balance of payments effect. The exchange rate is not a government target and so the government can concentrate on other aims.

Disadvantages

1. Unstable Exchange Rate

In free floating exchange rate system, it is merely determined by the forces of demand and supply of currency and therefore exhibit rapid fluctuations resulting into unstable exchange rates.

2. Uncertainty for Business and Investment

With currency fluctuations, exporters and importers will be uncertain about their prices of goods in other currencies and prices of raw-materials they have to import. This uncertainty may discourage trade and investment, although **forward markets** provide the opportunity to agree on a price now at which to sell or buy a currency in the future.

3. Speculation

Speculationary movement of funds between the countries (i.e., **Hot money flows**) are major cause and consequences of floating exchange rate system.

4. No guarantee of correction of BOP disequilibrium

There is also no guarantee that a floating exchange rate will eliminate a current account surplus or deficit. For instance, the value of an exchange rate may be pushed up despite the country having a current account deficit if speculators are buying the currency expecting it to rise in value.

5. Remove pressure on the government to maintain price stability

A floating exchange rate system may remove pressure on the government to maintain price stability. A government may rely on a fall in a floating exchange rate to restore any loss in international competitiveness arising from inflation. There is a risk, however, that a fall in the exchange rate will increase inflationary pressure. This is because the price of imported products will increase. As a result, the cost of imported raw materials will rise, the price of imported finished products will increase and the pressure on domestic firms to restrict their price rises will be reduced.

Governments cannot allow their economies to have a persistently higher inflation rate than competitor countries without running into balance of payments crises, and hence a depletion of reserves. Fixed rates thus force governments (in the absence of trade restrictions) to keep the rate of inflation roughly to the world levels.

Disadvantages

1. Central banks have to keep **too many reserves.** This involves an opportunity cost as the foreign exchange or gold, for instance, could be used for other purposes.

2. If, the exchange rate is **overvalued,** the central bank may be in danger of running out of reserves trying to keep the exchange rate at a level that does not reflect its market value.

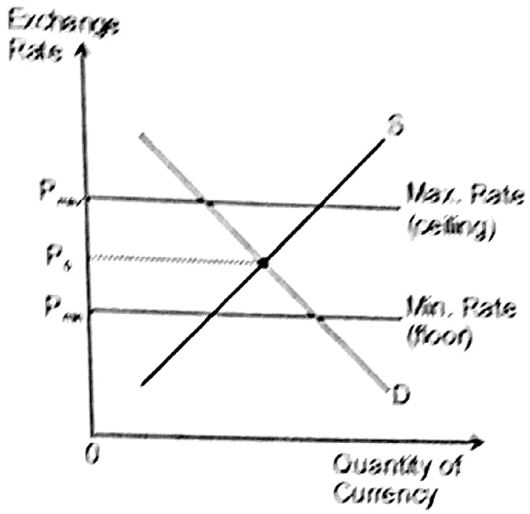
3. Government is **not free to choose domestic macroeconomic policies** independently. There is also the risk that a government may sacrifice other policy objectives in order to maintain the fixed exchange rate. For instance, a central bank may raise the interest rate in a bid to keep the exchange rate at the price the government wants maintained. A higher interest rate may, however, reduce aggregate demand and increase unemployment.

4. Deliberate **efforts are required to establish BOP equilibrium**

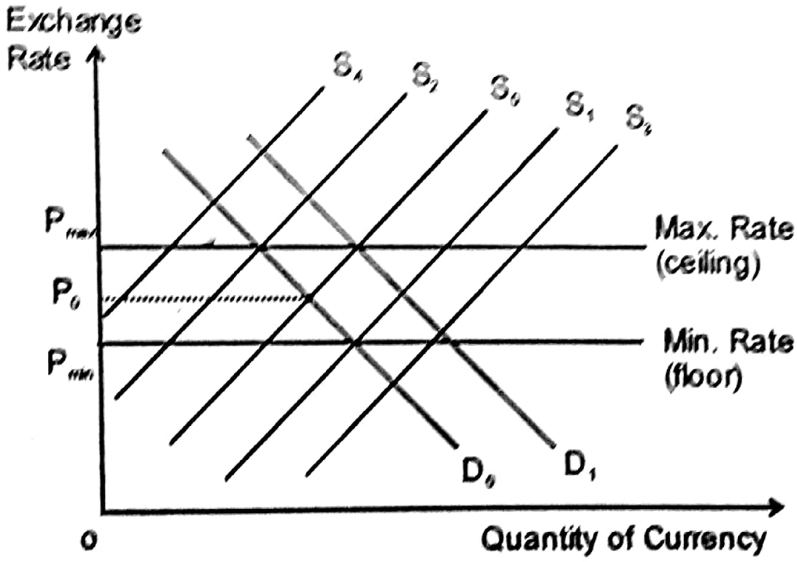
Managed floating system

Managed floating system (also called as dirty floating) combines the fixed exchange rate and the floating exchange rate. Under managed floating system, neither allows the exchange rate to float freely, nor does it keep it fixed. Rather, central bank sets a minimum exchange rate and a maximum exchange rate limit, within which currency is allowed to fluctuate according to the demand and supply.

Figure below shows that the government sets a central value of P_0, an upper band of P_{max}, which it does not want the exchange rate to exceed, and a lower limit of P_{min}, which it does not want it to fall below.



If the exchange rate is within the limits, for example at P_0, no action will be taken.



If the exchange rate crosses the maximum limit (when supply of the currency were to rise to S_4), central bank will buy foreign reserves and inject domestic currency into the foreign exchange market to increase supply to S_2 or S_0. Consequently, exchange rate will be pulled back into the allowed fluctuating band.

Similarly, if the exchange rate fluctuates between the two limits, for example at P_0, central bank does not intervene. However, if the exchange rate falls below the minimum limit, when supply of domestic currency rises to S_3 , central bank will sell the foreign reserves and buy domestic currency (shifting demand curve to D_1)to bring it back within the band.

Dirty floating enjoys the benefits of both fixed and free floating exchange rate.

The terms of trade

Terms of trade can be defined as the ratio of export prices to import prices.

$$\text{Terms of trade (TOT)} = \frac{\text{Exports price index}}{\text{Imports price index}} \times 100$$

The ratio is calculated from the average prices of many goods and services that are traded internationally. There are three types of terms of trade: favorable, unfavorable and balanced terms of trade.

Favorable TOT	Unfavorable TOT	Balanced TOT
Favorable terms of trade are those in which export prices are relatively more expensive than the import prices.	Import prices are relatively higher than the export prices.	Balanced terms of trade are achieved when both the prices of exports and imports are equated.
It means that fewer exports have to be sold to buy any given quantity of imports.	Same exports will have to be exchanged to gain the same quantity of imports.	Now more exports will have to be exchanged to gain the same quantity of imports.

For example, price index of exports is given as 110 and that of imports as 105, then

$$\text{Terms of trade (TOT)} = \frac{110}{105} \times 100$$

$$= 104$$

This shows favorable terms of trade. In fact wherever the figure exceeds 100, it is indicator of favorable terms of trade but should it be less than 100, the opposite holds; there are unfavorable terms of trade. 100 would mean balanced terms of trade. However if the figure has changed, say from 110 to 109, and then 104, we would say that terms of trade have deteriorated or become less favorable even though export prices are relatively still higher than import prices.

The **Prebisch-Singer hypothesis** suggests that the terms of trade tend to move against primary producing countries. This is based on the view that demand for manufactured goods and for services rises by more than the demand for primary products when income increases. In recent years, the relative prices of some agricultural products have fallen but there has been more volatility in commodity prices, with some years witnessing significant rises in the price of, for instance, oil and copper.

The whole idea is that terms of trade is a comparative measure. By itself, it offers no valuable information; it is only by comparing terms of trade of the base year with the current year would terms of trade be useful.

Movements in Terms of Trade

Favorable movement or improvement or increase in TOT

A rise in the terms of trade is described as a favorable movement or an improvement in the terms of trade. This is because it indicates that any given volume of exports will exchange for a greater volume of imports. There will be a favorable movement in TOT when:

- P_x increase given that P_m is the same
- P_m fall given that P_x is the same
- P_x increase and P_m increase but increase in P_x is greater than increase in P_m
- P_x fall and P_m fall but fall in P_x is greater than fall in P_m

Unfavorable/deterioration/adverse movement in TOT

Similarly a fall in the terms of trade is described as unfavorable, adverse or a deterioration as any given volume of exports will exchange from a smaller volume of imports.

- P_x fall given that P_m is the same

- P_m rises given that P_x is the same
- P_x increase and P_m increase but increase in P_m is greater than increase in P_x
- P_x fall and P_m fall but fall in P_x is greater than fall in P_m

Factors affecting Terms of Trade

There are two fundamental forces that will cause the changes in the terms of trade; the prices of exports and imports. What leads to changes in export and import prices and so to changes in the terms of trade is changes in demand for and supply of exports and imports, the price level, domestic economic growth, protectionism and the exchange rate.

1. Change in Demand

- if the demand for exports increases, it will raise the prices of exports as against the prices of imports. The TOT will be favorable.
- if the demand for imports increases, their prices will rise as against the prices of imports, thereby worsening the TOT.

2. Changes in Supply of Exports and Imports

- if the supply of exports falls, it will push the prices of exports up and consequently raise the TOT.
- an increase in supply of exports will bid the prices of exports down and will deteriorate TOT in turn.
- increased supply of imports will favor the domestic TOT and reduction in the supply of imports will raise the imports price causing an unfavorable movement in country's TOT.

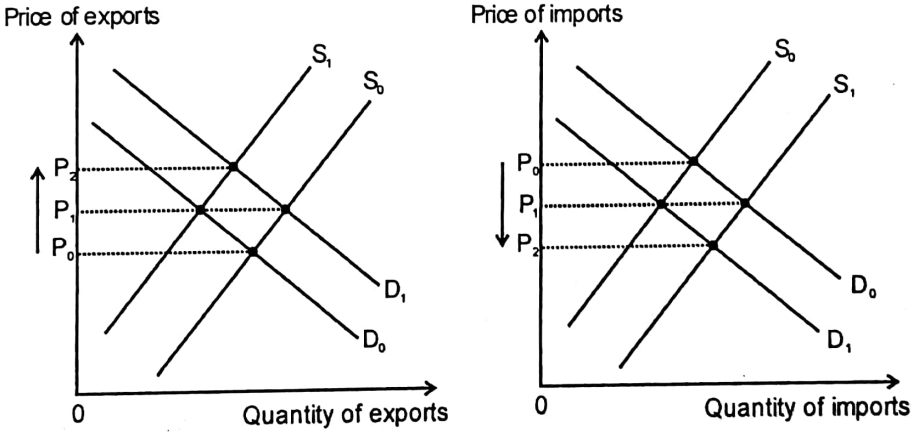


Figure 1:Improvement in terms of trade

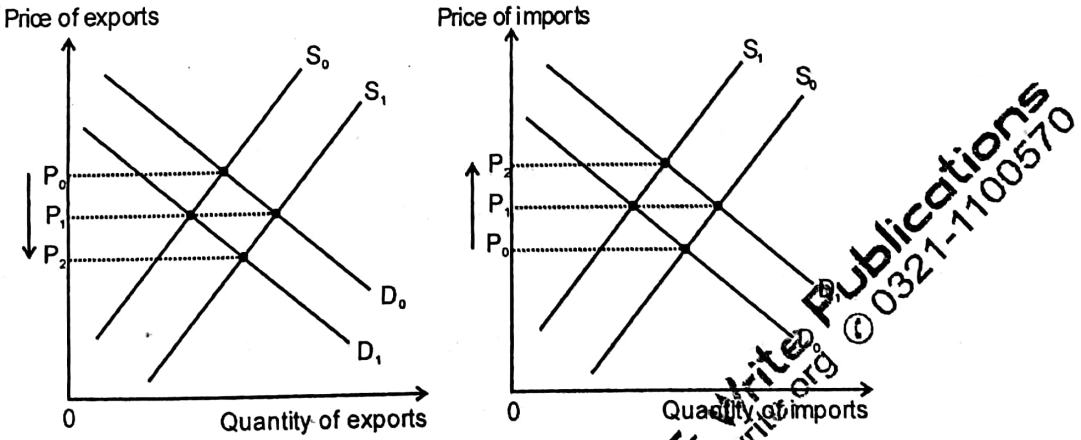


Figure 2: Worsening of terms of trade

3. Changes in Exchange Rates

- Devaluation makes imports costlier and exports cheaper in foreign markets, therefore, deteriorate country's TOT.

- Revaluation (appreciation) makes imports cheaper and exports expensive in international market. Therefore, improves TOT of the country.

4. **Inflation and Deflation**
   - If domestic inflation rate is higher than the rate of inflation in its trading countries, it will make exports expensive and imports cheaper relatively and TOT will improve.
   - TOT will also worsen if domestic rate of inflation is less than inflation rate of trading partners.
   - deflation (persistent fall in price level) makes domestic goods cheaper in foreign market and worsen its TOT.

5. **Economic Growth**
   Economic growth affects TOT in two ways.
   - the **demand effect** which increases the demand for imports as a result of increase in per capita income with economic growth.
   - the **supply effect** which increases the supply of exports and import competing goods.
   - It is the **net effect** of these two ultimately determines the TOT of a country. If the demand effect is more powerful than the supply effect and the volume of trade increases through imports, its TOT will be unfavorable. On the other hand, if the supply effect is more powerful than the demand effect, its TOT will improve.

6. **Protectionism**
   - imposition of tariff or quotas will raise the prices of imports in relation to exports prices and TOT will be worsened and vice versa.

The Impact of changes in the terms of trade

- effects of worsening of TOT
- effects of improvement in TOT

The effects of worsening of terms of trade

The effects of changes in the terms of trade are influenced by their cause, by the time period under review, and extent of involvement of the economy in the world trade.

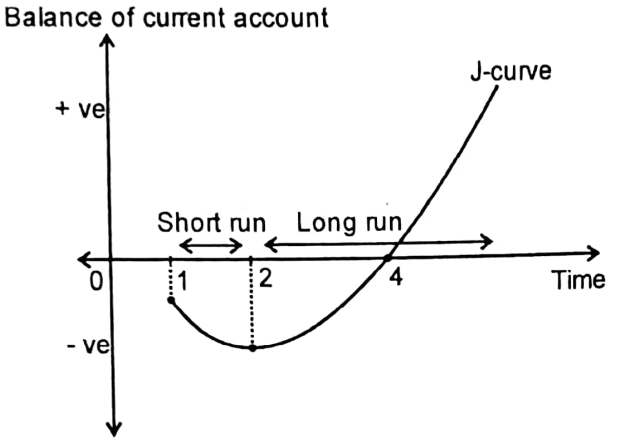
1. **Cause**
   Worsening of terms of trade will worsen current account balance if deterioration in TOT is due to demand side reasons.
   - If TOT worsen due to fall in demand for exports → both price and quantity of exports ↓
   - If TOT worsen due to rise in demand for imports → both price and quantity of imports ↑
   - current account (X–M) worsen

   If TOT worsen due to either an increase in supply of exports or fall in supply of imports (in both cases supply side reason), effect on current account will depend upon the proportion with which quantities of exports and imports will change with the changes in their respective prices, i.e., PED.

2. **Time Period and PED**

   In short run demand for exports and imports is likely to be relatively inelastic. This is because it will take some time for purchasers to notice price changes and to find alternative suppliers. When demand is inelastic a fall in export prices will result in a smaller percentage increase in demand for exports and so export revenue will fall. Whereas, if imports have inelastic demand and their prices rise, then a fall in demand by smaller percentage would result in a rise in import expenditure. The rise in import expenditure and fall in export revenue will worsen the country's current account position on the balance of payments.

However, in long run demand for exports and imports is likely to be more elastic as people have time to adjust to the price changes. If demand for exports is elastic, demand will rise by more than the fall in price and export revenue will rise. And if demand for imports is elastic, a rise in their price will result in a greater percentage fall in demand and a fall in import expenditure. Therefore, in the longer run an unfavorable movement in terms of trade could lead to an improvement in the county's current account position. This can be explained by J-curve as shown below:



According to Marshal-Lerner condition (i.e., to generate long-run outcomes) it is not necessary for exports demand and imports demand to be elastic individually. It is the combined price elasticity of demand of exports and imports that will play a decisive role in effectively of TOT deterioration. According to Marshal-Lerner condition, deterioration will produce long-run effects if

PED of exports + PED of imports) > 1

3. **Extent of World Trade**
   The extent to which an economy is open, i.e., proportion of current account to GDP will determine the strength of effects of changes in TOT on the economy. For countries which engage in world trade on a large scale as, e.g., the UK, movements on the terms of trade are important. When the volume of exports and imports are very large, quite small changes in the terms of trade can make a large impact on the balance of payments.

***Effects of worsening of TOT can be extended to GDP, employment, inflation and standard of living etc that will be similar to exchange rate devaluation.

The effects of an improvement in the terms of trade

Vice versa to worsening of TOT

PAST PAPER QUESTIONS

Topic: Determination of Exchange Rate

(Nov 2012/P22/Q3/a)
Explain what determines the demand for and supply of a currency in the foreign exchange market. [8]

(June 2012/P22/Q4/a)
Explain, with the help of a diagram, how a government can maintain a stable foreign exchange rate. [8]

(Nov 2002/P2/Q3/a)
Explain how the international value of a currency is determined in a floating exchange rate system. [8]

(June 1996/a)
Explain, with the aid of diagrams, how a government would maintain a fixed exchange rate [8]

(June 1994/a)
Explain how the determination of a floating exchange rate differs from that of a fixed exchange rate. [8]

(June 1996/a)
Explain how exchange rates are determined. [15]

(June 1991/a)
How do the monetary authorities in the UK intervene in the foregone exchange market? [8]

(June 1990)
Discuss the advantages and disadvantages of allowing the foreign exchange value of the pound sterling to be determined solely by market forces. [12]

Topic: Causes of Exchange Rate Depreciation & Appreciation

(Nov 2014/P23/Q3/b)
Discuss whether a floating exchange rate is consistent with the policy objective of a low and stable rate of inflation. [12]

(November 2013/P21/Q4/a)
Use a diagram to explain how a fall in the rate of interest in a country can cause its foreign exchange rate to change. [8]

(June 2011/P21/Q3)
(a) Explain how the effects of a devaluation on the level economic activity differ from those of a deflation. [8]
(b) Discuss whether inflation can be both the cause and the result of fluctuations in an economy's exchange rate. [12]

(June 2010/P21/Q4/a)
With the aid of a diagram, explain why an economy's floating exchange rate may depreciate. [8]

(Nov 2009/P21/Q4/a)
Explain how a rapid rate of inflation in a country will affect its floating exchange rate. [8]

(Nov 2001/a)
What might cause an appreciation of a floating exchange rate? [10]

(Nov 1992/a)
Describe what is meant by devaluation of a country's currency. [8]

Topic: Effects of Exchange Rate Depreciation & Appreciation

(June 2017/P21/Q4/a)
Explain how a fall in an economy's foreign exchange rate can cause both cost-push and demand-pull inflation. [8]

(Nov 2013/P21/Q4/b)
Discuss whether a rise in its exchange rate or a fall in its exchange rate is more beneficial for an economy. [12]

(June 2013/P23/Q4/a)
Explain how a change in a country's exchange rate might reduce a deficit on the current account of its balance of payments. [8]

(Nov 2012/P22/Q3/b)
Discuss the extent to which a decline in the value of the national currency (depreciation or devaluation) will improve a country's balance of trade. [12]

June 2012/P22/Q4/b)
Discuss whether a government should be more concerned by an unstable foreign exchange rate or by an unstable domestic price level. [12]

(June 2010/P23/Q4/a)
Explain the relevance of the Marshall-Lerner condition and the J-curve effect to the success of a currency devaluation. [8]

(June 2010/P23/Q4/b)
There are various influences on the international value of a currency in a floating exchange rate system. Discuss their relative importance in different economies. [12]

(June 2006/b)
Describe whether it is better for a country with a floating exchange rate to face an application or a depreciation of its currency. [12]

(Nov 2002/b)
Discuss whether an appreciation in the exchange rate to the advantage of an economy. [12]

(Nov 2001/b)
Discuss whether an appreciation of a country's exchange rate will always be beneficial to that country. [15]

(Nov 1999)
Explain why governments are sometimes concerned about the level of the exchange rate of their country's currency and discuss what policies they might adopt to influence the exchange rate. [25]

(June 1998)
In 1996, it was anticipated that South African exports should receive a considerable boost from a weaker exchange rate and the expected increase in world economic growth.
Explain the above statement. [10]

(Nov 1996/a)
Explain what is meant by free trade and analyze how exchange rate changes may affect a country's international trade. [10]

(Nov 1996/b)
Discuss why variations in the exchange rate have an important effect upon an economy. [10]

(Nov 1992/b)
Explain the likely internal and external effects of a fall in the value of your country. [17]

(June 1991/b)
Explain and comment on the reasons for such intervention. [17]

Topic: Advantages & Disadvantages of Fixed or Floating Exchange Rate System

(Nov 2009/P21/Q4/b)
Discuss whether a government should operate a fixed exchange rate system. [12]

UNIT 5

Balance of Payments

AS Level
Macroeconomics
Notes Book 2

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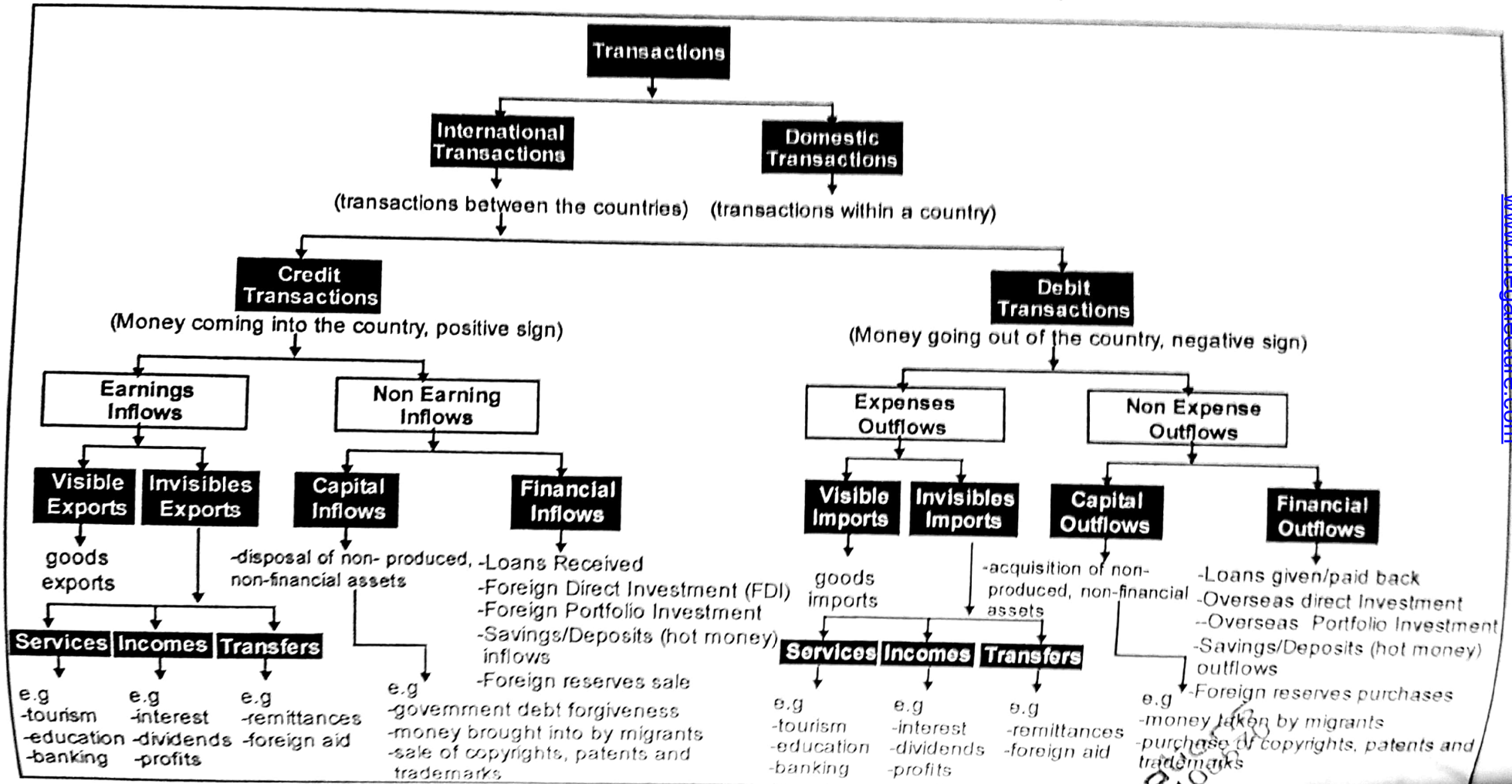
Syllabus 2016 – 18

a. BOP accounts
- the components of the balance of payments
- accounts (using the IMF/OECD definition)
- current account
- capital account
- financial account
- balancing item

b. BOP equilibrium and disequilibrium
- meaning of balance of payments equilibrium and disequilibrium
- causes of balance of payments disequilibrium in each component of the accounts
- consequences of balance of payments disequilibrium on domestic and external economy

Unit 5 Balance of Payments

Balance of payments is a record of a country's economic transactions with the rest of the world over a year.



Receipts of money from abroad are regarded as credits and are entered in the account with a positive sign. Outflows of money from the country are regarded as debits and are entered with a negative sign.

There is a standard presentation of the balance of payments account that is recommended by the International Monetary Fund (IMF). It consists of the current account, the capital account, the financial account and net errors and omissions (also sometimes known as the balancing item).

Primary Account	Sub account	Formula
	Visible balance (Balance of trade)	=Visible (goods) exports – visible (goods) imports
	Balance of trade in goods and services	=Visible balance + services balance
	Invisible balance	=Invisible exports -Invisible imports =Services balance + incomes balance +current transfers balance
	Services balance	=Services exports – services imports
	Incomes balance	=Incomes inflows – incomes outflows
	Current transfers balance	=Current transfers inflows – current transfers outflows
1. Current account balance	= visible balance + invisibles balance = Balance of trade in goods & services+ incomes balance +current transfers balance = visible balance+ Services balance + incomes balance +current transfers balance	
2. Capital account balance	=Capital inflows – capital outflows	
3. Financial account balance	=Financial inflows – financial outflows =Net investment + net deposits + net loans +net reserves	
4. Balance of payments	= current account balance + capital account balance +financial account balance without foreign reserves	
current account balance + capital account balance +financial account balance with foreign reserves + balancing item = 0		

Components of the balance of payments

The current account

Current account is part of balance of payments accounts and a record of the trade in goods, trade in services, investment income and current transfers. It is normally divided into four sub divisions.

a. **Trade in goods:** This records exports and imports of physical goods (previously known as 'visibles') such as cars, TV's, and clothing. Exports result in an inflow of money and are therefore a credit item.

Imports result in an outflow of money and are therefore a debit item. The trade in goods balance is the revenue earned from exports of goods minus the expenditure on the imports of goods. The trade in goods balance can also be called the **balance of trade**, the visible balance and the merchandise balance.

b. **Trade in services**: This covers the trade in exports and imports of services, which may be referred to as '**invisibles**'. Services include shipping, tourism, banking, and insurance. Thus, the purchase of foreign holiday a Pakistani would be a debit, whereas the purchase of holidays in Pakistan by a foreign resident would be a credit to the Pakistan's services account. The balance of these is called the services balance.

A trade in services deficit occurs when revenue from the export of services is less than the expenditure on services bought from other countries.

c. **Income**: This includes income in the form of profits, interest and dividends earned on direct investment abroad and foreign earnings on investment in the country. For example, dividends paid on foreign shares by residents in the country appear as credit items, while interest paid to foreigners on bank accounts they hold in the country are debit items.

d. **Current transfers:** These cover payments made and receipts received for which there is no corresponding exchange of an actual good or service. They include:
   - Government transfers such as payments to and receipts from international organizations and foreign aid.
   - Transfers by private individuals, e.g., workers' remittances.
   - Transfers out of the country are debits.
   - Transfers into the country (e.g., people working in a foreign country back to their relatives at home forms a large credit item in the case of some countries, for instance the Pakistan).

A current account deficit means that the combined debit items on the four parts exceed the combined credit items on the four parts. A current account surplus is where combined credits exceed combined debits of above four divisions.

Capital account

The capital account records the flows of funds into the country (credits) and out of the country (debits), associated with the acquisition or disposal of non- produced, non-financial assets.

It includes
- government debt forgiveness
- money brought into and taken out of the country by migrants
- the sales and purchases of copyrights, patents and trademarks.

For most countries, the capital account is a relatively small part of the balance of payments.

Financial account

In contrast to the capital account, the financial account is a significant part of many countries' balance of payments, which records large movements of funds into (credits) and out of (debits) the country. It is made up of four parts:

a. **Direct investment:**
This covers
- the **building** of a factory in another country and the **takeover** of an existing firm in another country (debit items)
- the setting up of a new plant or the takeover of a firm in the country by a foreign firm (credit items).

b. **Portfolio investment:**
This includes
- sale of government **bonds** and **shares** to foreign residents (credit items). Any subsequent profit from this investment that outflows to abroad will be recorded as an investment **income outflow** (debit items) on the current account.
- purchase of government bonds and shares in other countries (debit items). Any subsequent profit from this investment that inflows from abroad will be recorded as an investment **income inflow** (credit items) on the current account.

c. **Other financial flows**:
These consist primarily of various types of short term monetary movement between the country and the rest of the world.
- **Deposits** by overseas residents in banks in our country and **loans** received from abroad are credit items, since they represent an inflow of money.
- overseas **Deposits** by local residents in banks of another country and **loans** given or paid back to abroad are debit items, since they represent an outflow of money.

Short-term monetary flows also known as **hot money flows** are common between international financial centers to take advantage of differences in countries **interest rates** and changes in **exchange rates**.

d. **Reserve assets:**
These are made up of the government's holdings of:
- gold
- foreign exchange reserves
- Special Drawing Rights in the IMF

Reserves are kept to settle international debts and to influence the value of the foreign exchange rate.

- **Drawing on reserves** represents a credit item in the balance of payments accounts: money drawn from the reserves represents an inflow to the balance of payments (although an outflow from the reserves account). The reserves can thus be used to support a deficit elsewhere in the balance of payments.

- if there is a surplus elsewhere in the balance of payments, The Bank of England can use it to build up the reserves. **Building up the reserves** counts a debit item in the balance of payments, since it represents an outflow from it (to the reserves).

Net errors and omissions

When all the components of the balance of payments account are taken together, the balance of payments should exactly balance: credits should equal debits.

When the statistics are compiled, however, a number of errors are likely to occur. As a result there will not be a balance. To 'correct; for this, a net error and omissions item is included in the accounts. This ensures that there will be an exact balance. The main reasons for the errors are that the statistics are obtained from a number of **sources**, and there are often **delays** before items are recorded and sometimes **omissions** too.

A deficit on the current account of the balance of payments should be matched by a surplus of equal value on the capital and financial accounts. In practice, however, with so many transactions involved, it is difficult to keep an accurate record. Some mistakes are likely to be made and some transactions may not be included. It is interesting to note that the value of current account deficits experienced by some countries should be matched by the value of the current account surpluses experienced by other countries but again, due to mistakes and items being left out, this is not the case.

To compensate for this, a net errors and omissions figure (also sometimes called the balancing item) is included. By including the net errors and omissions figure, it means that the current account, capital account, financial account and net errors and omissions equal zero.

Over time, more and better quality information is likely to become available and so the size of the net errors and omissions figure usually declines.

Balance of payment disequilibrium

It is necessary to distinguish between equilibrium and disequilibrium in the balance of payments.

BOP Equilibrium

Here, equilibrium refers to a situation where manageable deficits are cancelled out by modest surpluses over a period of time. Under such circumstances there is no particular tendency for the exchange rate to change. Therefore, on short-term basis it does not necessarily mean that a deficit is bad and a surplus is good.

Some situations of equilibrium might be:

- Where a current account deficit is counter balanced by a financial account surplus.
- a current account surplus is recorded, but matched by a deficit on the financial account.
- one year's deficit is balanced by preceding year's surplus

It is difficult to put a period of time on this – the crucial thing is not to look at the balance of payments of an economy on a one-year only basis.

BOP Disequilibrium

Disequilibrium occurs when, over a particular period of time, a country is recording persistent deficits or surpluses in its balance of payments. As a consequence, it has to be recognized that the exchange rate is either overvalued or undervalued on the foreign exchange market. In such situations, particularly in the case of a deficit, corrective action is required in order to prevent the economy draining its foreign currency reserves or ending hopelessly in debt.

Disequilibrium in the balance of payments can arise where:

- all accounts, i.e., current account, capital account and the financial account are in deficit or surplus persistently.
- where current account surplus is unable to offset the persistent deficit on the financial account. and there is overall deficit persisting.
- there is a large surplus on the current account, generating an overall balance of payments surplus persistently. A pertinent example of an economy in this situation for many years has been the case of Japan.

Causes of balance of payment disequilibrium

When economists discuss balance of payments deficits and surpluses they are discussing deficits and surpluses on one or other of the accounts within the balance of payments. Most focus is usually placed on a deficit on the current account of the balance of payments.

Causes of a current account deficit

These include:

1. **A growing domestic economy:**
   - When firms are increasing their output, they may buy more **raw materials and capital goods** from abroad causing an increase in import expenditure.

- **Export revenue** may decline as a result of exports being **diverted** from the foreign to the domestic market.

This cause of a current account deficit is not likely to be considered to be a problem. This is because a growing economy is likely to **attract foreign direct investment**, which will lead to credit items in the financial account to offset the debit items in the current account.

It is also likely to be short-term and to be self-correcting. As the country's firms use the imported raw materials and capital goods to produce more products, they are likely to sell more products both abroad and at home. Therefore, export revenue may rise to match the higher import expenditure.

2. **Declining economic activity in trading partners:** If the countries that buy this country's imports experience recessions or slowdowns in economic growth, their import expenditure may fall or rise more slowly.

3. **Cyclical deficit**: A current account deficit that arises from either change in the economic cycle of the domestic economy or the economies of trading partners is sometimes referred to as a cyclical deficit. It is not usually considered to be a problem as, noted above, it will be relatively short-term and is likely to be self-correcting.

4. **Structural problems:** A current account deficit that lasts over the **long run** is more of a concern. This is because it indicates that domestic firms are **not internationally competitive** and that the country may have to borrow to finance the surplus spending. There are a number of causes of a lack of international competitiveness. These include:
   - an overvalued exchange rate
   - a relatively high inflation rate
   - low labor and capital productivity

   A structural deficit is a cause of concern as it will not be self-correcting.

   The economy has a high tendency to import goods. If citizens like to purchase imported cars, clothing, footwear, food, drink, electrical goods and so on, even though all of these items can be produced within the country with the view that "imported are best". Consequently, substantial deficits will be recorded annually on the trading account. A high tendency to import is a cause of concern as it will not be self-correcting.

5. Developing countries have very **limited domestic production** and have to rely on imported goods for much of their consumer demand.

6. As far as exports are concerned, developing economies often rely heavily for their export revenue on sales on **primary products** on world markets. The terms of trade are often unfavorable, meaning that they have to continually export a great volume of goods for the same export revenue. It is therefore easy to see why many have trade deficits on their trading accounts.

A financial account deficit

A financial account deficit is not necessarily a problem:

- it will give rise to an **inflow of profits, interest and dividends in future** years.
- It may also be **short-term**, resulting from hot money flowing out of the country in search of higher interest rates and in expectation that other currencies may rise in value.

It is more of a concern, however, if it results from a long-term **lack of confidence in the country's economic prospects**. Indeed, such a concern might result in a capital flight. Foreign owners of firms and shares in the country may sell these in large quantities. This movement of firms and funds out of the country reduces tax revenue and employment and may result in the country moving into a recession. The determinants of the level of confidence are very difficult to explain in simple terms. It is a complex phenomenon t economic variables, often set within a political context. Confidence may

also be severely affected by one particular event; again often a political rather than an economic origin, and this may well deter foreign investors.

Consequences of a current account deficit and a current account surplus

A balance of payments deficit is not necessarily bad, nor is a balance of payments surplus necessarily good. Both simply happen.

Consequences of current account deficit:

The effects would depend upon the **size**, **cause**, and **duration** of the deficit or surplus.

Current account deficit is a problem:

- if the deficit is not covered by investment income or an inflow of overseas investment, it will have to be financed by **drawing on reserves** or **borrowing**. Reserves are not infinite and it may be difficult to find willing lenders. In addition, borrowing and **attracting foreign investment** will later involve an **outflow of interest, profits and dividends in the future**, thereby weakening the investment income account.
- A deficit will **reduce the money supply** if the monetary authorities or another section of the balance of payments does not offset it.
- An increase in a current account deficit may also reduce **aggregate demand**, which may slow down **economic growth** and may cause **unemployment**.

A deficit would become a major problem for a country:

- if it is as large as the **whole balance of payments in deficit**
- when deficit **persists for many years**.
- when imports are mainly **consumer goods**
- if it constitutes a **large percentage of GDP**.

Current account deficit is not a problem:

- A current account deficit allows the residents of a country to consume more products than the country produces. This is sometimes referred to as a country **living beyond its means**.
- if deficit is caused by imports of **capital equipment** in the process of development, it may contribute in economic growth of country.
- short-term deficit can be **covered by the surplus of capital and financial account**.
- **Strong foreign reserves** may be able to tackle a temporary deficit.
- if it constitutes a **small percentage of GDP**.
- A deficit would reduce money supply in the economy, which would **reduce inflationary pressures**. Also when (X–M) ↓ →AD ↓ → D-pull inflation ↓

Hence, if current account deficit is small in magnitude, takes a small proportion of GDP, prevails only for a short period of time or caused by imports of capital goods may not be as harmful to an economy as it may be perceived.

Consequences of current account surplus:

It might not be immediately obvious that a surplus presents problems. However, there are number reasons why it might.

1. Exchange rate appreciation

A surplus can lead to undesirable domestic consequences. The surpluses attract 'hot' money which lead to an **over valuation** of the currency, which in turn decrease the competitiveness of exports. This

syndrome is sometimes known as the '**Dutch disease**' after the experience of the **Netherlands** following the exploitation of **North Sea gas**.

2. Retaliation

If one economy is in surplus, others must be in deficit. A persistent surplus may, therefore, embarrass one's trading partners and force them to place restrictions on imports which are to the detriment of the world trade. The activities of a country's trading partners in **getting rid of their deficits** may well decrease the demand for the surplus country's exports, thus 'feeding back' the effect of a deficit to the surplus country.

3. Inflationary consequences

A surplus increases the money supply unless exchange rates are freely floating. The high level of demand, combined with additions to the money supply, may generate inflationary pressure.

4. Depression of domestic living standards

A country running a considerable balance of payments surplus is, in fact, keeping down the standard of living of its citizens. This is because reserves of foreign currency built up by the surplus could be turned into goods and services for the population without any cost in resources to the economy.

The significance of the size of a current account deficit or surplus can be assessed more effectively by considering it as a percentage of the country's gross domestic product (output) than in monetary terms. For example, the **USA** in 2013 had a current account deficit of US**$400** billion whereas South Africa's deficit was only US$**22** billion. **South Africa's** deficit, however, might have been more of a concern as it accounted for **6.5%** of the country's GDP whereas the USA's deficit accounted for only **2.5%** of its GDP.

PAST PAPER QUESTIONS

Topic: Balance of Payments Accounts

(June 2011/P21/Q4/a)
Explain how the different international transactions of a country are recorded in its balance of payments accounts. [8]

(June 2007/P2/Q4)
(a) Outline the current account position of your country or another economy you have studied. [8]
(b) Discuss its ability to improve its performance on the current account. [12]

(June 1996/a)
Explain how a country's balance of payments is organized to account for all its international transactions. [8]

Topic: Causes of Balance of Payments Disequilibrium

(June 2014/P23/Q4/a)
Explain the factors that might cause an economy to experience a current account deficit. [8]

(Nov 2012/P23/Q4/a)
Explain how an economy may face a deficit in its trade in goods yet have a surplus on its current account of the balance of payments. [8]

(June 2008/P2/Q4/a)
Explain what is meant by a current account deficit. [8]

(June 1995/a)
Discuss what causes a current account deficit in the balance of payments. [10]

(June 1991)
Is a developing country more likely to have a deficit on the current account of its balance of payments than a developed country? [12]

(Nov 2006) (b)
Discuss whether a country experiencing inflation will always have a balance of payments problem? [12]

(Nov 1990)
What are the likely effects of inflation on the balance of payments of your country? [10]

Topic: Effects of Balance of Payments Disequilibrium

(Nov 2010/P23/Q4/b)
Discuss whether a balance of payments current account deficit necessarily indicates a weak economy. [12]

(June 2010/P21)
Discuss whether a current account deficit is always a serious economic problem for a country. [12]

(June 2005/b)
A country has a defect on the current account of its balance of payments. Discuss whether this is necessarily harmful to the country. [12]

UNIT 6

Government Intervention in Macro-economy

AS Level
Macroeconomics
Notes Book 2

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Syllabus 2016 – 18

a. Types of policy
- fiscal policy
- monetary policy,
- supply side policy
(instruments of each policy)

b. Policies to correct balance of payments disequilibrium
- assessment of the effectiveness of fiscal, monetary and supply side policies to correct a balance of payments disequilibrium (expenditure-reducing an expenditure-switching)

c. Policies to correct inflation and deflation
- assessment of the effectiveness of fiscal,
- monetary and supply side policies to correct inflation and deflation
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Unit 6 Government Intervention in a Macro-economy

The aims of macroeconomic policy

The main government macroeconomic policy aims are:

- full employment
- low and stable inflation
- balance of payments equilibrium
- steady and sustained economic growth
- avoidance of exchange rate fluctuations
- sustainable economic development.

No single aim is absolutely superior to other and at any one time, a government may prioritize one objective. For example, if the inflation rate is at 20% and rising, a government may decide to concentrate on achieving price stability.

Macroeconomic Policies:

Any attempt to achieve macroeconomic objectives is macroeconomic policy. In examining macroeconomic policy measures, the key concepts of efficiency, equilibrium and progress are important.

Types of macroeconomic policies:

- Fiscal policy
- Monetary policy
- Supply side policies

1. Fiscal policy

Fiscal policy is the use of taxation (T) and government spending (G) to manage aggregate demand in order to achieve the government's macroeconomic aims.

Types of Fiscal Policy

Changes in government spending maybe the result of:

- changes in economic activity (automatic stabilizers).
- changes in government policy (discretionary fiscal policy)

a. Automatic Stabilizers/Non-Discretionary:-

Automatic stabilizers are forms of government welfare spending and taxation that change, without any deliberate government action, to offset fluctuations in GDP.

Two factors act as automatic stabilizers:

- Government spending on unemployment benefits
- Progressive tax system

Budget is an annual statement in which the government outlines plans for its spending and tax revenue.

Government Budget Balance = T–G		
Budget Surplus	Budget Deficit	Balanced Budget
T > G	T < G	T = G
T–G > 0	T–G < 0	T–G = 0

A budget surplus arises when tax revenue exceeds government spending. In contrast, a budget deficit occurs when government spending exceeds tax revenue and a balanced budget is when government spending matches tax revenue.

Most governments seek to achieve a balanced budget over time. In the short term, a government may aim for, or welcome, a budget deficit if there is a low level of economic activity. A budget deficit that occurs due to automatic stabilizers is known as a **cyclical deficit**. A government is unlikely to be concerned about this as it will move towards a balance as economic activity increases. A government will, however, be concerned about a **structural deficit**. This arises when a government is committed to too much spending relative to its tax revenue. In this case, the deficit will not disappear when GDP increases. In **practice**, a budget deficit may contain **both** cyclical and structural elements.

The automatic stabilization process

Automatic stabilizers smooth out fluctuations in disposable income to keep the business cycle close to its long run potential path by:

- Stimulating AD during recessions
- Dampening AD during expansions

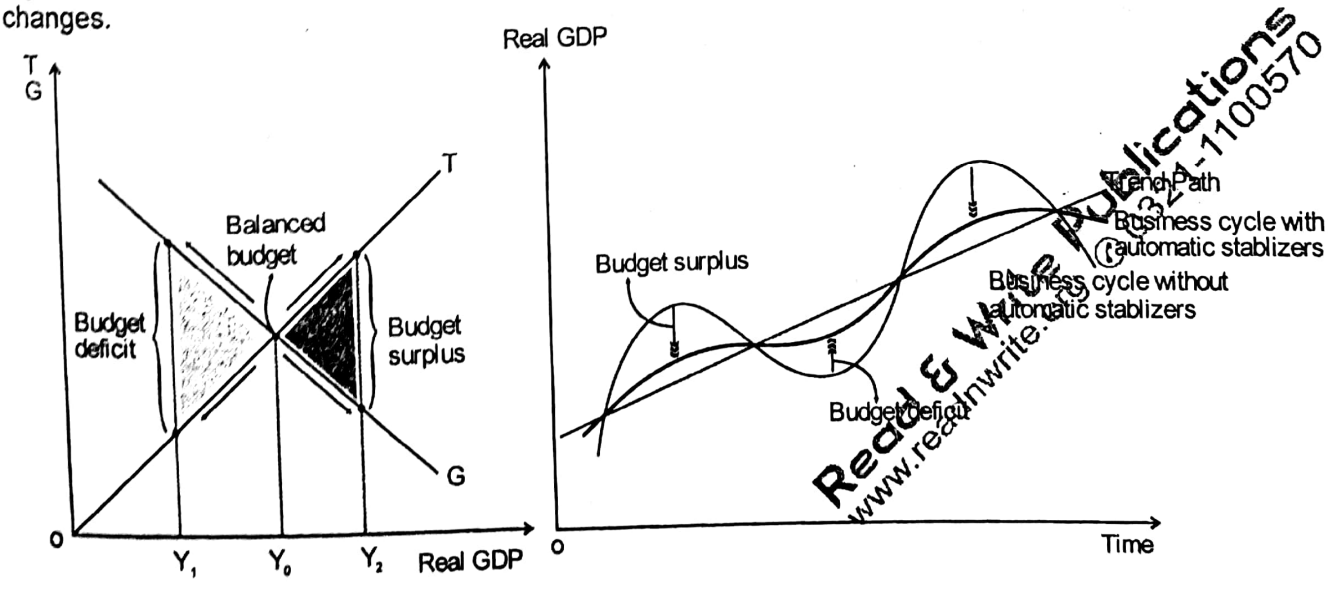
During a recession in business cycle:

- AD↓ → Y↓→ Per capita income ↓
- Those who were initially on the bottom of first tax exemption bracket → will move into tax exempted bracket→ Tax revenue ↓→Budget deficit ↑ → AD ↑ → recessionary pressure ↓ → automatically prevent from deepening of recession
- Those who were on bottom of higher tax bracket→ will be creep into lower tax bracket → will pay less tax→ Tax revenue ↓→Budget deficit ↑ → AD ↑ → recessionary pressure ↓→ automatically prevent from deepening of recession
- AD↓ → GDP↓→ Production↓→ No. of Unemployed↑→ government to spend on unemployment benefits ↑→ Government welfare spending (G)↑ →Budget deficit ↑ → AD↑ → recessionary pressure ↓→ automatically prevent from deepening of recession

During recovery or growth in business cycle:

- AD↑ → Y↑→ Per capita Income ↑
- Those who were initially on the top of tax exemption bracket → will be dragged into tax bracket → fiscal drag → Tax revenue ↑→Budget surplus ↑ → AD ↓ → Inflationary pressure ↓ → Automatically prevented overheating
- Those who were on top of lower tax bracket→ will be creep into higher tax bracket → will pay more tax → Tax revenue ↑→Budget surplus ↑ → AD ↓ → Inflationary pressure ↓→ Automatically prevented overheating
- AD↑ → GDP↑→ Production↑ → No. of Unemployed↓ → government to spend less on unemployment benefits →Government welfare spending (G)↓ →Budget surplus ↑ → AD↓ → Inflationary pressure ↓→ Automatically prevented overheating

Figures below shows how tax revenue and government expenditure change automatically as GDP changes.



Automatic stabilizers—programs that automatically expand fiscal policy during recessions and contract it during booms—are one form of countercyclical fiscal policy. It is a structural features of government spending and taxation that smooth fluctuations in disposable income, and hence consumption, over the business cycle.

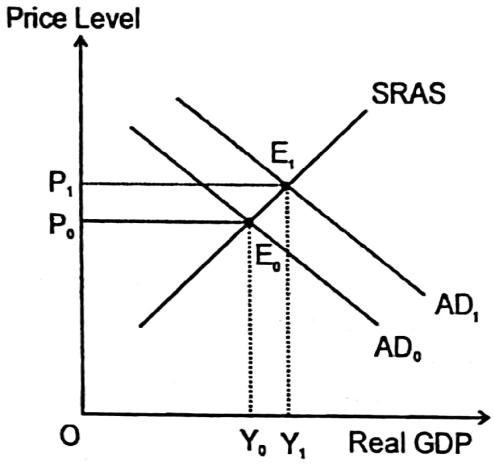
Is it possible to rely solely on automatic stabilizers?
Automatic stabilizers will take very long period of time to recover the economy from inflation or unemployment, therefore discretionary policies are inevitable for short-run solutions.

b. Discretionary fiscal policy

Deliberate changes in government spending and taxation can be referred to as discretionary fiscal policy. Discretionary fiscal policy can be:

- Expansionary or reflationary fiscal policy
- Contractionary or deflationary fiscal policy

1. Expansionary or Reflationary Fiscal Policy



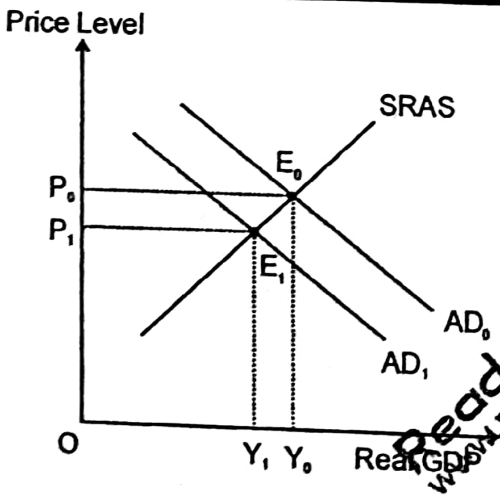
Government increases Government spending (G) on goods and services and reduces Direct Taxes (T) when economy falls in recession. This policy is known as expansionary or reflationary fiscal policy.

G↑→AD↑→GDP↑→unemployment ↓→ Economic growth ↑

Tax↓ → Yd↑ → C↑ →AD ↑→ GDP↑→ unemployment ↓, Economic growth ↑

Increased government spending and reduction in direct taxes will shift the AD rightward to AD_1 from AD_0 causing general price level to rise but unemployment to fall as national income from Y_0 to Y_1.

2. Contractionary or Deflationary fiscal policy



Policy instrument	Effectiveness
G↓→AD↓→inflationary pressure ↓	– Despite unfavorable situations, certain projects cannot be postponed. This is especially so with basic infrastructure such as the building of hospitals, schools and the expressways.
– Income tax rates ↑, Taxpayer threshold ↓, Tax base↑→ Tax↑ → Yd↓ → C↓ →AD ↓→ inflationary pressure ↓	– increase **unemployment** and **slow economic growth** – workers may seek **higher wages** to maintain their disposable income → **cost-push inflation**↑ – **disincentive effects** → Some workers may leave the labor force → AS↓→ cost-push inflation↑ – if they raise income taxes higher than those operating in rival countries, some of their skilled workers may **emigrate**→ AS↓ –
– tariff↑→Imports↓→ expenditure switching to local substitutes of imported goods	– Imposing **tariffs** against fellow members of a **trade bloc** is not an option. – Imposing or increasing **tariffs** against other countries involves two risks. One is that it may provoke **retaliation** – **tariffs** may reduce the pressure on domestic firms to become more efficient and therefore increase **inefficiency**. – Fiscal policy measures may alter a country's current account position in the short term but are unlikely to be a long-term solution. This is because once the policy measures are stopped, households and firms are likely to go back to spending the same amount on imports relative to the amount of export revenue earned.

Other Limitations of fiscal policy:

1. Fiscal policy is **too slow** to operate, i.e., time lags.
2. Fiscal policy is based on **GDP and CPI data** which is not **reliable**.
3. Fiscal policy is usually based on **political** aims rather than economic aims especially in less developed countries.
4. Less effective in **floating exchange rate system.**
5. Government policy measures may also be influenced by powerful pressure groups and there is the possibility of government **corruption**.
6. Events and policies abroad that affect a nation's net exports also affect its economy. National economies are vulnerable to **unforeseen international aggregate demand shocks** that can alter domestic GDP and make current domestic fiscal policy inappropriate, e.g., nine eleven or credit crunch.

2. Monetary policy

Monetary policy refers to any policy measures or instruments to influence the price or quantity of money. The three instruments of monetary policy are:

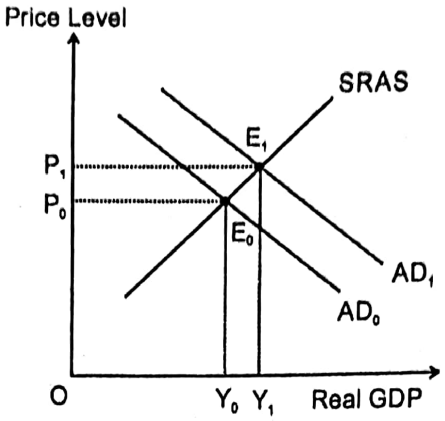
- **Money supply (Ms)** is the total amount of money in a country. It includes cash and banks lending.
- **Interest rate (ir)** is the price of borrowing money and the reward for saving.
- **Exchange rate** is the external value of domestic currency. Exchange rate measures include government decisions on what type of exchange rate system to operate and, in the case of a managed and fixed exchange rate, at what rate to set the exchange rate.

Monetary policy measures are usually implemented by the central bank of the country or area. Monetary policy, like fiscal policy, seeks to influence aggregate demand. Policy measures to change the money supply include those that seek to influence lending by commercial banks. This is because such lending is a major cause of changes in the money supply.

1. Expansionary or Reflationary monetary Policy:

Expansionary or reflationary monetary policy is used to achieve :

- Low unemployment
- Economic growth
- Reduction in financial account surplus or current account deficit of balance of payments
- to prevent exchange rate appreciation or to devaluate exchange rate



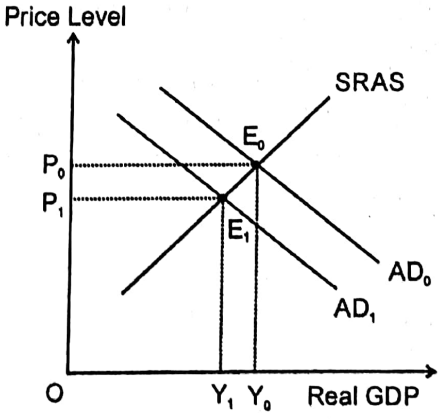
In this case, this may be achieved by:

- an increase in the money supply → C↑→ AD↑
- a cut in the interest rate→ I,C↑→ AD↑
- a reduction in the foreign exchange rate→ P_X↓→X↑, P_M↑→M↓→ (X−M) ↑→ AD↑

2. Contractionary or Deflationary monetary policy

Contractionary or deflationary monetary policy is used to achieve :

- Low inflation
- Reduction in financial account deficit or current account surplus in balance of payments
- to prevent exchange rate depreciation or to revaluate the exchange rate



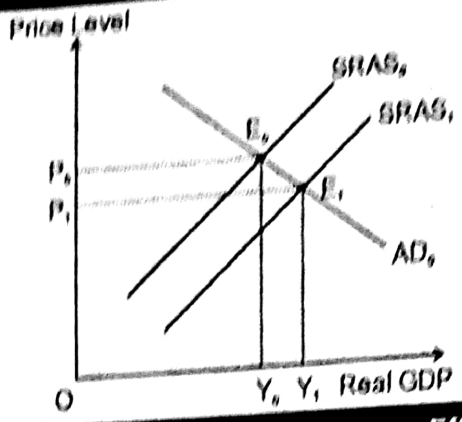
Policy instrument	Effectiveness
1. a decrease in the money supply →C↓→ AD↓	– In practice, it can be **difficult to control the money supply**. This is partly because commercial banks have a strong incentive to try to increase their lending and may seek to get round any limits a central bank seeks to impose on the growth of their lending. Trying to control certain forms of money may lead to new forms of money being used.
2. Interest rate (ir)↑: – cost of borrowing↑→C↓ (durables, e.g., cars &	– There is a **time lag** between changing interest rates and the full effect being transmitted to the macroeconomy. Some economists have estimated that it can take as long as **18 months** for interest rate changes to have their full impact. This is, however, less time than in the case of some fiscal policy measures.

houses etc) →AD↓→Demand-pull inflation↓ – cost of borrowing ↑→I↓→AD↓→Demand-pull inflation↓ – S↑→C↓→AD↓→Demand-pull inflation↓ – If domestic ir > ir abroad → hot money inflows↑ and outflows ↓→Demand for currency ↑ and supply ↑→exchange rate appreciation → exports expensive and imports cheaper relatively→ Net exports ↓ if combined elasticity of demand for exports and imports is greater than one→ AD ↓→ Demand-pull inflation↓	– Interest rate changes may be a powerful policy measure but they are also a **blunt** and **uncertain** one. – Commercial banks usually do keep their interest rates in line with the central banks', as it is the rate they will have to pay if they need to borrow from the central bank. There is, however, **no guarantee that they will always raise their interest rates** when the central bank increases its rate. – households may not reduce their spending if they are **optimistic** about the future. – increase the cost of borrowing funds to invest and will increase the opportunity cost of using profits to invest. **If investment falls below depreciation**, the capital stock will decline. The resulting decrease in aggregate supply can push up the price level. – A rise in the rate of interest may discourage **foreign direct investment** as it would raise foreign firms' costs and the firms may expect demand to fall in the country. – Countries that are members of an **economic union** may operate the same interest rate and the same exchange rate as other members and the area's central bank may make the decisions on these areas of monetary policy. – Another constraint may operate in the case of a country operating a **fixed exchange rate**. In this case, its central bank may be reluctant to raise the interest rate as it may put upward pressure on the exchange rate
3. **an increase in the foreign exchange rate** → Px↑→X↓, PM↓→M↑→ (X–M) ↓→ AD↓	– A higher interest rate may also have an adverse effect on **unemployment** and **economic growth,** as with a deflationary fiscal policy measure. – With increasing mobility of financial expenditure, it can be difficult for a country to operate an interest rate that is significantly different from rival countries. – lowering the exchange rate will not work if demand for exports and imports is price **inelastic** or if the relative quality of the country's products falls. – will improve balance of current account (X–M) in short run when demand for exports and imports is inelastic and therefore contribute to demand-pull inflation as explained by **J-curve** effect. – not likely to be an effective **long-term** solution to balance of payments problems.

3. Supply-side policy

All those measures that a government takes to increase aggregate supply in order to achieve it macroeconomic objectives are known as supply side policies.
Supply side policy measures have the potential to benefit all of a government's policy objectives in the long term. They can reduce inflationary pressure, raise economic growth, lower unemployment, stabilize an exchange rate, reduce a current account deficit and promote development.

Supply-side policies



Policy instrument	Effectivity
1. **cutting corporation tax** → investment↑ → both AD & AS ↑	
2. **cutting income tax** → working hours ↑ , stay in the labor force , persuade to enter the labor force ↑ → AS ↑	– The outcome of supply side policy measures is, however, **uncertain**. For example, cutting income tax may encourage some people to **work fewer hours** if they are currently content with their earnings. – **cuts in income tax** may increase aggregate demand before in short run they increase aggregate supply and therefore may **contribute to inflation.**
3. **reducing welfare payments** → unemployed more effort into searching for a job	
4. Increasing spending on **education** and **training** → skills, productivity, flexibility and mobility ↑ → AS ↑→ If increases in aggregate supply can keep pace with higher aggregate demand, a country can enjoy higher output (higher real GDP) without experiencing inflation.	– Some supply side measures, for example increased spending on education, may not be very effective in the **short term** as they can take a long time to have an effect. In the long term, however, they have the potential to be very effective. This is because they may directly tackle the problems causing the country's products to lack international competitiveness. – Providing more **education** and training may not be very effective if it is not of a high **quality** or it develops skills that will **not be in demand in the longer term**. – **Increased government spending on education** may increase aggregate demand in short run before they increase aggregate supply and therefore may **contribute to inflation.**
5. increasing spending on **infrastructure** → firms' transport costs ↓ → AS ↑	
6. **trade union reform** → number of days lost through strikes↓, workers' flexibility and mobility ↑ → AS ↑	
7. **privatization** → efficiency↑ → AS ↑	– Privatization **may** not result in an increase in efficiency if the privatized industries become monopolies and do not take into account external costs and benefits. – privatized firms that have considerable market power and become **monopoly** may raise their prices.

↓ **deregulation** → barriers to entry and laws and regulations↓ → AS ↑	– Deregulation and trade union reform may also result in increased **inefficiency** if there is market failure in the product and labor markets, which laws and trade union power initially countered.
↓ government **subsidies** → firms' costs of production↓ → AS ↑	– Providing subsidies to firms may not always result in lower prices of domestically produced products. This is because the firms **may not pass on the subsidies to consumers** and the payment of subsidies may make the firms complacent. There is also the risk that subsidies may provoke **retaliation** as foreign governments may see them as unfair competition.

Policies to correct current account deficit

There are two broad-based policy approaches that can be used to correct an imbalance in the balance of payments.

1. Expenditure-switching policies:

An expenditure switching policy is any action taken by a government that is designed to persuade domestic households and firms to buy domestically produced goods and services rather than imports. It would also include policy measures designed to persuade foreign households and firms to buy more exports from the domestic economy.

These policies are not designed to reduce the total amount of spending in a country but to redirect or 'switch' spending to the country's products rather than those produced in other countries.

- reduction in value of domestic currency (monetary policy)
- Protectionism (Fiscal policy and other measures)
- supply-side measures

When an economy faces unemployment as well as BOP, deficit, expenditure-dampening policies fail to rectify both problems simultaneously. Here, expenditure switching policies, e.g., devaluation of exchange rate. However, there is a risk it may generate inflationary pressure.

a. Reduction in of exchange rate (monetary policy):

Reducing the growth of the money supply, decreasing interest rate and exchange rate may be used as an expenditure switching measure.

If an economy has a high rate of unemployment and a current account deficit, its central bank may reduce the interest rate in a bid to put downward pressure on a **floating exchange rate** or government may intentionally do this by reducing interest rate or purchase of foreign reserves against domestic currency in **fixed exchange rate system**. A lower exchange rate may result in the country's products becoming more internationally competitive. if demand for exports and imports is elastic it will improve current account balance, reduce unemployment and accelerate economic growth.

Effectiveness of exchange rate devaluation:

1. The Marshal Lerner criterion states that devaluation will improve the balance of payments only if the sum of elasticites of demand for exports and imports is greater than unity.
2. The J-Curve—it has frequently been observed that measures taken to rectify a balance of current account deficit have often led to an immediate deterioration in the payments position followed by a subsequent recovery. If we plot this on a graph we obtain the J-curve effect as shown in the figure as follows.

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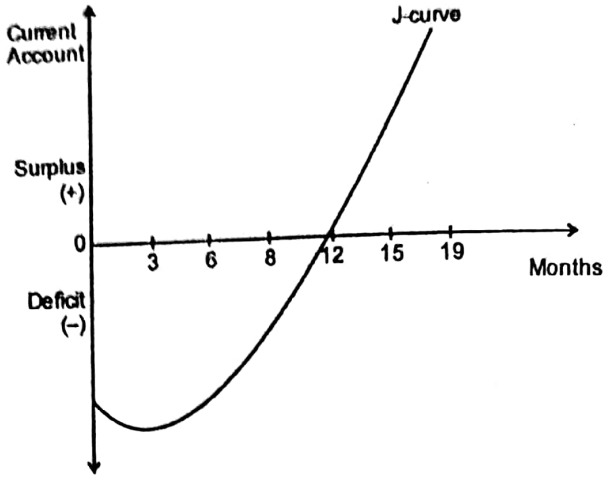

3. **Supply of imports must also be elastic.** The importers must be able to cut down production or divert their market to other countries. This will cut down on the volume of imports of the devaluating country.
4. There must be **no speculative activities following devaluation**. There must be no rumors that the country will devalue their currency further (as in most cases, devaluation comes in stages in terms of percentage fall). If this situation arises, then people will adopt 'wait and see' and the current account will not improve.
5. There must not be any form of **retaliation** on the part of the other trading partners. Brunei, in this case, must not devalue their currency; otherwise there will be no gains for Singapore. Other trading partners must not adopt strict protectionist policies as this will reduce the volume of exports of the devaluing country.
6. The **inflation rate** in the country must also be kept low. Despite the favorable exchange rate, exports of the country may not be attractive to other if the prices are high. The favorable exchange rate is offset easily by the high price of the product. Hence, the inflation rate must be kept low at all time.

b. Protectionism (fiscal and other measures)

Protectionism refers to the trade policy which restricts imports (by imposing tariffs, quantitative restrictions and other devices) and promotes domestic industries in order to give a competitive advantage to domestic economy of a country.

1. **Tariffs:** Tariffs are the best known method of protection and are sometimes referred to as customs duties. Tariffs, also called custom duties, act exactly the same way as a tax by artificially raising the price of foreign products as they enter the country. Instant effects of tariffs would be the rise in the price of imports which will reduce volume of imports, increase in government revenue and an eventual increase in domestic production.
2. **Quotas:** Quotas are limits on imports. The limits are usually imposed on the quantity of imports but are also sometimes imposed on the value of imports that can be purchased each year.
3. **Exchange control:** Instead of limiting the imports directly, a government may place limits on the amount of foreign exchange that can be purchased in order to buy imports, travel abroad or invest abroad.
4. **Subsidies:** Subsidies may be given to both exporters and to those domestic firms that compete with imports. In both cases domestic firms will, in effect, experience a fall in costs. This will encourage them to increase their output and lower their price. This may enable them to capture more of the markets at home and abroad.
5. **Embargoes:** An embargo is a complete ban either on the imports of a particular product or on trade with a particular country.
6. **Voluntary export restraints (VER):** A voluntary export restraint is an agreement between two countries where the government of the exporting country agrees to restrict the volume of its exports of a certain good or services. It may do this to prevent tariffs or quotas' being imposed on its product. Japan has entered into a number of VERs with EU members and with the USA in the export of its cars.

7. **Economic and administrative burdens ('red tape'):** Red tape means making import process more complex and slow by bureaucratic delay tactics. A government may seek to discourage imports by requiring importers to fill out **time consuming forms.** It may also set artificially high **product or health standards** to restrict foreign competition. Such measures restrict consumer choice.

Effectiveness of protectionism:

- A tariff will be more effective in **protecting the domestic industry** if demand for imports is price **elastic**.
- There is the possibility that the imposition of a tariff **may not make** domestic products more **price competitive**. This would be the case if the price of the import plus the tariff is still below the domestic price or if firms selling the imports absorb the tariff and do not raise their prices.
- If the UK imposes restrictions on, say, Japan, then Japan may **retaliate** and impose restrictions on the UK. The increased use of tariffs and other restrictions can lead to a **trade war**, with each country cutting back on imports from other countries. In the end, everyone loses.
- Countries may not be able to use protectionism measures against members of a **trading bloc.**
- Protectionism may not be effective if domestic firms do **not have a capacity to supply** enough for domestic consumption.

c. Supply side policy

Supply side policy measures may reduce a **current account deficit** and a **financial account deficit** by making domestic products more **price competitive** and by making domestic markets **more attractive to invest in**.

1. **Deregulation** and **privatization** may
   - increase the **competitive pressure** on domestic firms to keep costs and prices low
   - improve **quality**
   - make more **responsive** to changes in consumer demand.

2. **Spending on education and training** and increased investment may
   - A more **skilled labor force** and better capital equipment may **reduce the relative price** of domestic output and raise its **quality**. Both of these effects will be likely to increase domestic firms' share of the home market and the global market.
   - A skilful labor force and good quality capital equipment may also **attract foreign multinational companies** to set up branches in the country in expectation they will be able to produce good quality products at low cost.
   - **Portfolio investment** may also increase as the country's economic prospects are likely to improve as a result of higher aggregate supply.

3. **Trade union reform** may
   - enable domestic firms to work with more flexibility and so be more **responsive** to changes in demand.
   - A resulting fall in industrial action may, in addition, make **multinational** companies more willing to invest in the country.

2. Expenditure-dampening policies:

An expenditure dampening or reducing policy is any action taken by a government that is designed to reduce the total level of spending in an economy. Such a policy has **two effects**.

- One is a **reduction in spending**, which will mean that there will be fewer purchases of imported goods and services.
- The second is that domestic producers will find that their **domestic market is 'dampened'**. As a result, they may try to make up for the decrease in domestic sales with an increase in sales abroad. The overall effect, therefore, of an expenditure dampening policy may be a fall in imports and a rise in exports.

a. Fiscal policy

If a country is experiencing a deficit on the current account of its balance of payments, it may use a variety of fiscal policy measures. To reduce total expenditure, it could:

- income tax↑→ disposable income↓→ imports as well as domestically produced products expenditure↓
- government spending↓→ imports↓, pressure on domestic firms to increase their exports↑

b. Monetary policy

Reducing the growth of the money supply may be used as an expenditure dampening measure. A higher interest rate may act as a dampening policy measure, reducing demand for imports and reducing inflationary pressure. It may, however, raise a floating exchange rate that could reverse the fall in demand for imports

Policies to reduce current account surplus:

- free trade
- expansionary fiscal policy
- expansionary monetary policy and exchange rate revaluation

Policies to correct demand-pull inflation

To reduce demand-pull inflation, governments employ

- deflationary fiscal policy
- deflationary monetary policy measures.
- supply-side policies. (To reduce the risk of demand-pull inflation in the longer term, governments use supply side policy measures. Over time aggregate demand tends to increase. If increases in aggregate supply can keep pace with higher aggregate demand, a country can enjoy higher output (higher real GDP) without experiencing inflation)

Policies to correct cost-push inflation

- In the short term, a government may instruct its central bank to **raise the exchange rate** in a bid to reduce cost- push inflation. Such a measure may reduce raw material and capital costs and is likely to put pressure on domestic firms to find ways to cut their costs.

- Governments may also employ **supply side policy measures** to correct cost-push inflation. For example, increased spending on **training** can raise labor productivity and so reduce labor costs or at least reduce the upward pressure on labor costs. **Lower corporation tax** may encourage firms to buy more efficient capital equipment, which can also put downward pressure on price rises. A government may decide to provide **subsidies** to firms facing, for instance, higher fuel costs, so that they do not have to raise their prices. It may also hope that firms may use some of the subsidies to buy new capital equipment, which may lower prices in the longer term.

The effectiveness of policies to correct cost-push inflation

- A rise in the exchange rate may not reduce inflation if foreign producers decide to keep the price of their exports unchanged in the country's currency.
- The country's firms may also not respond to the increased competitive pressure to keep down their cost and price rises.
- Increased spending on training may be successful in raising the skills of workers but if their pay rises by more than their productivity, costs of production will still rise.
- Lower corporation tax may not result in more investment if firms are pessimistic about the future.

- There is also the risk that government subsidies may increase aggregate demand, through the rise in government spending, but may not increase aggregate supply if firms do not respond positively by using them to increase their efficiency.

Policies to correct deflation and their effectiveness

A government will not seek to stop **good deflation** but it will be anxious to correct **bad deflation**. To reverse a fall in aggregate demand and the price level, governments employ reflationary fiscal and monetary policy measures. For example, a government may increase its spending, cut tax rates, reduce interest rates and/or increase the money supply.

A rise in **government spending may be more effective** than the latter three policy measures. This is because firms and households may be **pessimistic** during periods of deflation and so may not spend more even if their disposable incomes rise and it becomes cheaper to borrow.

When interest rates are low it may not be possible to reduce them much further and any cuts may have little effect. For instance, a 2% **interest rate is already low** so if firms and households are not borrowing, it suggests they are concerned about future economic prospects. So if the interest rate is reduced to 1.5%, it is unlikely to stimulate increased borrowing and spending.
Central banks may increase the money supply, increasing the funds commercial banks have available to lend. The banks, however, may be reluctant to lend because they may think there is an **absence of creditworthy borrowers**.

Past Paper Questions

Topic: Types of policies

(June 2017/P22/Q4/a)
Explain the difference between fiscal policy and monetary policy. Show how each can be used to increase aggregate demand. [8]

(June 2017/P22/Q4/b)
Discuss whether supply side policy is more likely to be successful than fiscal policy when an economy is faced with inflation. **[12]**

(June 2017/P21/Q4/b)
Discuss the use of supply side policy as a means of solving the problem of inflation. Consider whether this policy is likely to be effective. [12]

(June 2016/P22/Q4/a)
Using examples, explain the instruments of monetary policy and supply-side policy. [8]

(June 2016/P22/Q4/b)
Discuss the advantages and disadvantages of supply-side policy and consider its effectiveness in an economy that is facing a labour shortage. [12]

Topic: Policies for Correcting a Balance of Current Account Deficit

(Jun 2014/P23/Q4/b)
Discuss the policies available to a government faced with a current account deficit and consider which policy has the fewest disadvantages for the consumers in that economy. [12]

(June 2013/P23/Q4/b)
Discuss whether changing the exchange rate or imposing tariffs is the better way of reducing a deficit on the current account of the balance of payments. [12]

(Nov 2012/P23/Q4/b)
Discuss whether a satisfactory balance of payments, a strong exchange rate and a low rate of inflation are likely to be achieved at the same time. [12]

(Nov 2011/P23/Q3/b)
Discuss whether government action is the most likely cause of a current surplus on the balance of payments. [12]

(Nov 2011/P21/Q3/b)
Discuss the effectiveness of expenditure-switching policies in reducing a current account deficit on the balance of payments. [12]

(June 2011/P21/Q4/b)
Discuss the use of tariffs and quotas as policies to reduce a current account deficit. [12]

(Nov 2010/P23/Q4/a (ii))
Explain
(ii) the difference between expenditure-dampening and expenditure-switching trade policies. [8]

(June 2008/P2/Q4/b)
Discuss the effectiveness and desirability of imposing tariffs to correct a current account deficit. [12]

(June 2007/P2/Q4/a)
Explain the difference between expenditure-switching and expenditure-dampening policies as a means of correcting a balance of payments disequilibrium. [8]

(June 2004/b)
Discuss the circumstances in which reducing the exchange rate and introducing quotas are effective policies to tackle a trade deficit. [8]

(June 1998/b)
Discuss the policy options that are available to a government to deal with a balance of trade deficit. [12]

(June 1995/b)
Comment on the policies available to a government faced with a current account deficit. [15]

Topic: Policies to correct demand-pull inflation

(June 2017/P23/Q4/b)

(March 2016/P22/Q4/b)
Compare two policies that may be considered to solve the problem of demand-pull inflation and evaluate which is likely to be the more effective. [12]