

# BASICS OF MACROECONOMICS

**Dr. Dhaval J. Pandya**  
**Asst. Prof. & Head**  
**Department of Economics,**  
**Udhna Citizen Commerce College &**  
**S.P.B. College of Business Administration &**  
**Smt. Diwaliben Harjibhai Gondaliya College of B.C.A. & I.T.,**  
**Surat.**  
**Email: [djp\\_econ@yahoo.co.in](mailto:djp_econ@yahoo.co.in)**

Dedicated to...

The Patron Saint of *Macroeconomics*  
Lord John Maynard Keynes  
(1883 – 1946)



# The Birth of Macroeconomics

- The development of macroeconomics has been one of the major breakthroughs of 20<sup>th</sup> Century economics, leading to a much better understanding of how to combat periodic economic crisis & how to stimulate long term economic growth.
- In response to the Great Depression , John Maynard Keynes (1883-1946) developed his revolutionary theory in his monumental work *“The General Theory on Employment ,Interest And Money”*(1936), which helped us to explain the forces producing economic fluctuations & suggested how Governments can control the worst excesses of the business cycles.

# History

- Macroeconomic issues have dominated world and in particular U.S. political & economic agenda for much of the 20<sup>th</sup> Century.
- In 1930s, when production ,employment & prices collapsed in United States & across much of the industrial world, economists & political leaders wrestled with the calamity of the Great Depression.
- During Second World War & again during Vietnam War in the 1960s, the problem was one of managing a sustained boom & containing high inflation.
- In 1970s the burning issue was “Stagflation”- a combination of slow growth and rising prices that left Americans feeling miserable.
- The 1990s witnessed a period of rapid growth, falling unemployment and stable prices – a period so unusual that it was called the “new era” economics in Western nations.

# Central Macroeconomic Problems

1. Why do output & employment sometimes fall and how can **unemployment** be reduced?
2. What are the sources of **price inflation**, and how can it be kept under control?
3. How can nation increase its rate of **economic growth**?

# Subject Matter of Macroeconomics

- Determination of National Income.
- General Price level & Inflation.
- Business Cycles / Trade cycles.
- Stagflation.
- Economic Growth.
- Balance of Payments & Exchange Rates.

# Significance of Macroeconomics

- Importance of macroeconomics for-
  1. Accelerating economic growth.
  2. Understanding business cycles.
  3. Formulating Government's macro economic polices.
  4. Individual & business decision making.

# Objectives & Instruments of Macroeconomics

Objectives	Tools/ Instruments
1. Output: High level & rapid growth of output	Fiscal Policy: Government Expenditures (Public Exp.) Taxation
2. Employment: High level of employment with low involuntary unemployment.	Monetary Policy: Controlling the Money Supply to determine interest rates.
3. Price Level Stability: With minimum inflationary & deflationary spirals .	Fiscal & monetary tools.

These are the ways that policy makers can affect the pace & direction of economic activity.

# Macro Economic Policies

- There are two macro economics polices viz., Fiscal Policy & Monetary Policy.
- The *fiscal policies* of the government involve the power to tax and power to spend while *monetary policy* involves determining the supply of money and interest rates ; these affects investment in capital goods & other interest rate sensitive spending.
- By careful use these policies, governments can affect output, employment & inflation.
- Macroeconomic polices for stabilization & economic growth includes fiscal policies (of taxing & spending) along with monetary policies (which affect interest rates & credit conditions)

# Can Macroeconomic policies remedy the shortcomings of the Market?

<b>Failure of Market Economy</b>	<b>Government Interventions</b>	<b>Current Examples of Govt. Policy</b>
<b>Inefficiency</b>		
Monopoly	Encourage Competition	Anti trust laws , deregulation
Externalities	Intervene in markets	Anti pollution laws, anti smoking ordinance
Public Goods	Encourage beneficial activities	Provide infrastructural facilities , provide public education
<b>Inequality</b>		
Inequality in income & wealth	Redistribute income	Progressive tax on income & wealth
<b>Macroeconomic Problem</b>		
Business cycles	Stabilization through macroeconomic policies	Monetary Policy ( $M_s$ & $r$ ) Fiscal Policy (Tax & Spending))
Slow economic growth	Stimulate growth	Invest in education, rise in national saving

# Post-Keynesian Developments in Macroeconomics

- Monetarism – Milton Friedman
- Supply-Side Economics.
- Rational Expectations Theory.

# Macro Economic Models



- AD – AS Model
- IS – LM Model

# Inside the Macro economy: AS- AD Model

## Aggregate Supply and Aggregate Demand

- Aggregate Supply (A.S.): refers to the total quantity of goods & services that the nation's businesses willingly produce & sell in a given. A.S. basically depends on price level, productive capacity & the level of costs.

# Inside the Macro economy: Aggregate Supply and Aggregate Demand

- Aggregate Demand (A.D.): refers to the total amount of different sectors in the economy willingly spend in a given period. It depends on the level of price, monetary & fiscal policies & on some other factors.

# The Concept of Macroeconomic Equilibrium

- A macroeconomic equilibrium is a combination of overall price (P) and quantity (Q) at which all buyers and sellers are satisfied with their purchases, sales and prices.
- We use A.D. & A.S. concepts to see how equilibrium values of price and quantity is determined in economy.
- The level of national output and the general price level are determined at the intersection of the A.D. & A.S. curves called equilibrium.
- This equilibrium occurs at an overall price level where firms willingly produce and sell what consumers willingly to buy.

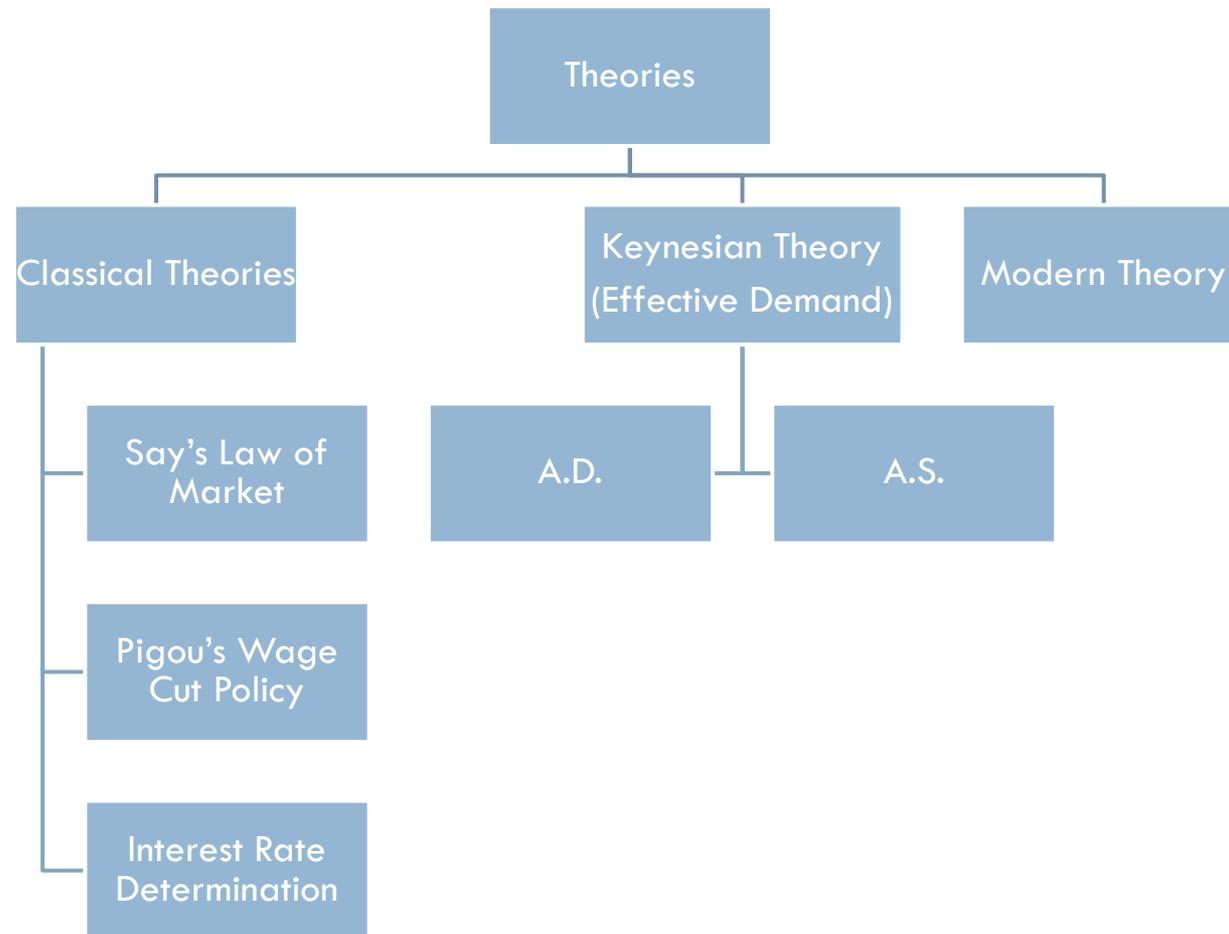
# IS – LM Curve Model

- Interlinkages between Goods Market & Money Market:
- In the Keynesian Analysis, National Income is determined at the level where AD & AS for Consumption (C) & Investment Goods (I) is equal to aggregate output (Q) . This is a point where Goods market is in equilibrium.
- According to Keynes, the rate of interest is determined where the Demand for Money & Supply of Money equates one another. This is a point where money market is in equilibrium.
- In this Keynesian model, changes in the rate of interest either due to changes in demand for money or supply of money affects the determination of national income & output in the goods market. *So the changes in the goods market is influencing by money market.*

# Classics V/s. Keynes

Classical Thoughts	Keynesian Thoughts
Laissez Faire Policy (Market Base)	Controlled Policy (Role of the Government)
Long term Approach	Short term Approach
Supply Oriented	Demand Oriented
Equilibrium @ Full employment	Equilibrium before Full employment
Micro To Macro (Specific to General)	Macro To Micro (General to Specific)
Theoretical Approach (Normative notion)	Policy Oriented Approach (Positive notion)
Wage Flexibility- Pigou's Wage-Cut Policy	Efficiency Wage
Interest Rate Determination (Saving Investment Parity : $S=I$ )	Liquidity Preference Theory (Demand & Supply of Money Based)

# Theory of Income & Employment



# Say's Law of Market

- The essence of Say's Law of Market is that the supply through the process of production generates necessary income (earned by factors of production) to demand the goods produced.
- According to Say the main source of demand is the flow of factor incomes generated from the process of production itself.



***“Supply creates its own demand”.***

# Propositions of Say's Law of Market

1. Production is the soul cause of demand.
2. There can not be overproduction of goods any time.

Any expansion in output would create an equivalent expansion in income & in spending too. To express this symbolically we can write –

$$\triangle Q = \triangle Y = \triangle E$$

# Assumptions of Say's Law of Market

1. Optimum Allocation of Resources.
2. Perfect equilibrium.
3. Perfect competition.
4. Market economy.
5. Laissez faire policy.
6. Elastic market.
7. Market automatism.
8. Circular flow ( $Y=E$ ).
9. Saving-Investment parity.
10. Long term phenomenon.

# Pigou's Wage Cut Policy

- The classists especially Prof. A. C. Pigou advocates the *money wage cut policy to solve the problem of unemployment.*
- Classical economist believed that if wage are lowered sufficiently all involuntary unemployment disappears.



# Pigou's Wage-Cut Policy

- If one want to increase employment (N) then one has to reduce wages (W).

- Illustration : If the Wage Fund of a company is Rs.1000.00

Wage	Labourers Employed	Wage Fund
Rs.100	10	10*100=1000
Rs. 50	20	20*50=1000

- $W/r \downarrow$  – Cost  $\downarrow$  – Price  $\downarrow$  – Demand  $\uparrow$  – Output  $\uparrow$  – Investment  $\uparrow$  – Income  $\uparrow$  – Employment

# Keynes' Criticisms Against Classical Theory

- Unrealistic assumption of full employment.
- Undue importance to long run.
- Keynes' denial to Say's law of market.
- Attack on money wage cut.

( $W/r \downarrow$  - PPM  $\rightarrow$  Consumption  $\downarrow$  - Demand  $\downarrow$  -  $Q \downarrow$  -  $Y \downarrow$  -  $N \downarrow$ )

- Attack on interest rate flexibility theory.

$S \ \& \ I = f(r)$  However,  $S \ \& \ I = f(Y)$

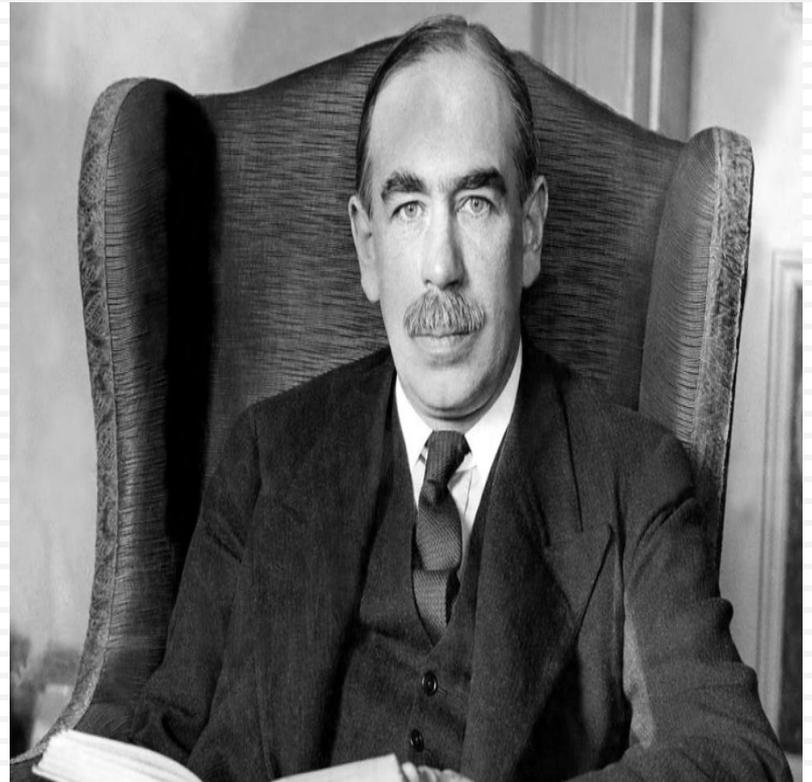
- Role of Government- No laissez faire policy.

# Keynesian Theory of Effective Demand

- Prof. J. M. Keynes rejected the classical dogma in his book *“The General Theory of Employment, Interest & Money”* published in the year 1936.
  
- Salient Features of Keynesian Economics:
  1. Macro Economic Analysis.
  2. Short period analysis.
  3. Generality of approach.
  4. Policy orientation.

# Keynesian Economics

John Maynard Keynes  
British economist (1883-1946)



# The Principle of Effective Demand

- The gist of Keynesian analysis of income determination lies in the principle of effective demand.
- Keynes pointed out that the level of income & output in an economy is determined by the level of employment, which in turn is determined by the level of “*Effective Demand*” (E.D.). Functionally,

$$Y \text{ \& } Q = f(N)$$

$$N = f(ED)$$

$$ED = f(C + I + G)$$

# The Principle of Effective Demand

## Continue...

- In a money economy, effective demand is revealed by the total expenditure incurred by the people on the real goods & services, meant for consumptions as well as investment. The flow of expenditure, in turn determines flow of income. (as expenditure of one person is income for another person).

$$\text{Total Expenditure}(E) = \text{Total Income}(Y)$$

- As the flow of expenditure varies flow of income also varies accordingly.

# The Principle of Effective Demand

## Continue...

- Effective demand is thus represents the total expenditure on the total output produced, at any equilibrium level of employment. It thus denotes the value of total output of the community, which is described as national income. Obviously, national income equals national expenditure. Briefly,

$$\begin{aligned}\text{Effective Demand} &= \text{Value of National Output} \\ &= \text{National Income} \\ &= \text{National Expenditure} \\ &= \text{Aggregate Expenditure on consumption goods (C)} + \\ &\quad \text{Aggregate Expenditure on Investment goods (I)} \\ &= \text{Consumption} + \text{Investment}\end{aligned}$$

# Determinants of Effective Demand

- There are two basic determinants of effective demand in an economy. These are Consumption (C) & Investment (I).
- Since Government expenditure also a significant determinant of effective demand in modern economy, we may state the components of effective demand as follows –

$$ED = C + I + G$$

# Analysis of the Level of Effective Demand

## (Determination of Effective Demand)

- Keynes Stated that E.D. is determined by the interaction of Aggregate Supply Function (A.S.F.) & Aggregate Demand Function (A.D.F.).
- The volume of employment in an economy is determined by entrepreneur's consideration of Aggregate Demand Price (A.S.P.) & Aggregate Supply Price (A.S.P.) at a particular level of employment.

$$E.D. = f ( A.D.P. + A.S.P.)$$

# Aggregate Demand Function / Price (A.D.F./A.D.P)

- A.D.F. is a schedule representing *maximum sales proceeds* expected by an entrepreneur from the sales of output resulting at various levels of employment.
- With an increase in the level of employment, ADP tends to rise & vice versa.

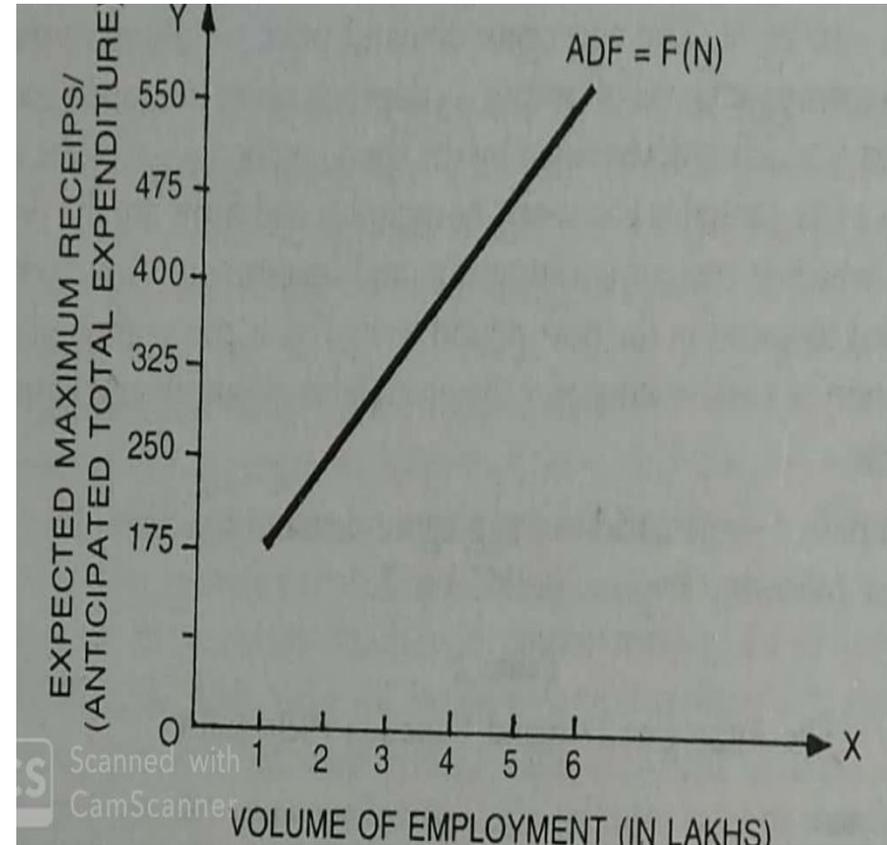
$$ADF = f ( N )$$

# Aggregate Demand Function (ADF)

## Tabular Explanation

Level of Employment (N) (In lakhs of workers)	Expected Maximum Sales Proceeds
1	175
2	250
3	325
4	400
5	475
6	550

## Diagrammatical Explanation



# Aggregate Supply Function / Price (A.S.F./A.S.P)

- The Aggregate Supply Function refers to a schedule of various *minimum amounts of proceeds or revenue* which must be expected to be received by entrepreneur from the sales of output resulting at various levels of employment.
- According to Keynes, the supply price of employment can be determined in terms of labour cost.

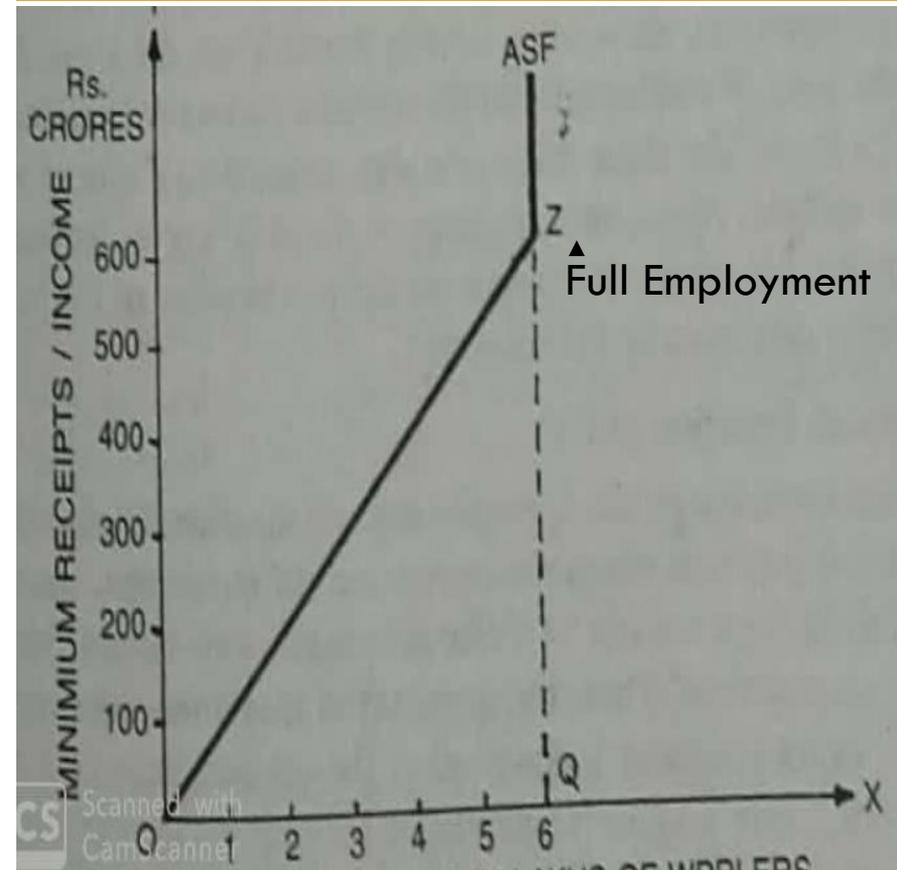
$$ASP = f ( \text{Labour Cost} )$$

# Aggregate Supply Function (ASF)

## Tabular Explanation

Level of Employment (N) (In lakhs of workers)	Money Wage	ASF = N x W
1	10	100
2	10	200
3	10	300
4	10	400
5	10	500
6	10	600

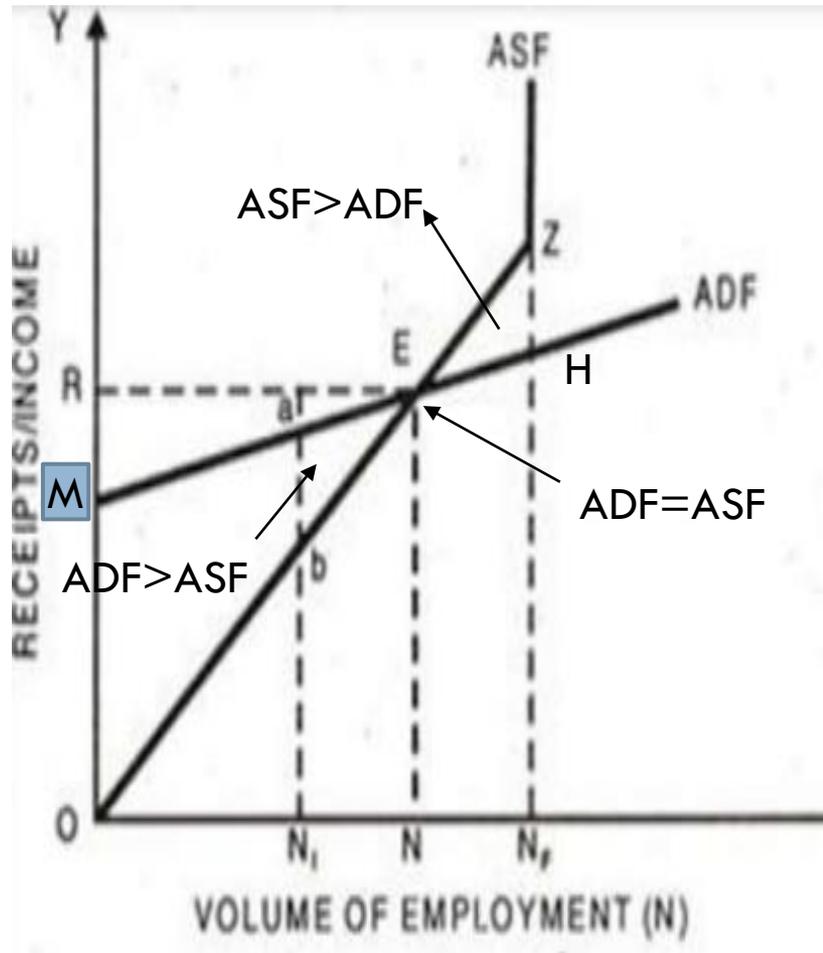
## Diagrammatical Explanation



# Equilibrium Level of Employment: Point of Effective Demand

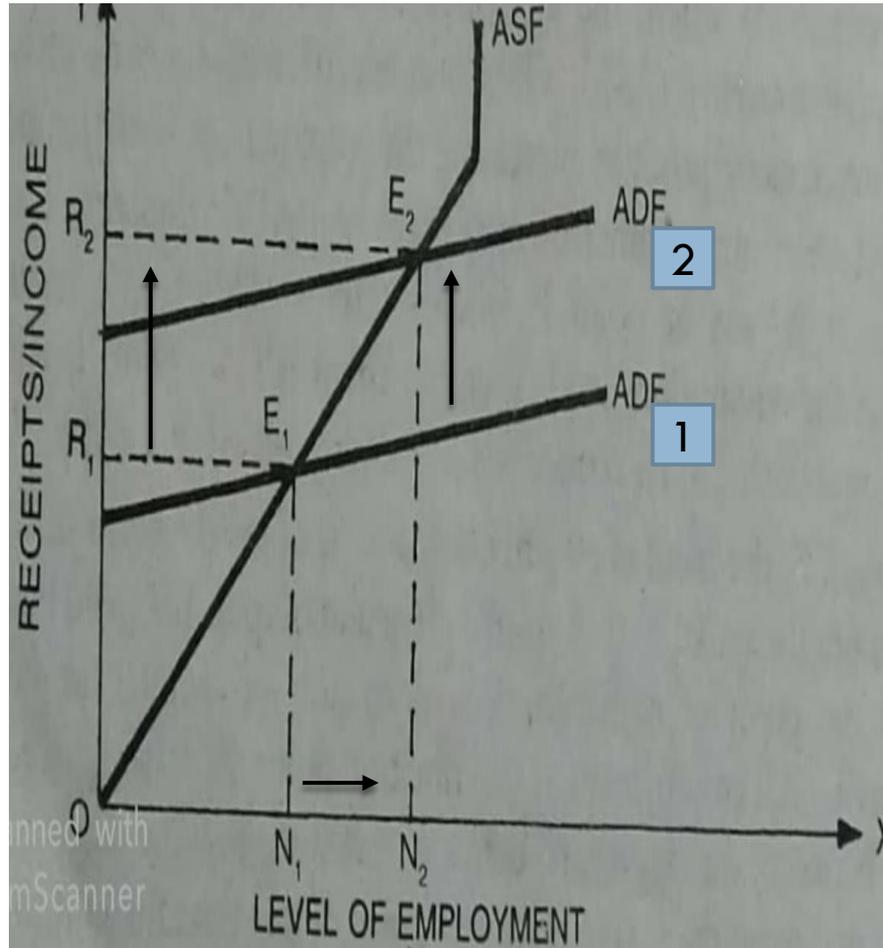
Employment (N)	ASP	ADP	Comparison	Direction of Change
1	100	175	$ADF > ASF$	Increase
2	200	250	$ADF > ASF$	Increase
3	300	325	$ADF > ASF$	Increase
4	400	400	$ADF = ASF$	Equilibrium
5	500	475	$ADF < ASF$	Decrease
6	600	550	$ADF < ASF$	Decrease

# Point of Effective Demand



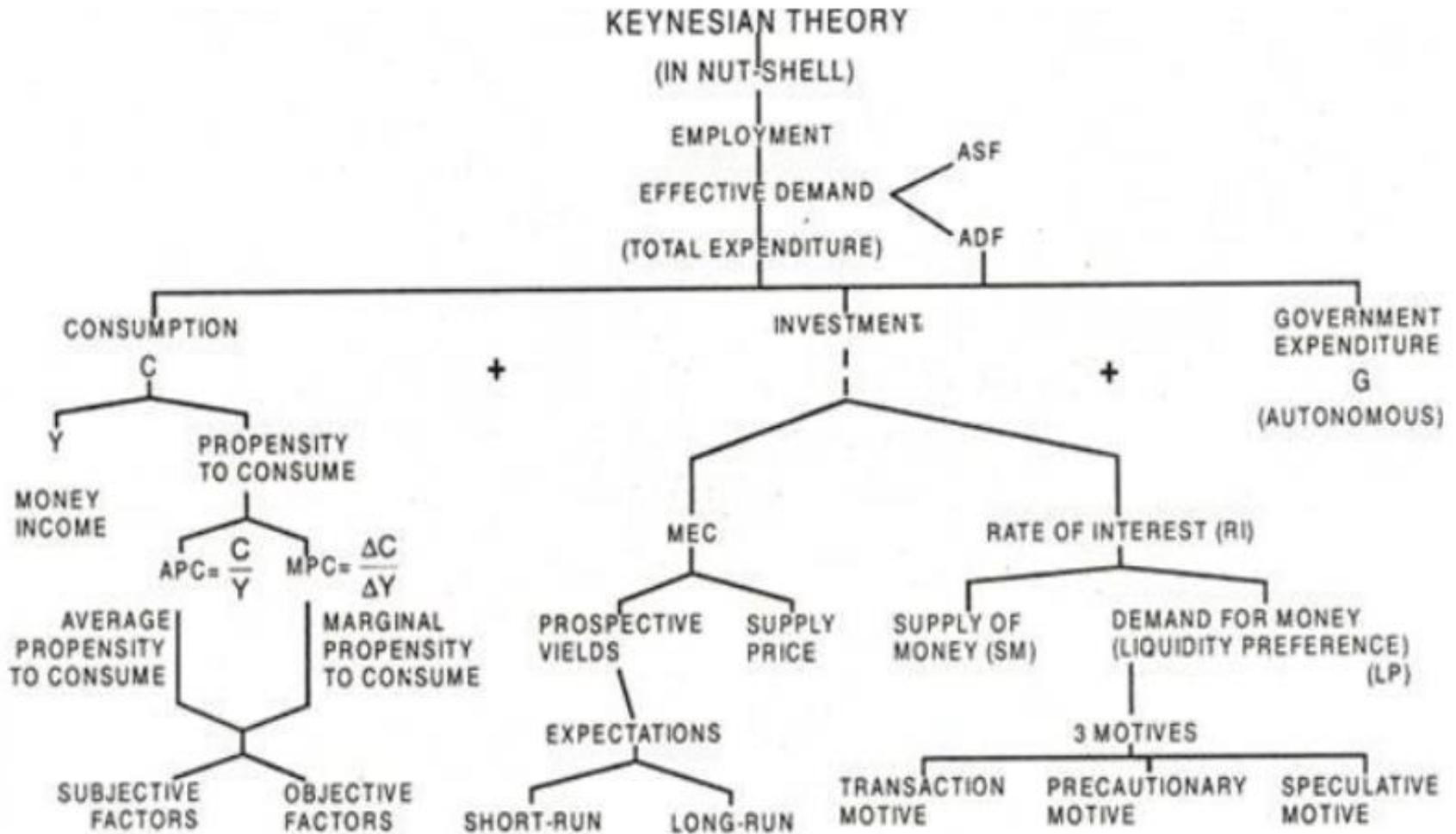
N	ADP	ASP
ON1	aN1	bN1
ON	EN	EN
oNf	HNf	ZNf

# Raising Employment through ADF



Equilibrium	Employment	Income
E1	ON1	OR1
E2	ON2	OR2

# Keynesian Theory in Flow Chart



# Consumption

- Consumption expenditure is the main constituent of aggregate demand in an economy.
- The level of community's expenditure on consumption is determined by various factors viz., house hold's income, taste ,preference, current & expected prices, expected future income, interest rates, debts ,real wealth, taxation, inflation etc.
- According to Keynes, current consumption depends on current disposable income. As rise in income leads to rise in consumption & vice versa. The empirical consumption-income relationship is represented by the consumption function.

# Fundamental Psychological Law of Consumption

- The Keynesian concept of consumption function stems from the fundamental psychological law of consumption which states that *there is a common tendency for people to spend more on consumption when income increases, but not in the same extent as the rise in income, as the part of income is also saved.*
- The community as a rule, consumes as well as saves a larger amount with rise in income. Symbolically,

$$Y = C + S$$

# Propositions of Law of Consumption

1. When the income of the community increases, the consumption expenditure will also rise, but less proportionately.
  2. Income is always bifurcated into spending & saving. ( $Y=C+S$ ).
  3. An increase in income ,will ,thus lead to an increase in both consumption & savings.
- The gist of Keynes' law is that consumption mainly depends on income & that income recipients always do not tend to spend all of the increased income on consumption. This is a fundamental maxim upon which Keynes' concept of consumption function is based.

# Assumptions of Keynes' Law of Consumption

1. **Constancy of psychological & institutional factors:** propensity to consume remains stable & institutional complexities influencing consumption expenditure.
2. **Normal economic conditions:** general economic conditions are normal & there is no abnormal or extraordinary circumstances like war, inflation, deflation etc.
3. **Laissez –faire policy:** There is an existence of free capitalist economy in which there is no Government interventions.

# Consumption Function

- The consumption function or propensity to consume is nothing but an expression of an empirical income-consumption relationship.
- In technical terms, Keynes postulates that *ceteris paribus* consumption is a function of income.
- Algebraically, the relationship between consumption as a dependent variable & total real income as an independent variable is expressed as -

$$C = f(Y)$$

# Propensity to Consume

- Propensity to consume refers to the actual or intended consumption expenditure undertaken out of varying levels of income.
- Other things being equal, the consumption function shows that changes can be expected in consumption from the given changes in income.
- The propensity to consume does not mean mere desire to consume, but actual amount of real consumption that takes place or that is expected to take place at various levels of income.

# Schedule of Propensity to Consume

We can tabulate various amounts of consumption expenditure which people are prepared to make at various corresponding levels of income. Such a list is called a schedule of the propensity to consume or is sometimes also referred to as the schedule of intended consumption. A schedule of the propensity to consume is a statement showing the functional relationship between the level of consumption at each level of income. Such a schedule is illustrated in Table 1.

Table- 1.

Income (Y)	Consumption (C) (In Rs. Crs.)
200	220
300	300
400	380
500	460
600	540
700	620

# Diagrammatical Explanation

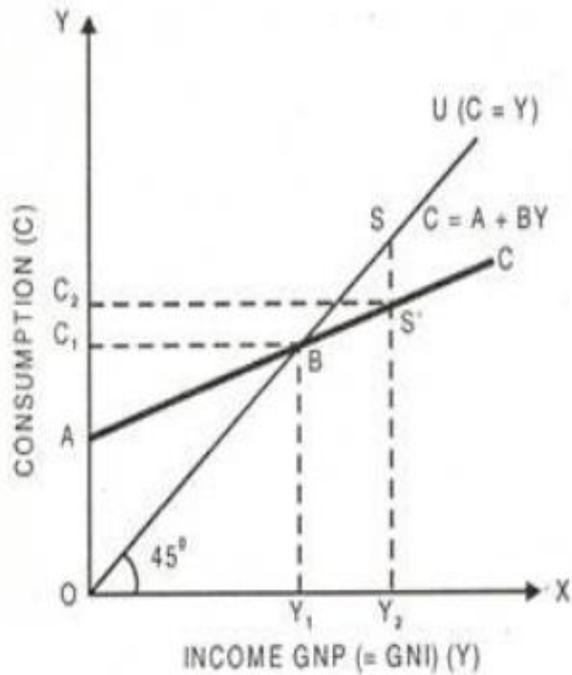


Fig. 1. Linear Consumption Function

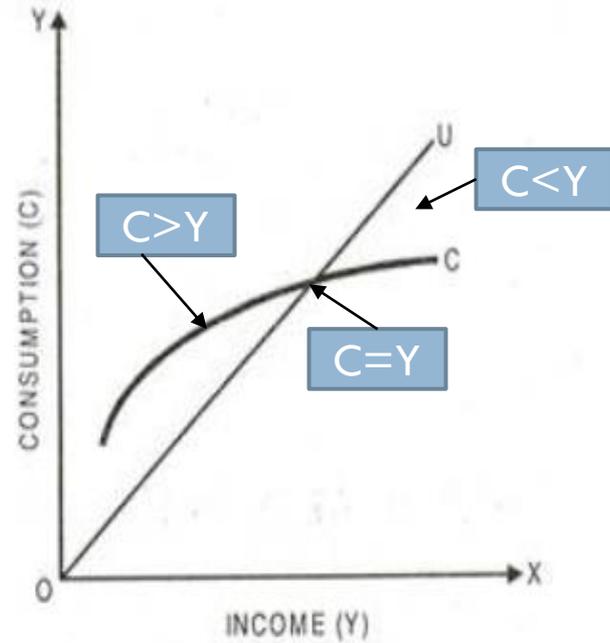
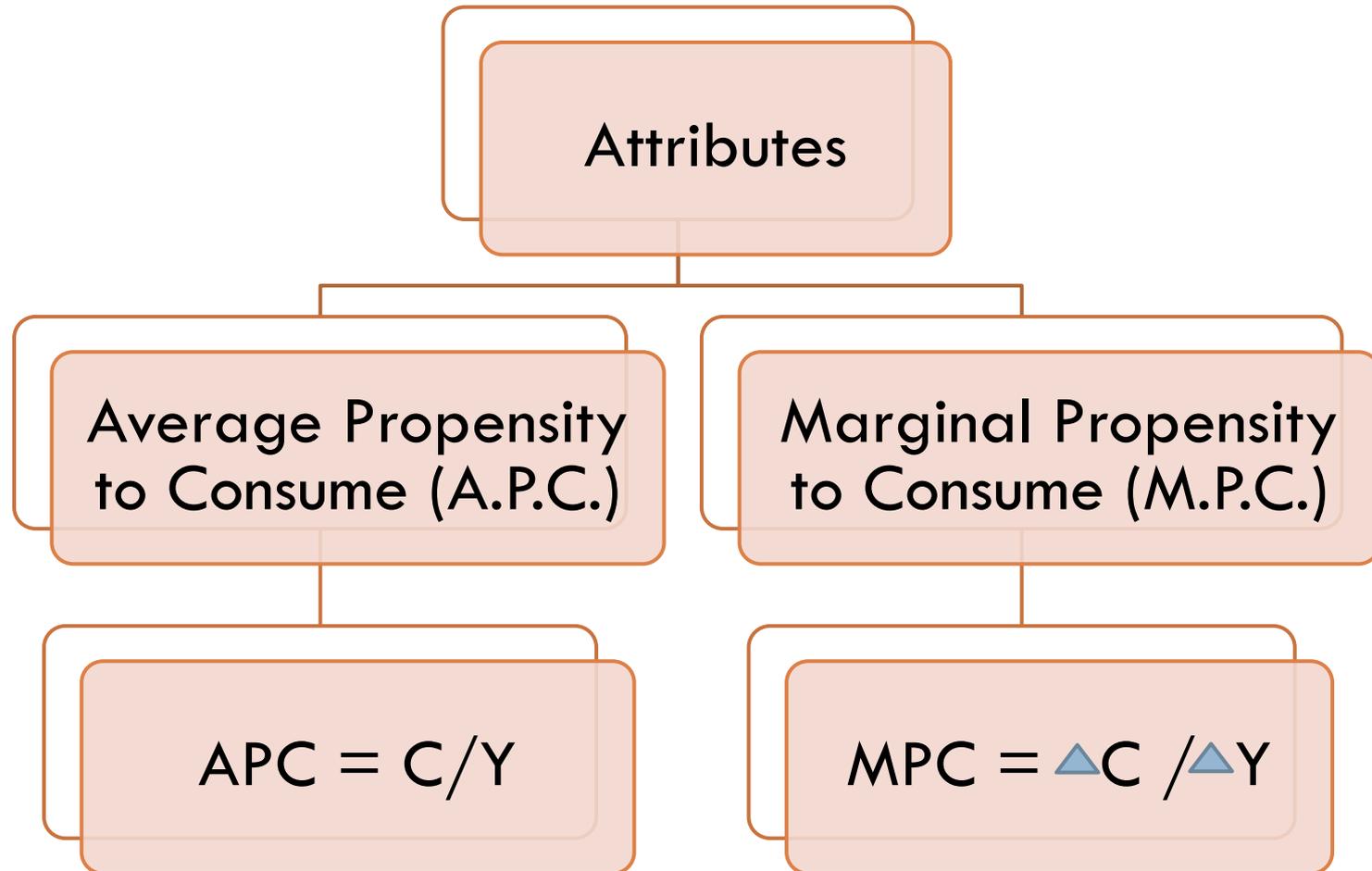


Fig. 2. Non-Linear Consumption Function

# Video on Keynesian Psychological Law of Consumption

- [\(77\) Keynes's Psychological Law of Consumption \(HINDI\) - YouTube](#)

# Technical Attributes of Consumption Function



# Average Propensity to Consume : A.P.C.

- APC: ...is a ratio of aggregate or total consumption to total income in a given period of time.

$$APC = C/Y$$

- APC implies a point on the curve C which indicates the ratio of income consumed. The C curve is made up of a series such points.
- In the above Fig. income is plotted on OX axis and consumption along OY. CC curve represents the propensity to consume schedule. At point K, the average propensity to consume is equal to 0.62.

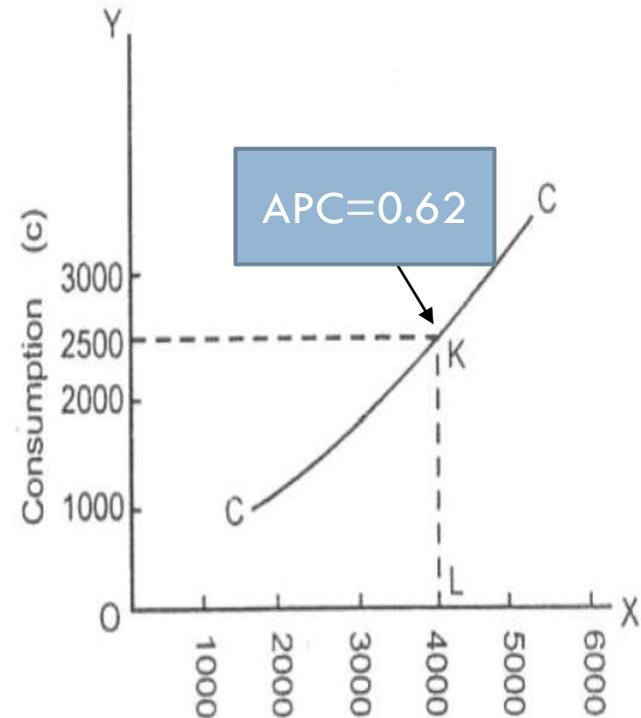


Fig. 30.2 Income (Y)

$$KL/OL = (C/Y) \text{ i.e., } 2500/4000 \text{ or } 25/40 \\ = 0.62$$

# Marginal Propensity to Consume: M.P.C.

MPC : ... is a ratio of the changes in the level of aggregate consumption to a change in the level of aggregate income. Thus, MPC refers to the effect of additional income on consumption.

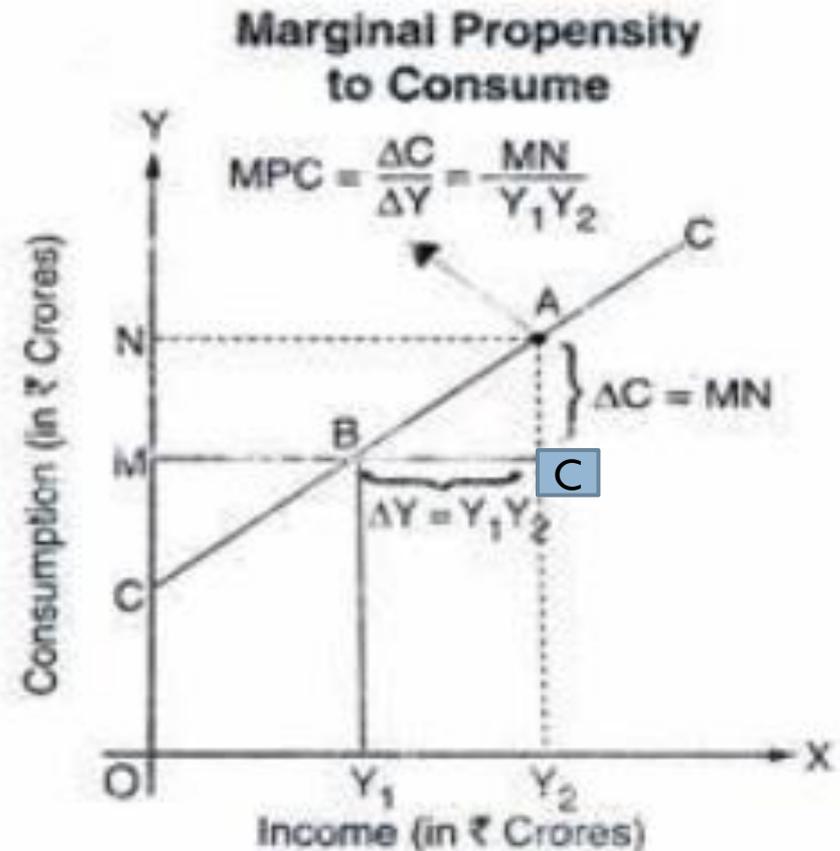
**J.M. Keynes** has defined marginal propensity to consume (MPC): "As the relationship between a change in consumption ( $\Delta C$ ) that resulted from a change in disposable income ( $\Delta Y$ )".

$$\text{MPC} = \frac{\text{Change in Consumption}}{\text{Change in Income}} = \frac{\Delta C}{\Delta Y}$$

For example, let us suppose the disposable income rises from \$2000 billion to \$3000 billion ( by \$1000 billion) and the consumption expenditure increases from \$1500 billion to \$2000 billion (by \$500 billion).

The marginal propensity to consume is:

$$\text{MPC} = \Delta C / \Delta Y = 500 / 1000 = 1/2 = 0.5$$



# Schedule For Propensity to Consume

Income	Consumption	APC = C / Y	MPC = $\Delta C / \Delta Y$
300	300	300/300=1	-
400	380	380/400=0.95	80/100=0.8
500	460	460/500=0.92	80/100=0.8
600	540	540/600=0.90	80/100=0.8
700	620	620/700=0.88	80/100=0.8

Here, it is noteworthy that the value of MPC is always positive but less than one.

$$0 < \text{MPC} < 1$$

# Saving Function

- Like consumption saving depends not only on income but on the propensity to save as well. The propensity to save is also of two types: average and marginal.
- We may define the two propensities formally. The average propensity to save (APS) is the ratio of total saving to total income and is expressed as:

$$APS = S/Y$$

- Similarly the marginal propensity to save (MPS) is the ratio of the change in total saving to change in total (national) income that brought it about and is expressed as

$$MPS = \Delta S / \Delta Y$$

# Summary

- <https://in.video.search.yahoo.com/search/video?fr=mcafee&ei=UTF-8&p=Propensity+to+consume&type=E211IN826G0#id=2&vid=a0a516b98874cbf10d0dc25ec153a004&action=click>

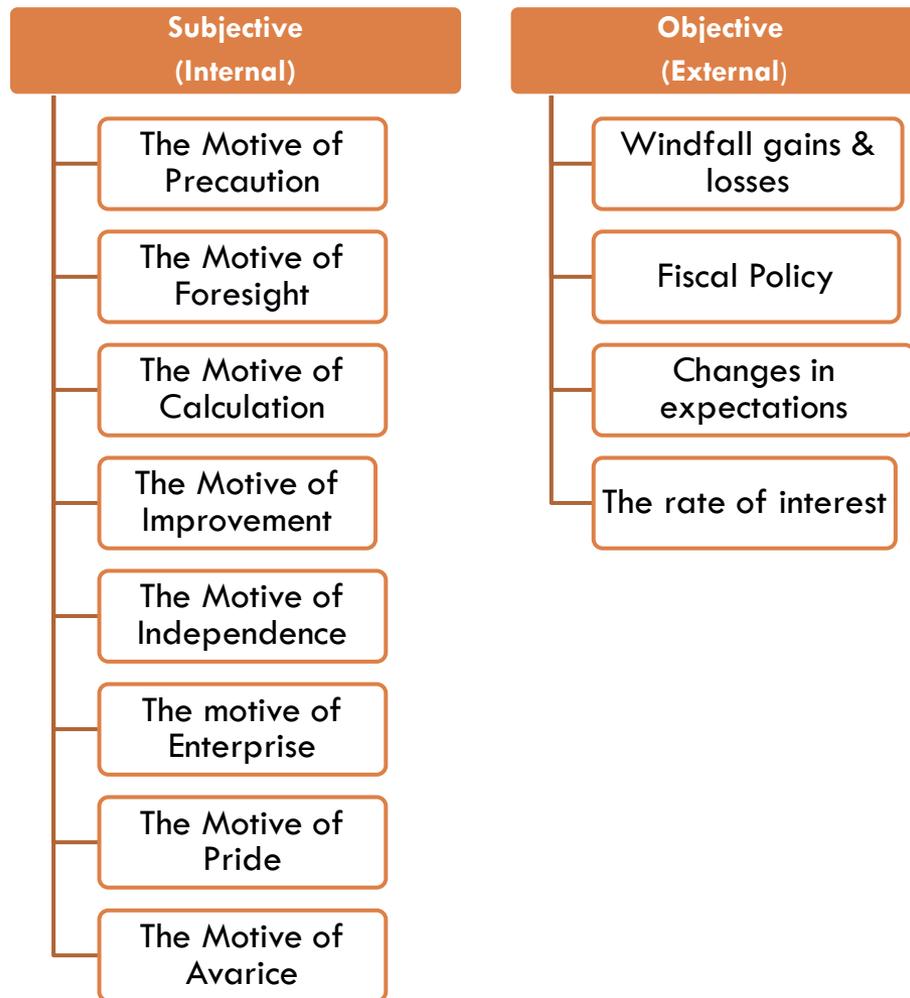
# Factors Determining Consumption Function (Propensity to Consume)

## Determinants

**Subjective(Internal):**The subjective factors are endogenous or internal to the economic system itself. This factor relate to psychological characteristics of human nature, social structure, social institutions & social practice etc.

**Objective(External):**The objective factors are exogeneous or external to the economy itself. These factors may at times undergo rapid changes. Thus, objective factors may cause a shift in the consumption function.

# Determinants of Consumption Function



# Investment

- The term investment is applied to production of goods not meant for immediate consumption, but to be used for further production. Such type of goods are to be called as investment goods.
- Investment also implies the production of new capital goods – plant & equipment.
- Lord Keynes, however, concentrates only on gross private business investment & seeks to analyze the determinants of business investment demand.

# Investment

- To Keynes, business investment demand consists of two factors viz.,
  - (i) the demand for additional inventories &
  - (ii) the demand for additional capital goods.
  
- Again by term investment, Keynes means real investments (creation of new capital goods).

# Investment Function

**Investment function** refers to the inducement to invest or investment demand.

- Classical economists considered investment demand simply as a decreasing function of interest rate.

$$I = f(r)$$

Where,

I = Investment

r = Rate of interest.

- According to Keynes volume of investment undertaken by private entrepreneurs in the economy depends on two factors namely, marginal efficiency of capital ( e ) & the rate of interest ( r )

$$I = f(e, r)$$

$$e = MEC$$

# Marginal Efficiency of Capital: M.E.C. (e)

- To examine the profitability of ventures Keynes introduced the concept of MEC.
- In simple terms **MEC refers to expected rate of profit.**
- Prof. Kurihara defines MEC as a ratio between the prospective yields of an additional capital assets & their supply price. This can be symbolically expressed as –

$$e = Q / P$$

Where,

e = MEC

Q = prospective Yields. (Return)

P = Supply price.

# Marginal Efficiency of Capital: M.E.C. (e)

- By relating these two concepts of prospective yields & supply price, Keynes arrived at a precise definition of MEC.
- For Keynes, MEC can be defined as – *“being equal to that rate of discount which would make the present value of the series of annuities given by the return expected from the capital assts during its life just equal to its supply”*

# Supply Price

- *The price at which you invested in market is to be called as supply price.*

$$SP = \frac{Q_1}{(1+e)} + \frac{Q_2}{(1+e)^2} + \dots\dots\dots \frac{Q_n}{(1+e)^n}$$

Where ,  $SP =$  Supply price of a capital asset.

$Q_1 , Q_2 \dots Q_n =$  Series of anticipated annual returns.

$e =$  rate of discount.

# Demand Price

- Demand price of an asset is defined as a sum of expected future yields (i.e., the series of prospective annual yields) discounted at the current rate of interest.

$$DP = \frac{Q_1}{(1+r)} + \frac{Q_2}{(1+r)^2} + \dots + \frac{Q_n}{(1+r)^n}$$

Where , DP = Demand Price

Q1, Q2 ...Qn = the prospective yields or annuities.

r = current rate of interest.

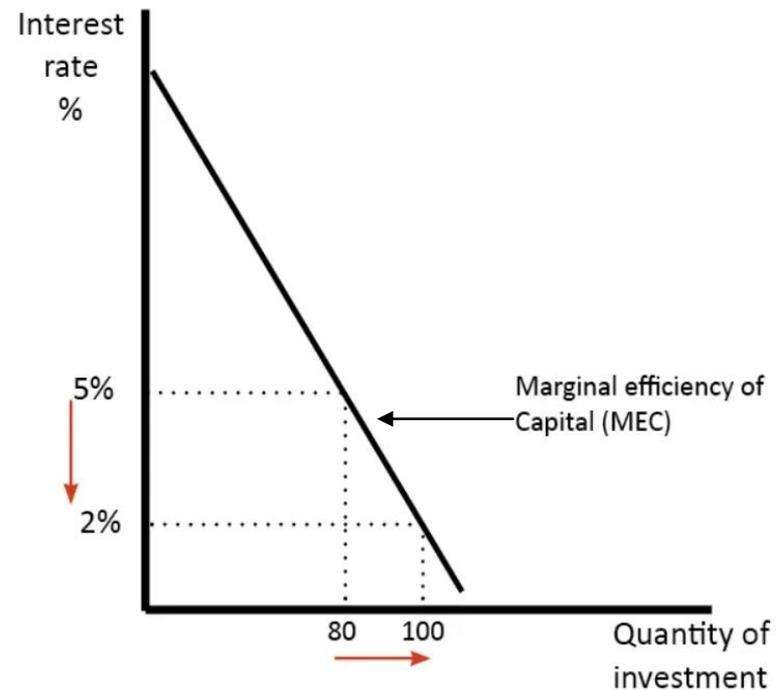
# Comparison

Supply Price (SP) (In Rs.)	Annual Yield (Q) (In Rs.)	MEC (e) (In %)	Rate of Interest (r)	Demand Price (DP) (In Rs.)	Effect
2500	100	4	4	2500	Neutral (SP=DP)
2000	100	5	4	2500	Favorable (SP<DP)
2500	100	4	5	2000	Adverse (SP>DP)

# Why are interest rates important for determining the marginal efficiency of capital?

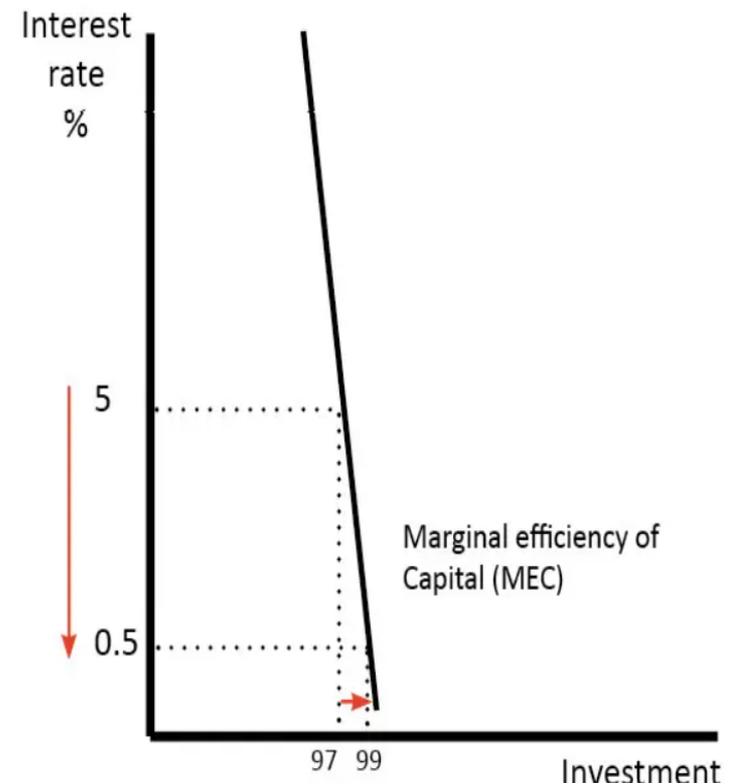
- To finance investment, firms will either borrow or reduce savings. If interest rates are lower, it's cheaper to borrow, or their savings give a lower return making investment relatively more attractive.
- **Diagrammatical Interpretation:**
  - A cut in interest rates from 5% to 2% will increase investment from 80 to 100.
  - The alternative to investing is saving money in a bank; this is the opportunity cost of investment.
- If the rate of interest is 5%, then only projects with a rate of return of greater than 5% will be profitable.

Marginal Efficiency of Capital



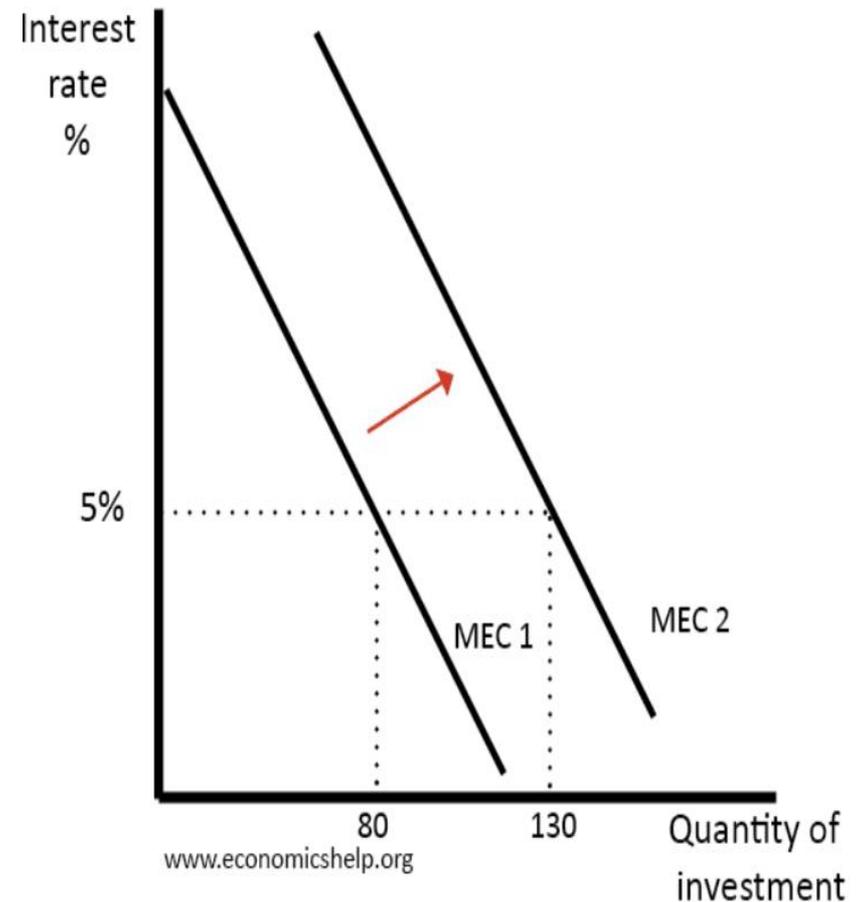
# How responsive is investment to interest rates?

- In Keynesian investment theory, interest rates are one important factor. However, in a liquidity trap, investment may be unresponsive to lower interest rates. In some circumstances, demand for investment is very interest inelastic.
- In a liquidity trap, business confidence may be very low. Therefore, despite low-interest rates, firms don't want to invest because they have low expectations of future profits.



# Factors which shift the marginal efficiency of capital

- At the same rate of interest rate – more investment projects are demanded. This could reflect an improvement in economic circumstances, which encourage firms to invest.



# Factors Affecting MEC

## □ SHORT TERM FACTORS

1. Expectations about the course of demand, price & cost.
2. Business optimism & pessimism.
3. Change in income.
4. Propensity to consume.
5. Changes in liquid Asset.

## □ LONG TERM FACTORS

1. Population growth.
2. Technological advancement.
3. Creation of an infrastructure.

# Imp. Points to be remembered...

- $Y = C + S$
- $S = Y - C$
- $C = Y - S$
- $APC = C / Y$
- $APS = S / Y$
- $MPC = \Delta C / \Delta Y$
- $MPS = \Delta S / \Delta Y$
- $MPS + MPC = 1$
- $MPS = 1 - MPC$
- $0 < MPC \text{ \& } MPS < 1$

# Multiplier (K)

- The effect of change in investment upon consumption expenditure & the consequent generation of income in the short run are examined by Keynes in the theory of multiplier.
- The theory of multiplier tells us that when there is an increment of aggregate investment, income will increase by an amount which is  $K$  (the investment multiplier) times the increment of investment.

# The Concept of K

- Conceptually, multiplier refers to the effects of changes in investment outlays on aggregate income through induced consumption expenditure. Thus, the multiplier expresses a relationship between an initial increment of investment & the resulting increase in aggregate income.

# Investment Multiplier (K)

- In fact, the multiplier is the name given to the numerical coefficient which indicates the increase in incomes which will result in the response to an increase in investment.
- For instance, if investment increases by one crore of rupees & the aggregate income (national income) rises by four crores, then multiplier is 4.
- In short, the ratio of the realised change in aggregate income to the given change in investment is defined as multiplier.

Symbolically,

$$K = \Delta Y / \Delta I$$

- Where, K = Multiplier  
 $\Delta Y$  = Change in income.  
 $\Delta I$  = Change in investment.

# Multiplier Coefficient

- Given the multiplier coefficient  $K$ , we can measure the resulting change in the level of income caused by an intended change in investment ...

$$\Delta Y = K * \Delta I$$

Samuelson therefore, defines multiplier as “the number by which the change in investment must be multiplied in order to present us with the resulting change in the income.(Economics, p.123)

# MPC & Multiplier...

- The propelling force behind multiplier effect is the consumption function.
- Keynes assumes that when the real income of the community increases or decreases, its consumption will increase or decrease, but not in the same proportion.
- Hence the marginal propensity to consume (MPC) is always less than one. This MPC is at the heart of multiplier principle.
- The value of multiplier is in fact determined by the MPC. The larger its value, the greater the value of multiplier & vice versa.

# MPC & Multiplier...

- Thus the investment multiplier is a direct function of MPC. On this basis, Keynes sets a general formula for multiplier as follows –

$$K = 1 / 1 - MPC (\Delta C / \Delta Y)$$

- Alternatively, since  $1 - MPC = MPS$  we can also say

$$K = 1 / MPS (\Delta S / \Delta Y)$$

- This means that the multiplier coefficient is measured as the reciprocal of the propensity to save.

# Assumptions of Multiplier Theory

- Constant MPC.
- Stable monetary & fiscal policies.
- Excess capacity.
- Close economy.
- No dynamic changes.
- No time lag.

# Working of Multiplier (Process)

- **Sequence Analysis:** Suppose , in any given period of time, investment increases by Rs. 10 Crs.. It will first increase income by Rs. 10 Crs. for those engaged in producing investment goods. Assuming MPC to be 0.5 or 50 percent in the first round, Rs. 5 crs. will be spent on consumption goods by these income recipients. Thus, Rs. 5 crs, in turn ,are received as an income by those engaged in consumer goods industries. This logic is based on the fundamental proposition that one person's consumption expenditure is another's person income, so that the amount spent on consumption means a further amount of income received within economy. This recipient of 5 crs. Income will in turn spend 50 percent of that income on consumption, 2.5 crs in the second round. Similarly, Rs 1.25 crs. Of the income will be generated in the third round & so on.

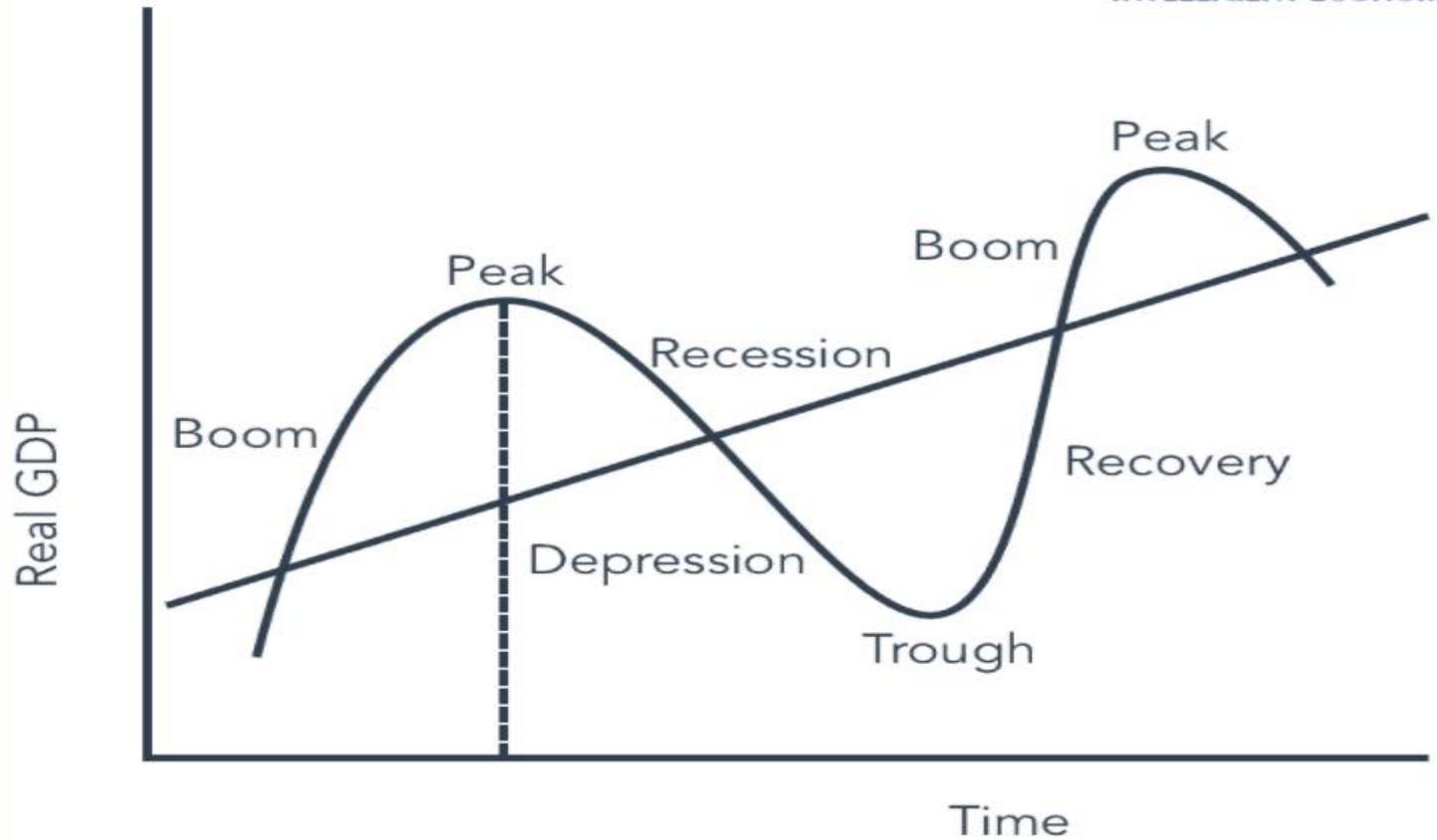
# Process of Income Propagation

<b>Rounds of new consumption</b>	<b>New Income (In Rs. Crs.)</b>	<b>New Savings (In Rs. Crs.)</b>
Initial Investment	10	Nil
1 <sup>st</sup> Round	5	5
2 <sup>nd</sup> Round	2.5	2.5
3 <sup>rd</sup> Round	1.25	1.25
4 <sup>th</sup> Round	0.65	0.65
5 <sup>th</sup> Round	0.31	0.31
Remaining rounds...	0.31	0.31
<b>Total</b>	<b>20</b>	<b>10</b>



# Leakages of Multiplier Process

- Increase in MPS.
- Debt cancellation.
- Purchase of old shares & securities.
- Hoarding of cash balances.
- Inflation.
- Net imports.



## Business Cycles

## Trade Cycles

# Business Cycles

- Business cycles is also known as trade cycles.
- The dynamic forces operating in the economy create various kinds of business or economic fluctuations. These fluctuations are sometimes short period or sometimes its long period.
- These cyclical fluctuations are wave like changes in economic activity characterized by recurring phases of expansion & contraction. These uneven movements take the shape of waves from peak to trough & from trough to peak.

# Definition of Business Cycles

- The term business cycles or trade cycles in economics refers to the wave like fluctuations in the aggregate economic activity, particularly in employment, output & income. In other words, trade cycles are ups & downs in economic activity.
- Mitchell defined trade cycles as a fluctuation in aggregate economic activity.
- Haberler defined trade cycles as an alteration of periods of prosperity & depression, of good & bad trade.

# Features of Business Cycles

- Wave like movement in economic activity in short run.
- Cyclical fluctuations are recurrent in nature.
- Expansion & contraction in trade cycles are cumulative in effect.
- Trade cycles are all pervading (spread) in their impact.
- Trade cycles is characterized by the presence of a crisis. (i.e., asymmetrical, violent & sudden).
- Trade cycles differ in timing & amplitude.
- Trade cycles are rhythmic.
- There are minor (3-4 years) & major cycles (10-15 years).

# Phases or Stages of Business Cycles

I. Prosperity Phase

(Expansion or Upswing)

II. Recession Phase

(A turn from prosperity to depression)

III. Depressionary Phase

(Contraction or downswing)

IV. Revival or Recovery Phase

(A turn from depression to prosperity)

# Features of the Phases

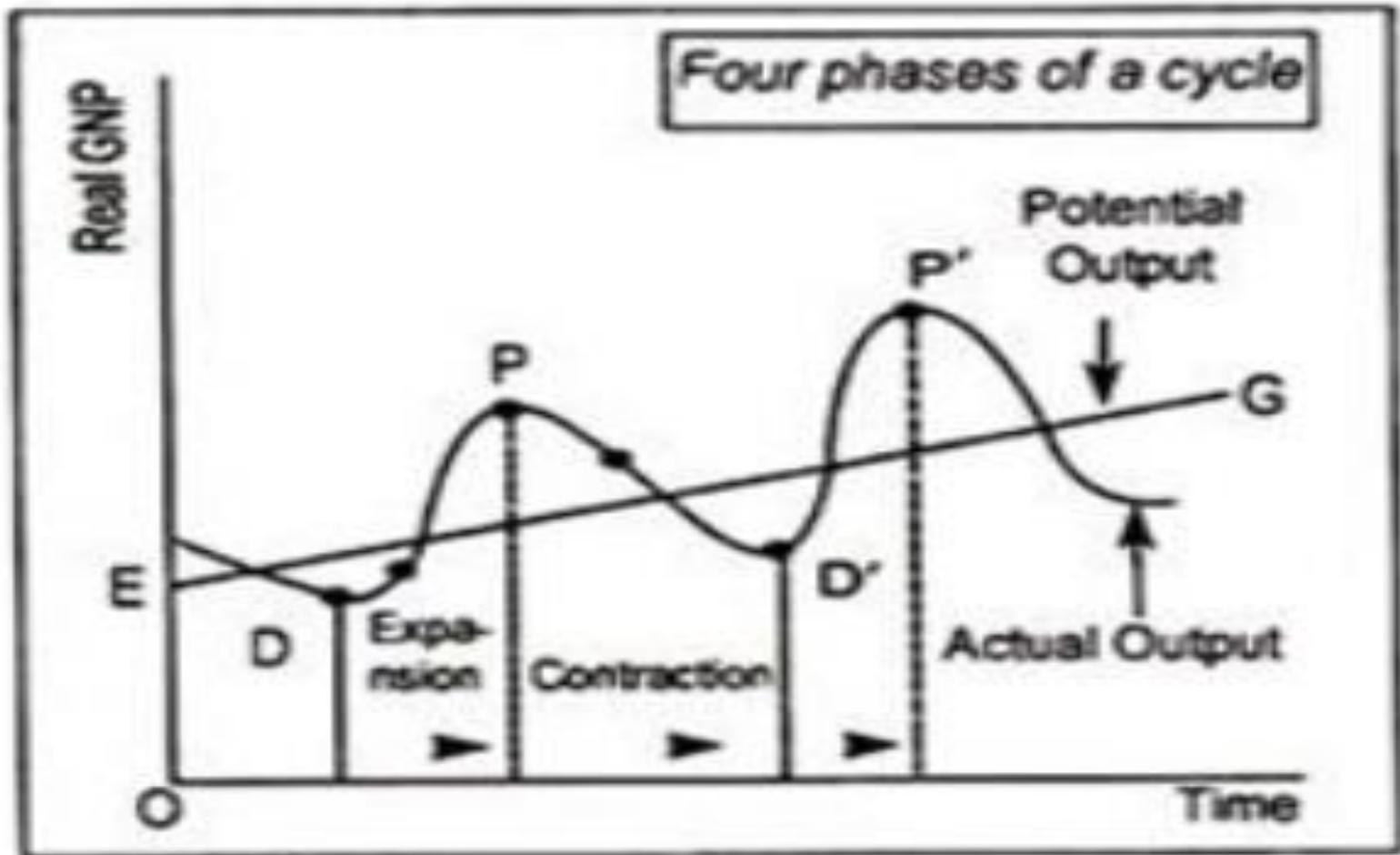
## Prosperity

- A high level of output & trade.
- A high level of effective demand.
- A high level of employment & income.
- A high marginal efficiency of capital.
- Inflation.
- Arising structure of interest rate.
- Expansion of bank credit.
- Overall business optimism.
- Tendency of economy to operate at almost full employment.

## Depression

- Shrinkage in volume of output & trade.
- Low level of effective demand.
- Rise in the level of unemployment & fall in aggregate income.
- Collapse of marginal efficiency of capital.
- Deflation.
- Fall in the structure of interest rate.
- Contraction in bank credit.
- Business pessimism.
- Curtailment in consumption expenditure.

# Diagram of Phases of Trade Cycles



# Suggested Readings...

- Samuelson & Nordhaus, (2001), Macroeconomics, McGraw-Hill Irwin, New York.
- Michl Thomas R.,(2009), Macroeconomic Theory- A Short Course, PHI Learning Private Limited, Eastern Economy Edition, New Delhi.
- Ahuja H.L., (2006), Macro Economics- Theory & Policy : Advanced Analysis, S. Chand & Company Ltd., New Delhi

# International Economics

Dhaval J. Pandya, Ph.D.

Asst. Prof. & Head, Department of Economics,

UCCC & SPBCBA & SDHGC of BCA & IT,

Surat

Email: [djp\\_econ@yahoo.co.in](mailto:djp_econ@yahoo.co.in)

# Basic Concepts

- Trade
- Types of trade
- Foreign trade (Volume, Composition & Direction).
- Balance of Payments.
- Trade policies.

# Meaning of Trade

- Exchange of goods & services which has economic value between the two or more parties or countries or regions within & outside the national territory is known as trade.
- Broadly speaking, trade can be classified in two parts viz.,
  - i. Internal Trade
  - ii. International Trade (External)

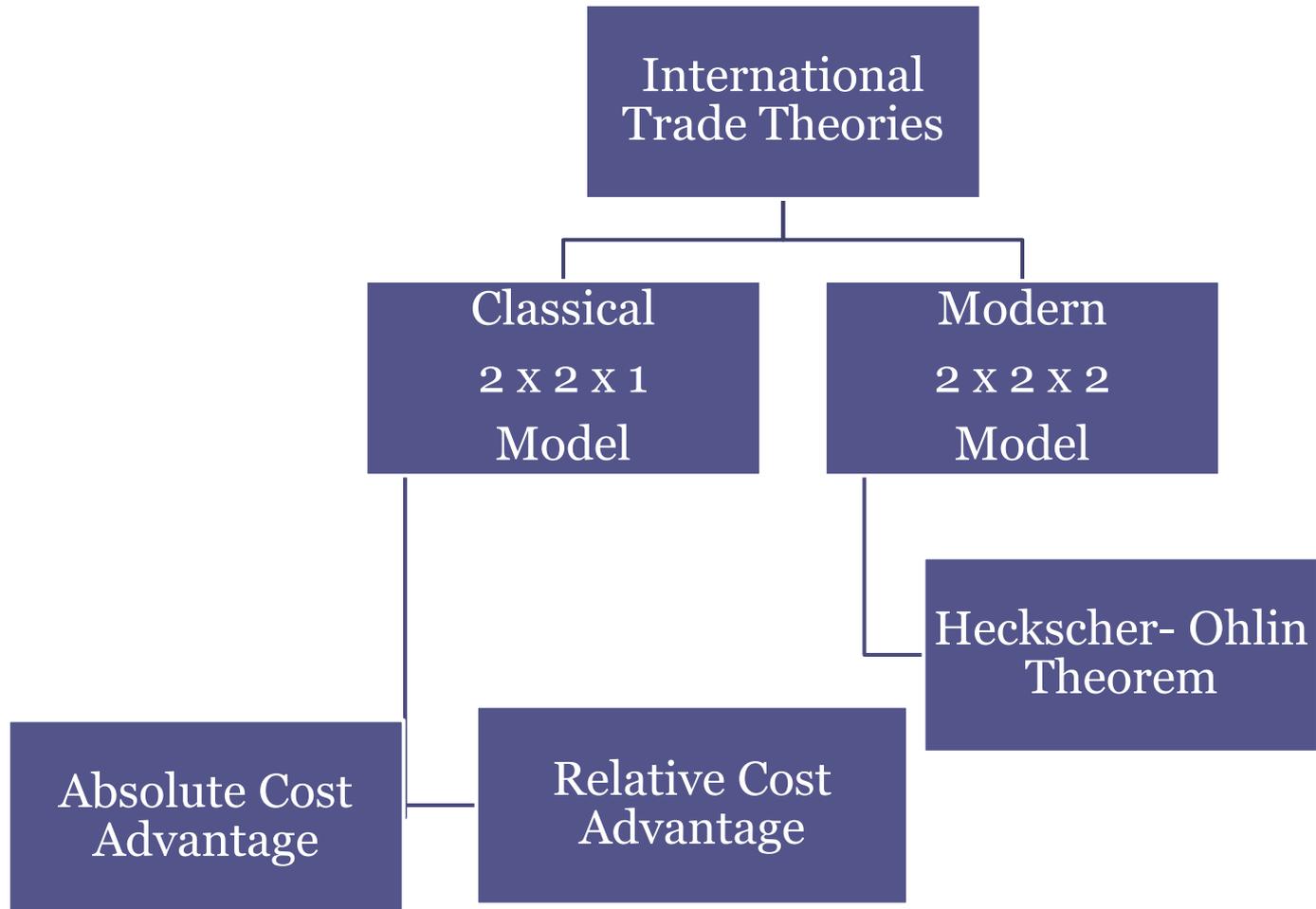
# Basis of International Trade

- Why do Nations Trade?
  - a. Difference in the basic labour cost.
  - b. Factor proportion/ endowment.
  - c. Technology.
  - d. Institutional Policies related to Finance.  
(International Economic Organization viz., I.M.F., World Bank, WTO, UNCTAD etc.).
  - e. Trade Polices. (Free Trade & Protection)

# Theories of International Trade

“Every man lives by exchanging.”  
Adam Smith

# Types of International Theory



# Theories of International Trade

1. Absolute Cost Advantage theory – Adam Smith.
2. Relative / Comparative Cost Advantage Theory – David Ricardo.
3. Factor Proportion Theory / Modern Theory – Heckscher & Ohlin.

# Classical Theories

- The classicalists believe that the differences in the relative price of goods between different nations is the basis of international trade.
- Classical economists stress mainly on supply factors affecting trade or in other words, classical theories are supply oriented theories.
- Difference in the supply conditions at home & abroad is the base of international trade.

# Absolute Cost Advantage Theory : A. Smith

- Smith developed this theory & it is traced in his monumental work – “*An Enquiry into the Nature & Causes of Wealth of Nations*” (1776).
- According to him, trade will emerge only if one country has an absolute cost advantage in the production of one commodity & absolute cost disadvantage in the production of others.
- Each country will export that commodity in the production of which it commands an absolute cost advantage & import that commodity in which it has an absolute cost disadvantage.

# Smith's 2 x 2 x 1 Matrix

Countries	Commodities	
	Cotton	Jute
India	5	10
Bangladesh	10	5

Note: Figures shows the cost of commodity per unit.

# Limits of Smith's Matrix

- P.T. Ellesworth & J. Clark argues that if country has no specific line of production in which it was clearly superior? Or if country has more factor inputs then what?

# Ricardo's Comparative Cost Advantage Theory

- In Ricardo's work on "*Principles of Political Economy & Taxation*" (1817) he formulated the pure theory of international trade.
- At the centre of Ricardian theory it is the Principle of Comparative Cost which plays significant role for trade.
- Ricardo aptly remarks that "*it is the comparative quantity of commodities which labour will produce that determines their present & past relative values*".
- Labour Theory of Value (Price = Labour Cost)

# Ricardian's 2 x 2 x 1 Matrix

Countries	Commodities	
	Cloth	Wine
Portugal	90	80
England	100	120

Note: Figures shows the cost of commodity per unit.

# Balance of Payments

Trade balance refers to the difference between countries imports and exports for a period of time.

# Balance of Payments (B/Ps.)

- The principal tool for analyzing the monetary aspects of international trade is the balance of payments statement.
- The study of B/Ps was of great importance for the mercantilists. The term B/Ps. Made its entry into the English economic literature during the mercantilist period.
- Generally, the international B/Ps of a country is a statistical record in the form of balance sheet. It presents the summary account of all economic transactions of a county during any given period of time.
- It is symbolically expressed as B/Ps.

# Definitions

- According to U.S. Department of Commerce, *the “B/Ps of a country consists of the payments made, within a stated period of time between the residents of that country & residents of the foreign countries”*. It may be defined in a statistical sense as an itemized account of transactions involving receipts from foreigners on one hand & payments to foreigners on the other hand. Since the former relate to the international income of a country called ‘Credits’ & the later relate to the international out go they are called ‘Debits’.

# Definitions

- Kindleberger C.P. defines B/Ps as *“a systematic record of all economic transactions between the residents of the reporting country & residents of foreign countries during a given period of time”*.
- In the language of I.M.F. *“the B/Ps of a country is a systematic records of all economic transactions between residents of the country (reporting country) & residents of rest of the world over a specific period of time”*.
- For me, Balance of payments is *“a summation of 4 “S” i.e., it’s a Systematic, Summarized, Statistical, Statement of all economic transactions of domestic country with rest of the world, during a specific period of time (usually a year)”*.

# Glossary

- **Economic Transactions:** ...refers to the exchange of values for which there is monetary price. Therefore, it involves the transfers of ownership of goods, rendering of services, transfer of money & transfer of assets & liabilities from residents of one country to other.
- **Residents:** ...refers not only to individuals but it also includes the Government, corporate bodies, institutions, non-profit organizations, business enterprise etc.

## Equation of B/Ps

- Since B/Ps is a systematic records of the country's total money receipts received from & payments made to abroad, the difference between receipts & payments is either surplus or deficit. Thus B/Ps of a country can be expressed as –

$$B/Ps = R - P$$

OR

$$B/Ps = (Rd + Rf) - (Pd + Pf)$$

$$\text{Since } Rd = Pd$$

$$\text{Therefore, } B/Ps = Rf - Pf$$

# Kinds of B/Ps

Surplus (Positive/Favourable)

Where,  $R_f > P_f$

Deficit (Negative/Adverse)

Where,  $R_f < P_f$

Balanced (Zero/Balance/Equilibrium)

Where,  $R_f = P_f$

# Components of Balance of Payments

Sr. No.	Receipts (Credits)	Payments (Debits)
1.	Exports of Goods & Services a. Merchandise of goods. b. Services c. Income from foreign investments.	Imports of Goods & Services a. Merchandise of goods. b. Services. c. Foreign income from investments made at home.
2.	Sales of Long term claims. a. Equity claims. b. Debt claims.	Purchase of long term claims. a. Equity claims. b. Debt claims.
3.	Sales of short term claims. a. Against deposits. b. Others.	Purchase of short term claims. a. Against deposits. b. Others.
4.	Sales of Gold.	Purchase of Gold.
5.	Unilateral Receipts	Unilateral Payments.
6.	Errors & Omissions. (1+2+3+4+5 = 3000 USD)	Errors & Omissions. (1+2+3+4+5 = 2800 USD)

# Structure of Balance of Payments

- The structure of B/Ps is usually composed of two accounts namely,
  1. Current Account.
  2. Capital Account.
- These accounts come from two types of transactions viz.,
  - a. Real Transactions (which taken into account real sense of actual transfer of goods & services).
  - b. Financial Transactions (which involves only the transfer of money & currencies or claims to money or titles to investments).

# Current Account of B/Ps

- Current account mainly consists of two sub groups namely,
  - a. merchandise or trade account or visible account.
  - b. Invisible account.
- In trade or **merchandise account**, only transactions related to goods are entered. That is all goods exported or imported are recorded in goods account. The invisible account usually comprises the service account & the gift or charities account. The **services account** records all the services exported or imported by residents of the nation. It comprises items like, banking & insurance charges, interests on loans, transit expenditure, transportation charges etc.

# Capital Account

- Capital account deals with the payments of debts & claims or loans.
- It consist of all such items employed in financial both imports & exports namely private balance, therefore, it includes private balances assistance by international institutional agencies viz., I.M.F., I.B.R.D..(World Bank) , A.D.B. etc. & balances held on Governmental account (all government transactions).

# Country's Balance of Payments Account

Receipts (In Rs. Crs.)		Payments (In Rs. Crs.)	
<b>Current Account Transactions</b>			
Merchandise exported	200	Merchandise Imported	300
Services exported	100	Services imported	200
Income from foreign investments	200	Foreign income from investment	200
Unilateral receipts	200	Unilateral payments	100
<b>Sub Total</b>	<b>700</b>	<b>Sub Total</b>	<b>800</b>
<b>Capital Account Transactions</b>			
Long term borrowings	200	Long term lendings	80
Short term borrowings	100	Short term lendings	60
Sales of gold/assets.	100	Purchase of gold/assets	50
<b>Sub Total</b>	<b>400</b>	<b>Sub Total</b>	<b>190</b>
<b>Grand Total</b>	<b>1100</b>	<b>Grand Total</b>	<b>990</b>
		<b>E &amp; Os.</b>	<b>110</b>

# Balance of Payments V/s. Balance of Trade (B/Ps V/s. B/T)

- There is a market distinction between these two concepts. B/Ps is a wider concept than B/T. In fact, balance of trade is a part of balance of payments.
- Balance of trade is a part of current account. So, it refers only to the value of exports & imports of goods., i.e., visible items only. It does not include services.
- On the other hand, balance of payments is more comprehensive in scope & covers the total debits & credits of all items, visible as well invisible.
- Thus, B/T is only a segment of B/Ps.

# Types of Disequilibrium in Balance of Payments

Types	Description
Cyclical Disequilibrium	It occurs on the account of trade cycles. Depending on the different phases of trade cycles like prosperity & depression, demand & other forces vary, causing changes in terms of trade as well; growth of trade accordingly surplus or deficit will result in B/Ps.
Structural Disequilibrium	It emerges on account of structural changes in some sectors of the economy at home or abroad which may alter the demand or supply relations of exports or imports or both. E.g. Agricultural distortions may affect other industries & thereby affect the overall B/Ps.
Short term Disequilibrium	This type of disequilibrium is temporary one, lasting for short period, which may occur once in a while. When a country borrows or lends internationally, it will have short term effect, as these loans are usually for short period or even if they are for long period, they are redeemed later on. , hence position will be automatically correct & poses no serious problems.
Long term Disequilibrium	It refers to the deep rooted, persisted deficit or surplus in B/Ps of the country. Its secular disequilibrium emerging on account of the chronological accumulated short term disequilibria. It endangers the exchange stability & F E Reserves.

# Causes of Disequilibrium in B/Ps.

1. Trade cycles.
2. Huge development & investment programmes.
3. Changing export demand.
4. Population growth.
5. Huge external borrowings.
6. Inflation.
7. Demonstration effect.
8. Alteration in reciprocal demands.

# Balance of Payments is always in Balance

- The B/Ps, in an accounting sense must always balance. Debits must be always equals to credits if entries are consistently made. Thus, there can be no disequilibrium in B/Ps as a whole.

$$\text{Total Debits} = \text{Total Credits}$$

<b>Autonomous Transactions</b>	<b>Accommodating Transactions</b>
Transactions for its own sake.	Mostly done by monetary authorities.
Pure business purpose of exports (Xs) & imports (Ms).	Sales of gold, supply of foreign exchange

- Disequilibrium in B/Ps is either because of current account or because of capital account. Mainly, disequilibrium is due to the continuous deficit in the B/Ps.

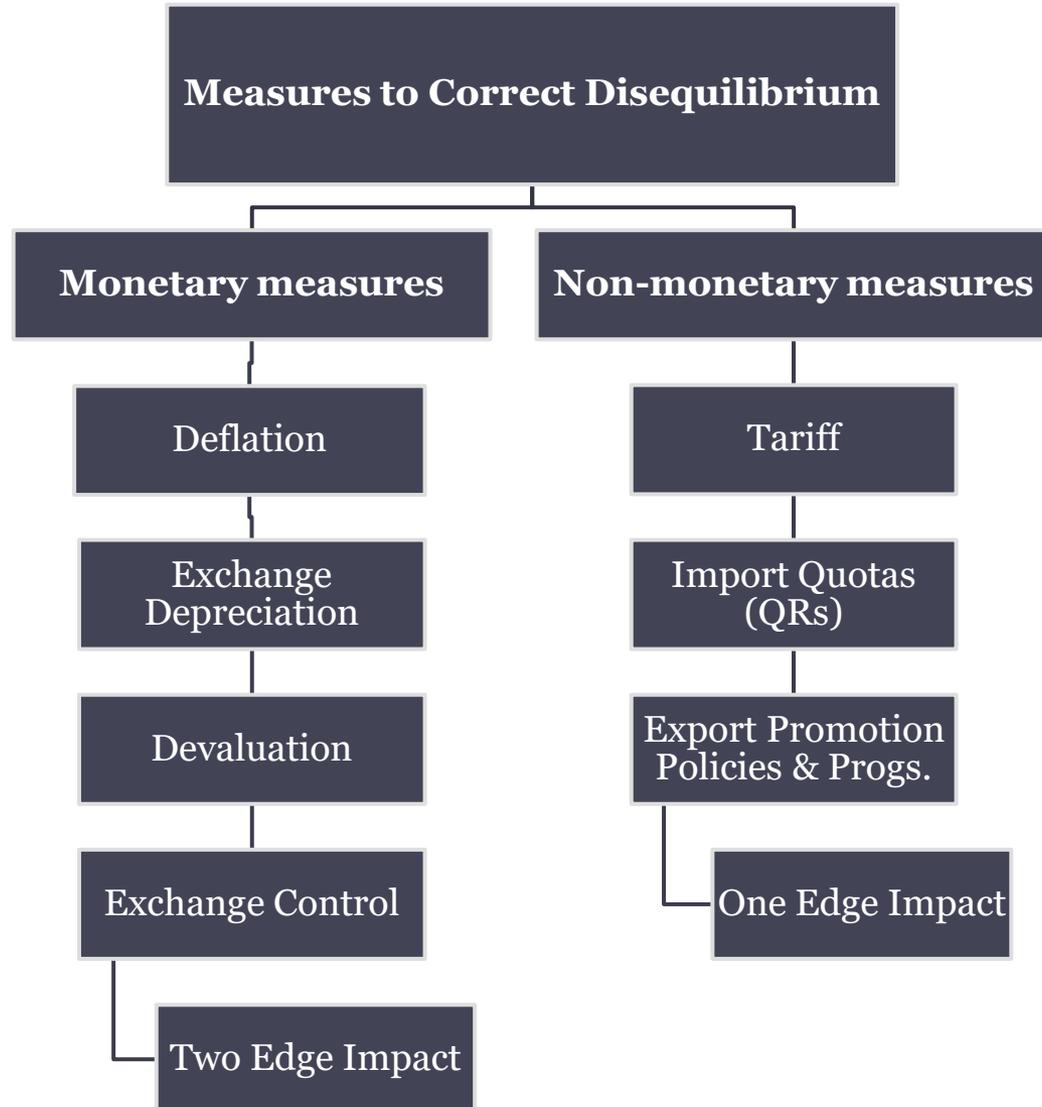
## Measures to correct disequilibrium in B/Ps.

- Any disequilibrium (deficit or surplus) in B/Ps. When it persists consistently is certainly because of its disastrous effect on country's economy. Since both deficit or surplus is certainly bad for economic development so it has to be restored at earliest.
- The various measures that may be used for correcting an adverse B/Ps. Are of two types viz.,
  1. Monetary measures.
  2. Non-monetary measures.

# Monetary Measure & Non-Monetary Measures

- Monetary measures have a two edge impact in improving the B/Ps position. They boost up exports as well checks or curtails imports. Monetary measures, however, function indirectly.
- While that of non-monetary measures effects directly & improves B/Ps. Position. But they works one way only. In other words, non monetary measures checks only over imports.

# Measures to correct disequilibrium in B/Ps.



# Deflation

- Basically, a deficit B/Ps occurs due to high imports & low exports. This is to be reversed. In this regard traditionally, it has been suggested that a country may adopt **deflationary or dear money policy** by raising the bank rate & restricting credit.
- Under deflation, prices of domestic goods fall which makes exports attractive & imports relatively costlier.

# Exchange Depreciation

- Another important method for correcting an adverse B/Ps is to depreciate the external (exchange) value of home currency. In simple words, it's a decline in the rate of exchange in one country in terms of another. Suppose the exchange rate between the Indian Rs. & US is  $1\$ = \text{Rs.}10$ . If India experiences adverse B/Ps in regard to USA, the Indian demand for American currency will rise. Consequently, the price of the USD in terms of Rs. will appreciate in its external value. Thus the new exchange rate will be  $1\$ = \text{Rs.}12$ . which implies 20 % exchange depreciation of Indian Rupees.
- This method, is however, not feasible under present IMF system.

# Devaluation

- This is the most commonly used method for correcting disequilibrium in B/Ps. It is suitable under IMF system.
- Devaluation means official decrease in external value of currency in terms of foreign currency. When a country has a persistent deficit in B/Ps it may devalue its currency with permission of IMF.
- When a country's currency is devaluated, the impact would be relative cheapness of its exports to the foreigners & relative dearness of its imports. Consequently, export will rise & imports will decline.
- In modern times, generally a country resorts to devaluation when it intends to correct a chronic or fundamental deficit disequilibrium.

# Conditions for Successful Devaluation

1. A fairly elastic demand.
2. Structure of exports & imports.
3. Domestic price stability. (Inflation)
4. International co-operation.
5. Co-ordination of other measures.

# Drawbacks of Devaluation

1. Devaluation is acknowledgement of country's economic weakness.
2. It may induce inflationary tendencies in domestic economy.
3. It inflates the burden of debt servicing.
4. It takes considerable time to show its effect.
5. Its effect is general & drastic.

# Exchange Control

- Restrictions on the use of foreign exchange by the Central Bank are called exchange control.
- When an exchange control is adopted, all the exporters & importers have to surrender their foreign exchange earnings to the Central Bank.
- Under exchange control , the Central Bank releases foreign exchange only for essential imports & conserves the rest of the balance.
- This method offers no permanent solutions to the problem of disequilibrium in B/Ps.

# Non- Monetary Methods : Tariff

- Tariff is a fiscal device which may be used for correcting deficit disequilibrium in B/Ps.
- A schedule of duties levied upon the importation of commodities into a given nation from abroad is called tariff. It refers to custom duties imposed on imports.
- Imposition of import duties will rise the prices of imported goods which curtails the imports of a country.

## Import Quotas/ Quantitative Restrictions (Q.Rs.)

- Under the quota system, the Government may fix & permit maximum quantity or value of a commodity to be imported during a given period. By restricting imports through quota system deficit is reduced or eliminate & thereby the B/Ps conditions will be improved.
- Its impact is direct & it is better then import duties or tariff.
- Quota have immediate effect of restricting imports as the marginal propensity to import becomes zero once the quota limit is reached.

# Export Promotion Policies & Programmes

- To improve the deficit disequilibrium in B/Ps one has to increase their exports & that's why the Government may adopt this method.
- An export promotion programmes includes subsidies, tax concession to exporters, marketing facilities, incentives for exports, loan proprieties to the export sector under credit policy of the Central Bank etc.
- ***“Export or Perish”*** is the slogan for any country facing the problem of fundamental disequilibrium in its B/Ps.

# Foreign Exchange Management

“Foreign Exchange is the Engine for International Trade”.

# Foreign Exchange Management

- Some mechanism of international payment is essential for effectuating international transactions of goods & capital movement.
- Different countries have different currencies with different values. Hence it is essential to connect these currency values to each other in order to measure the values of international transactions.
- For this purpose the concept of foreign exchange came into operation.

# Foreign Exchange Market (FEM)

- The foreign exchange market is a place where foreign currencies are bought & sold.
- C. P. Kindleberger defines FEM as “*a place where foreign money are bought & sold*”. Its an institutional arrangement for buying & selling of foreign currencies. Exporters sell the foreign currencies & importers buy them.
- FEM is a part of the money market in the financial centers.

# Functions of F.E.M.

Function(s)	Description
Transfer Function	It transfers the purchasing power of two national currencies from one nation to another.
Credit Function	It provides the credit for international trade.
Hedging Function	It provides the hedging facilities to the players of international trade.

# Foreign Exchange Rate : FER

- **Meaning:** When goods & services are exchanged, there has to be determined some rate of exchange or exchange ratio between them. In other words, there must be some “*price*” at which the goods & services can be exchanged & this exchanged price is known as foreign exchange rate.
- Thus, foreign exchange rate can be defined as – *the rate at which the currencies of two nations are exchanged at par (equality) for each other* are termed as rate of foreign exchange.

# Meaning & Significance of FER

- Foreign exchange is the starting point for international trade. For instance, if one USD is exchanged for Rs. 70 then FER would be  $1\$ = \text{Rs.}70$ .
- In other words, rate of exchange is nothing but the value or price of a country's currency expressed in terms of foreign currency.
- Significance of FER:
  1. FER is a link to international trade.
  2. FER affects the volume, direction & composition of international trade.

# Determination of FER

Determination of FER

Demand for FER

$(D_{FE})$

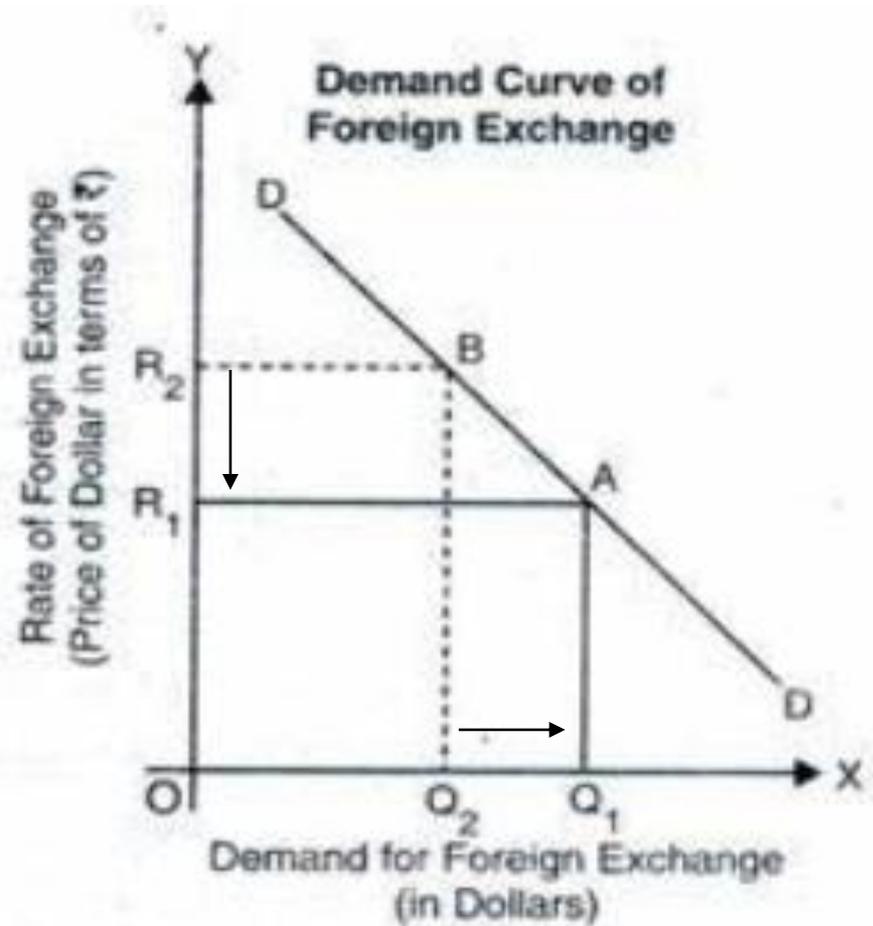
Supply of FER

$(S_{FE})$

$$FER = f(D_{FE} \& S_{FE})$$

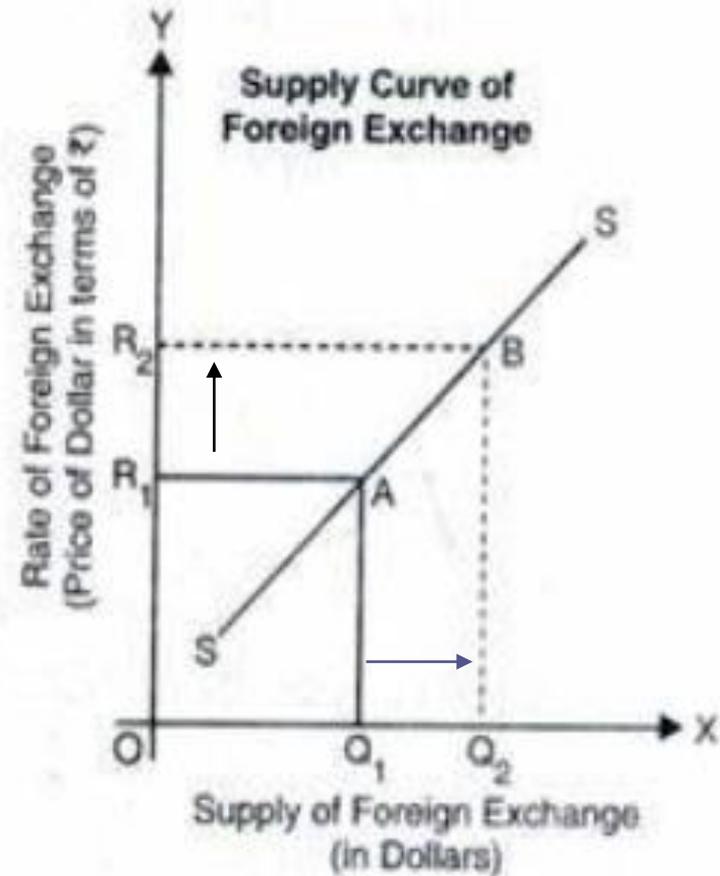
# Demand for FER

- A demand schedule for foreign exchange is a schedule showing the different amounts of foreign exchange demanded at different rate of foreign exchange, ceteris paribus.
- The FER & demand for foreign exchange is inversely related with one another.
- Why there is a Demand for FE ?
  1. Imports.
  2. Investment. (Capital Outflow)
  3. Unilateral Transfers.



# Supply of FER

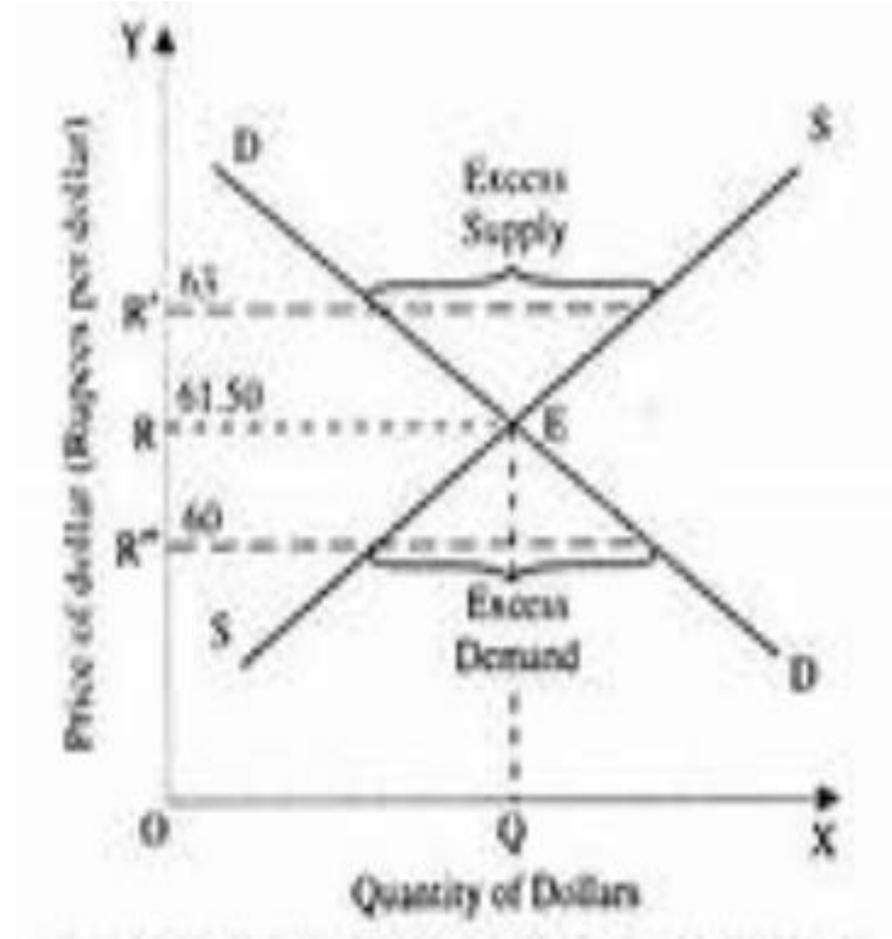
- The supply schedule of foreign exchange shows the different amounts of foreign exchange that are available at different foreign exchange rate in the foreign exchange market.
- There is a positive relationship between FER & supply of foreign exchange. Meaning thereby, higher the FER, higher will be the supply.
- Why there is a Supply of foreign exchange?
  1. Exports.
  2. Investments (Capital Inflow).
  3. Unilateral Transfers.



# Equilibrium FER

- The FER in a foreign exchange market is determined by the interaction between demand & supply of foreign exchange.
- At the equilibrium foreign exchange rate the total amount of foreign exchange demanded by buyers (importers) equals to the total amount of foreign exchange offered for sales by the sellers (exporters).
- At any other FER, other than OR the foreign exchange market will be in disequilibrium.
- In short,

$$\text{FER} = f(D_{\text{FE}} + S_{\text{FE}})$$



# Theories on Determination of FER

Mint Parity Theory

Purchasing Power Parity Theory

Balance of Payments Theory

# Mint Parity Theory



# Purchasing Power Parity Theory

- With the breakdown of the gold standards during the period of first world war (1914-1918), gold parities & free movement of gold are ceased & with this mint parity approach lost its significance.
- The theory of Purchasing Power Parity (PPP) was coined in 1802 by Richard Wheatley in his famous work, “*Remarks on Currency & Commerce*” in his book named “THE THEORY OF INTERNATIONAL PRICES”.
- The theory was later popularized in 1918 by the Swedish economist Gustav Cassel who used the term *Purchasing Power Parity*.

# The Statement

- The basic principle underlying the PPP theory is that foreign exchange (a foreign money) is demanded by the nationals (citizens) of a country because it has the power to command goods in its own country.
- When the domestic currency of a nation is exchanged for foreign, what in fact is done is that domestic purchasing power is exchanged for foreign purchasing power.
- The main factor determining the exchange rate is the relative purchasing power of two countries' currencies. Meaning thereby, when two currencies are exchanged, what are exchanged, in fact, are the internal purchasing powers of two different national currencies.

# The Theory

- The theory further states that the rate of exchange between two inconvertible paper currencies tends to approximate the ratio of their purchasing power.
- In nutshell, according to this theory we can compare the value of 1 unit with other currencies like USD, Sterling Pound, Yen etc.
- The theory has been presented in two versions viz.,
  1. Absolute Version
  2. Relative Version

# Absolute Version of Theory

- The absolute version of purchasing power parity stresses that the rate of exchange should normally reflect the relation between the internal purchasing power of the various national currency units.
- For instance, let us assume that there presentative collection of goods cost Rs. 500 in India & the same in USA costs \$100. In this case the current rate of exchange is  $\text{Rs. } 5 = 1\$$ .

# The Formula

The Formula of Absolute Version:

$$\text{Exchange Rate} = \frac{\text{No. of currency A}}{\text{One unit of currency B}} \times \frac{\text{Ip of B}}{\text{Ip of A}}$$

- Where, Ip stands for internal purchasing power which is reciprocal of the index of general price level. It means if price increases, purchasing power declines.
- The right hand side of equation shows the FER ,where B is regarded as foreign country.

# Statistical Formula

- In statistical terms thus the FER may be expressed as –

$$R = \frac{P_b \times Q_o}{P_a \times Q_o}$$

- Where,  $P_a$  = prices in country A  
 $P_b$  = prices in country B  
 $Q_o$  = the corresponding weights/ quantities  
 $P$  = the prices related to representative bundles of items with assigned weights being the same for two countries.
- Thus, the FER is determined by the ratio of the internal purchasing power of foreign money & internal purchasing power of domestic money.

# Limits of Absolute Version

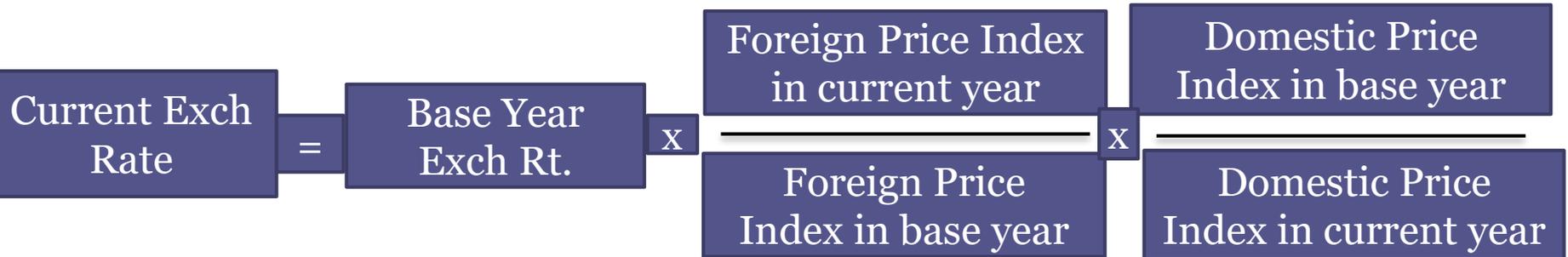
1. Absolute version measures the absolute level of internal prices. As we know that the value of money can not be measured in absolute terms.
2. The goods produced & demanded in two different countries are not of same kind of quantity & of same quality.

# Relative Version of Theory

- The relative version of PPP theory was propounded by G. Cassel.
- The theory in its relative version states that the changes in the equilibrium rate of exchange will be governed by the changes in the ratio of their respective purchasing power. Here, some past exchange rate is assumed to be an equilibrium rate & is adopted as a base rate.

# The Formula

The Formula of Relative Version:



Symbolically,

$$R_1 = R_0 \times \frac{P_{b1} / P_{b0}}{P_{a1} / P_{a0}}$$

# Illustration

- To illustrate this point, let us assume there is a bilateral trade between India & USA. In the base year the FER is 1 Re. = 20 Cents & price indices are 100 in both these nations. Now, suppose in later period the price index in India goes up to 300 & in US it goes to 150, then the new exchange rate will be 1Re. = 10 Cents.

$$R_1 = 20 \text{ Cents} \times \frac{150}{100} \times \frac{100}{300} = 10 \text{ Cents}$$

Therefore , the new exchange rate will be 1Re. = 10Cents.

# Interpretation

- From the illustration we can say that when the prices in country A doubled relative to price in country B from period 0 to 1, the rate of exchange should fall by half or the price of foreign exchanged expressed in local currency should double.
- The theory also suggest that ***inflation has its impact on the exchange rate***. A country's currency tends to appreciate or depreciate in proportion to difference between Domestic Inflation Rate (DIR) & Foreign Inflation Rate (FIR), if it is to maintain its PPP.

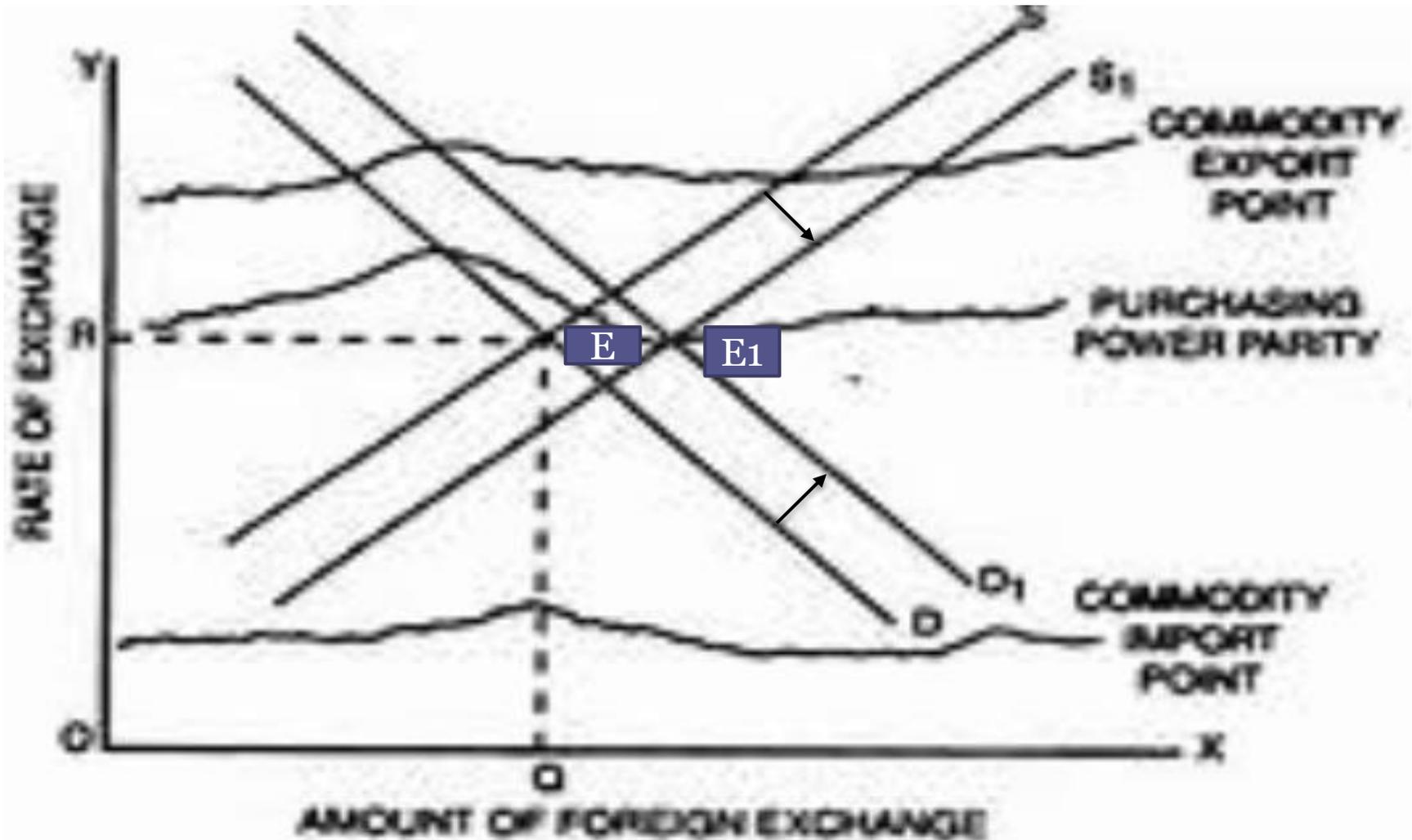
$$PPP = DIR - FIR$$

Where, DIR = Domestic Inflation Rate

FIR = Foreign Inflation Rate

If **DIR > FIR** then there will be ***depreciation of home currency*** & if **FIR > DIR** then there is ***appreciation of home currency***.

# Diagrammatic Explanation



# Major Criticisms of PPP Theory

- It ignores many real determinants.
- It is based on unrealistic assumptions.
- The theory is an empty truism.
- The theory overlooks the importance of demand & supply in foreign exchange.
- It holds good in long run.
- Issue of old exchange rate(Base rate).
- It disregards the basis of international trade.
- Practical difficulty in measuring true purchasing power of a currency.
- The theory ignores capital transactions.
- Unrealistic assumption of exchange rate as a passive variable.
- Static theory.
- Unrealistic assumption of free trade & absence of exchange control.
- It does not include the elasticities of reciprocal demand.
- It is crude approximation.
- It fails to explain large volatility.

# Factors affecting FER

- Trade movement
- Capital movement
- Stock exchange operations
- Speculation transactions
- Banking operations
- Monetary policy
- Political conditions

# Public Economics

Dhaval J. Pandya, Ph.D.  
Head - Department of Economics,  
U.C.C.C. & S.P.B.C.B.A. & S.D.H.G. College of B.C.A. & I.T.,  
Surat- Gujarat  
Email: [djp\\_econ@yahoo.co.in](mailto:djp_econ@yahoo.co.in)

# Public Finance : An Introduction

- The complex problems that centers around the income-expenditure process of the government are studied in public economics or public finance.
- According to Hugh Dalton, Public finance is “concerned with the income & expenditure of public authorities & with the adjustment of one to the other, adjustment not necessarily to equality, but to whatever arithmetic relationship, in given conditions, is best.”(Dalton, Principles of Public Finance, p.1)
- In traditional sense, public finance is a study of the nature & principles of State expenditure & state revenue. In short, public finance is a fiscal science.

# Fundamental Problems of Government's Fiscal Activities

- To what extent the State should intervene in economic field?
- What should be the size of public revenue?
- What should be the size of public expenditure?
- In what way should taxes be raised?
- How should tax burden should be distributed?
- What should be the formal & effective incidence on production, consumption, distribution & welfare?
- In what ways public expenditures should incurred?
- What would be the criterion for a budget & how it should be balanced?
- What should be the nature & burden of public debt? & How it should be managed?

# Subject matter of Public Finance

Public Revenue (જાહેર આવક)

Public Expenditure (જાહેર ખર્ચ)

Public Debt (જાહેર દેવું)

Financial Administration (નાણાકીય વહીવટ)

# The Scope of Public Finance

- According to Musgrave, the scope of public finance comprises the following three functions of the Government's budgetary policy confined to fiscal department-
  1. The allocation function. (ફાણવણી કાર્ય)
  2. The distribution function. (વિતરણ કાર્ય)
  3. The stabilization function. (સ્થિરતા કાર્ય)
- These refers to three objectives of budget policy i.e., the use of financial instruments :
  - (i) To secure adjustments in the allocation of resources.
  - (ii) To secure adjustments in the distribution of income & wealth.
  - (iii) To secure economic stabilization.

# Functions of Public Finance

1. To provide social goods to satisfy collective wants.
2. To make proper adjustments in income distribution.
3. To use fiscal instruments for economic stabilization.

# Public Revenue

- The income of the Government through all sources is called public revenue or public income.
- According to Dalton, the term public income has two senses, wide & narrow. In its wider sense it includes all the income or receipts which a public authority may secure at any given period of time. In its narrow sense, it includes only those sources of income of public authority which are ordinarily known as revenue resources.
- In modern welfare State, public revenue are of two types viz.,
  - a. Tax revenue (કર આવક) &
  - b. Non-tax revenue. (બિન-કર આવક)

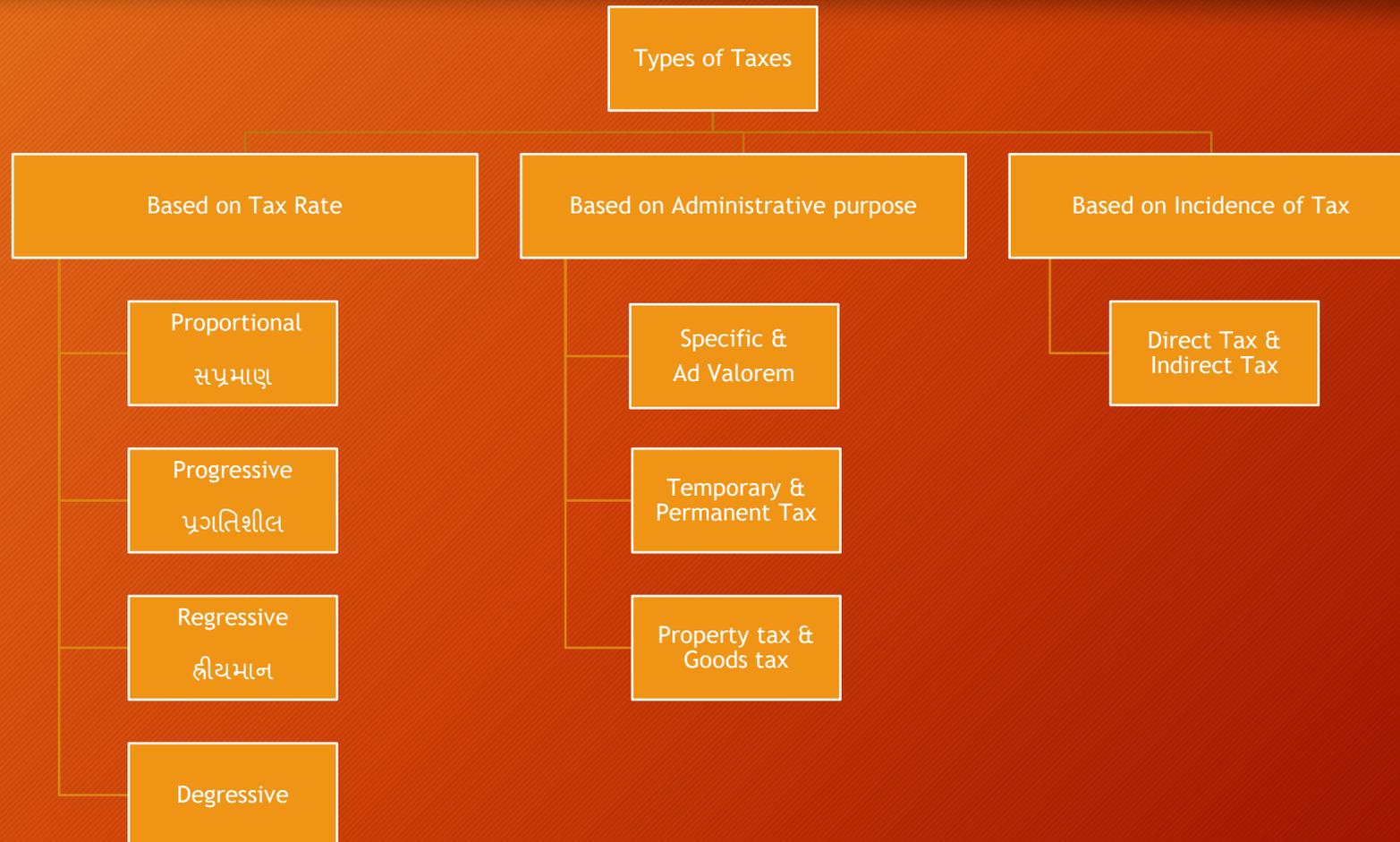
# What is Tax?

- Taxes are compulsory contributions imposed by the Government on its citizens to meet its general expenses incurred for the common goods, without any corresponding benefits to the tax payers.
- “The essence of tax , as distinguished from other charges by the Government, is the absence of a direct *quid pro quo* between the tax payer & public authority.” (Taussig, Principles of Economics, Vol. II, p.483).
- “Tax is a compulsory contribution from a person to the Government to defray the expenses incurred in common interest of all , without reference to specific benefits conferred.” (Seligman, Essays in Taxation, p. 432).
- In short, Tax can be defined as “*Non quid pro quo*” .

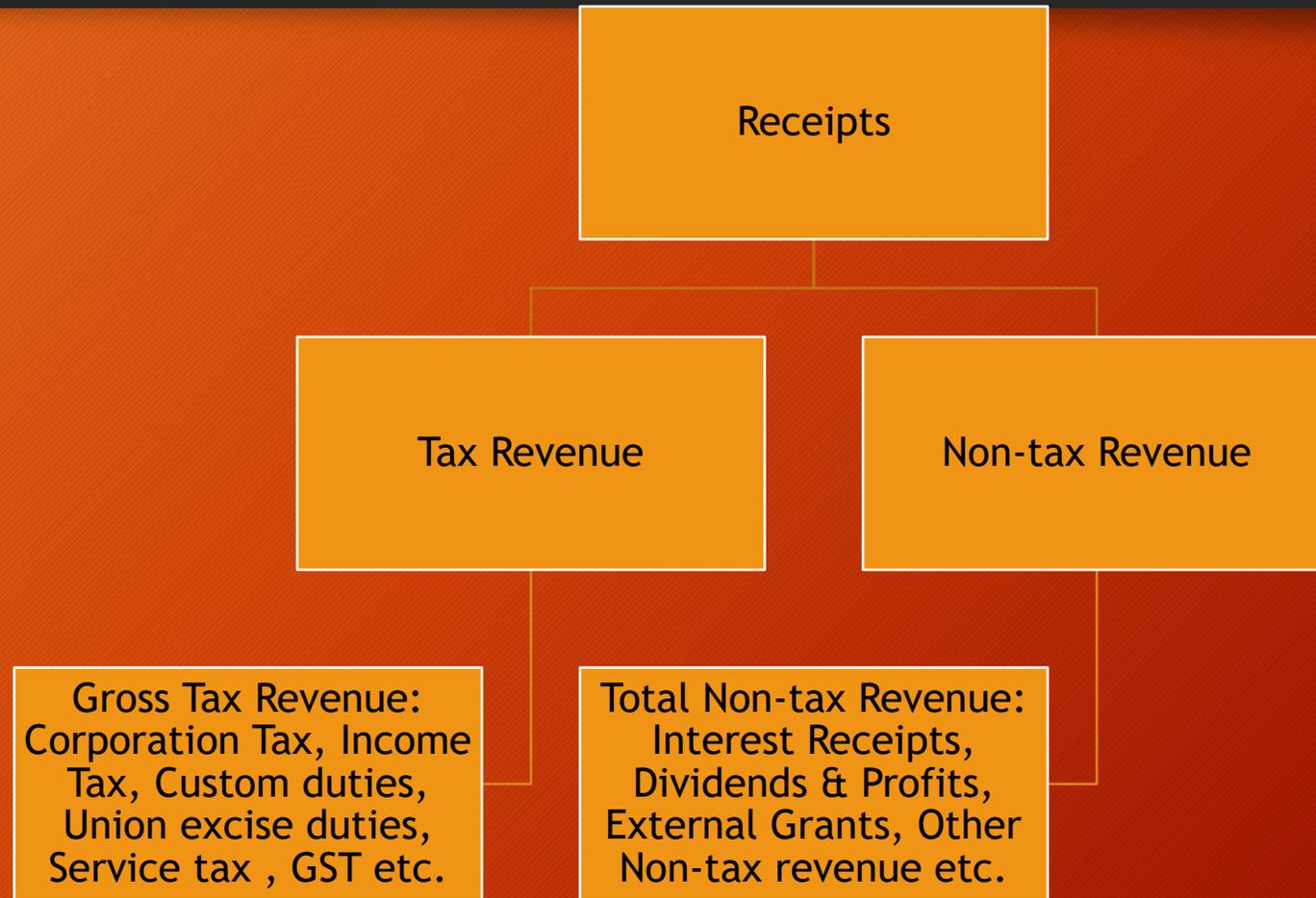
# Types of Revenue



# Types of Taxation



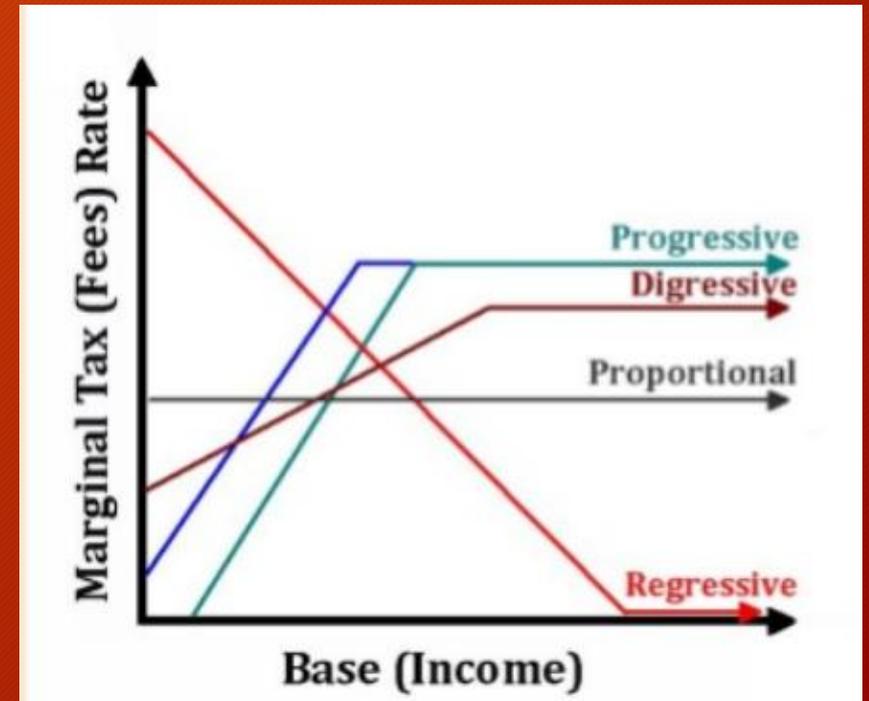
# Structure of Receipts



# Based on Tax Rate

- Considering the relation between tax rate & tax base (income) there are four types of taxes.

Types of Taxes	Description
Proportional Tax Rate	Taxes in which the rate of tax remains constant, though the tax base change, are called proportional tax system. (Equity Principle)
Progressive Tax Rate	Taxes in which the rate of tax increases as tax base expands is called progressive tax system. (Ability to Pay)
Regressive Tax Rate	When the rate of tax decreases as tax base increases is called regressive tax system.
Digressive Tax Rate	It's a combination of progressive & proportional tax system.



# Tabular Explanation

Tax Base / Income (In Rs.)	Proportional	Progressive	Regressive	Digressive
1000	10	10	10	5
2000	10	15	8	6
3000	10	25	5	7
4000	10	30	2	7

# Specific & Ad Valorem Taxes

- According to the method of assessment, taxes on commodities may be classified into two types - Specific & Ad valorem.
- Taxes which are based on specific quantities or attributes of goods are called specific taxes. It is generally assessed on the weight, no. of volume etc.
- Ad valorem taxes on the other hand, are difficult to administer & collect as they involve the assessment of the value of goods.

# Direct Taxes & Indirect Taxes

- A direct tax is really a tax which is paid by a person on whom it is legally imposed & the burden of which can not be shifted to any other person is called direct taxes, said Dalton. In other words, the impact & incidence of direct tax will fall on same person, as it can not be shifted to any other person(s).
- An indirect tax, on the other hand, is a tax in which the burden of tax can be shifted to others. Thus the impact & incidence of tax will fall on different persons. Dalton defines indirect taxes as those taxes which are not direct.

# Concept of Impact, Incidence & Shifting of Tax

Concept	Meaning
Impact of tax (કર-ઘાત)	The immediate or initial or first money burden (effect) of tax is known as impact of tax. It always falls on the person who is legally responsible to pay the tax amount in the first instance.
Incidence of tax (કર-સંપાત)	The final money burden of tax is known as incidence of tax.
Shifting of tax (કર-વિવર્તન)	The process of transferring the direct money burden of a tax to another person is known as shifting of tax. In other words, when the burden of tax is shifted from one person to another then it is to be identified as shifting of tax. Shifting of tax can be classified in two parts- forward shifting of tax & backward shifting of tax.

# Factors affecting incidence of tax

1. Elasticity of demand & supply
2. Cost conditions
3. Market structure

# Factors affecting incidence of tax

## 1. Elasticity of demand

Elasticity of demand	Incidence
Unitary elastic demand	Buyers & sellers equally share tax burden.
Perfectly elastic demand $E_d = \infty$	Full incidence on sellers
Perfectly inelastic demand	Full incidence on buyers
Relatively elastic demand	A large part of incidence on the sellers & less on buyers
Relatively inelastic demand	A large part of incidence on buyers & less on sellers

# Factors affecting incidence of tax

- Elasticity of supply

Elasticity of Supply	Incidence
Unitary elastic supply	Buyers & sellers equally share tax burden.
Perfectly elastic supply	Full incidence on the buyers
Perfectly inelastic supply	Full incidence of sellers
Relatively elastic supply	Greater incidence is on the buyers
Relatively inelastic supply	Larger incidence on the sellers

# Factors affecting incidence of tax

- Cost conditions

Different Cost conditions	
Increasing cost conditions	Incidence is partly on the buyers & sellers
Constant cost conditions	The tax will fully shifted to the buyers who bears is full incidence
Decreasing cost conditions	The consumers not only bears the full incidence of tax but has to pay a higher per unit cost for the reduced supply.

# Indian Tax Structure

- The Indian system as evolved during the British rule was conservative & regressive in nature & covered only a narrow range of population. However, it is only after independence, & especially after the implementation of Indian planning the far reaching changes have been made in our tax structure to make it responsive to meet the needs & requirements of our developing economy.
- The changes suggested in our tax structure have been in accordance with the recommendations of number of committees, commissions, expert study groups appointed from time to time by the Government of India.

# Objectives of Indian Tax Policy

1. To mobilize resources for economic development.
2. To promote savings & investments.
3. To ensure optimum allocation of resources.
4. To reduce regional disparities.
5. To reduce income inequalities.
6. To act as an integral part of anti-inflationary & anti-recessionary policy.

# Key Features of Indian Tax System

- Growing Tax revenue.
- Rising the amount of non-tax revenue.
- Increasing share of DTs & IDTs in tax revenue.
- Increasing Tax-GDP ratio.
- Trends towards lower tax rates.
- Shift in relative importance of different taxes.

# Growing Tax Revenue

- There are 2 main reasons for this dramatic growth in tax revenue-
  1. Over the years, there has been a considerable deepening & widening of tax base( both direct & indirect tax rates has been substantially increased).
  2. The increase in tax revenue is also the result of a substantial increase in production, employment, income & consumption.

Year	Tax Revenue ( In Rs. Crs)
1950-51	357
1970-71	2451
1980-81	9358
1990-91	42978
2000-01	136658
2010-11	569868
2020-21	1426287
2022-23	20,86,662

Source: Economic Survey, 2022-23

# Rising the amount of non-tax revenue

- There has been a significant rise in non-tax revenue too over a period of time.

Source: Economic Survey, 2020-21

Year	Non-Tax- Revenue (In Rs. Crs.)
1950-51	49
1980-81	3411
2001-02	70224
2010-11	121672
2018-19	235704
2019-20	326221 (PA)
2020-21	385017 (BE)
2022-23	N.A.

# Increasing share of DTs & IDTs in tax revenue

- There is a consistent rise in the DTs & IDTs over a period of time.
- However, the share of IDTs in tax revenue remained to be very high as compared to DTs.
- This is because of a soaring consumptional expenditures made by population.

Year	Direct Taxes (In Rs. Crs.)	Indirect Taxes (In Rs. Crs.)
1970-71	511	1940
1980-81	1893	7465
1990-91	6903	36075
2000-01	49651	87007
2010-11	313501	256367
2020-21	583210	843077
2021-22	865386	939407
2022-23	10,66,827 (51.1%)	10,19,835 (48.9%)

Source: RBI, Handbook of Statistics on Indian Economy, 2022-23

# Increasing Tax-GDP ratio

- The earliest way to know the tax burden is to find out tax-GDP ratio.
- The share of tax revenue in GDP of a country has shown a persistent rise over a period of time. However, this ratio remained to be very high in many developed economies.
- In developed economies this ratio ranges in between 30 - 35 %.

Year	Tax-GDP Ratio (In Percentage)
1950-51	6.3
1970-71	11.0
1990-91	15.3
2012-13	20.3
2017-18	18.0
2022-23	17.1

# Trends towards lower tax rates

- Tax reforms have been integral part of process of structural reforms initiated in India since 1991. Prior to this, the rate of personal & corporate tax were exorbitantly high.
- However, after recommendations of Wanchoo Committee report this rate has been lowered to 77 % in 1974-75 to 66% in 1976-77.
- After 1997-98, the rate of personal tax has also kept at the tax slabs of 10, 20 & 30 % respectively.
- This gives boost to tax payers to pay more tax to the authorities.

Year	Personal Income Tax (In Rs. Crs)	Corporate Tax (In Rs. Crs)
1970-71	114	371
1980-81	438	1311
1990-91	1250	5335
2000-01	23766	25177
2010-11	102441	209115
2020-21	299689	283507
2022-23	527616	539202

Prepared By: Dr. Dhaval J. Pandya

Source: RBI, Handbook of Statistics on Indian Economy, 2022-23

# Shift in relative importance of different taxes

- Apart from various direct taxes, the Government expands the scope of indirect taxes. However, after implementation of GST majority of taxes are covered under GST. Some indirect taxes like custom duties, excise duties etc. are not included in GST.

# Shortcoming of Indian Tax System

- Low tax revenue.
- Narrow tax base.
- Intersectoral imbalances.
- Predominance of IDTs for a very long time.
- Mounting tax arrears.
- High incidence of tax evasion.
- Lack of integration & cascading effects of tax system.

# Evaluation of Indian Tax Structure

1. Tax buoyancy
2. Regressive tax system
3. Administrative efficiency
4. Multiplicity of tax laws & lack of integration
5. Intersectoral imbalance in tax structure
6. The burden of tax exemption
7. Equity

# Goods & Service Tax (GST)

- GST or Goods and Services Tax, is a unified indirect tax in India that replaced multiple central and state taxes, like VAT and service tax, to create a single market for goods and services.
- It is a destination-based tax on consumption, where only value addition is taxed at each stage, and the final burden is on the consumer.
- The system includes Central GST (CGST), State GST (SGST), and Integrated GST (IGST) for interstate transactions, and is governed by the GST Council, which decides on tax rates and rules.

# Genesis of GST

- The Goods and Services Tax (GST) came into effect from 1 July 2017 through the implementation of the 101<sup>st</sup> Amendment to the Constitution of India by the President of India, Government of India. It replaced an existing system of fragmented and complex indirect taxes, consisting of multiple central and state taxes.
- Here it is worth noting that 1 July is celebrated as GST Day in India.
- Former prime minister Atal Bihari Vajpayee is credited with founding GST in India and is often referred to as the '*Father of GST in India*'.
- Vijay Kelkar, as the Chairman of the Finance Commission and Kelkar Corporation, played a key role in the improvement of the GST regime.

# Objectives of GST in India

- **"One Nation, One Tax":** A key objective was to create a common national market with a uniform tax rate for a particular product or service across the country.
- **Subsume Major Indirect Taxes:** GST was implemented to replace a majority of central and state indirect taxes, simplifying the overall tax structure.
- **Eliminate the Cascading Tax Effect:** The goal was to remove the "tax on tax" effect by providing a seamless flow of input tax credits throughout the supply chain.
- **Curb Tax Evasion and Corruption:** By using a robust online platform for all transactions, GST reduces opportunities for tax evasion and promotes accountability.
- **Increase the Taxpayer Base:** Bringing more businesses, especially from the unorganized sector, into the tax net helps to formalize the economy and increase government revenue.
- **Promote Ease of Doing Business:** The simplified online procedures and single, unified tax system have reduced compliance burdens for taxpayers.
- **Improve Logistics and Distribution:** The removal of interstate checkpoints and simpler documentation has led to faster and more efficient movement of goods.
- **Boost Economic Growth:** By creating a transparent and efficient tax system and lowering costs, GST aims to make Indian products more competitive and stimulate economic growth.

# Types of GST in India

- India has four types of GST:
  1. Integrated Goods and Services Tax (IGST)
  2. State Goods and Services Tax (SGST)
  3. Central Goods and Services Tax (CGST) and
  4. Union Territory Goods and Services Tax (UTGST).
- This simple division makes it easy to tell the difference between interstate and intrastate goods.

# GST Slabs

- GST was initially structured with multiple tax slabs—0%, 5%, 12%, 18%, 28%, and 40%. However, certain goods such as petroleum products, alcoholic beverages, and electricity were excluded from GST and continued to be taxed separately by state governments under the previous tax system.
- The GST rates in India have been simplified to three main slabs: 5%, 12% and 40%. The 5% rate applies to essentials and common household goods, the 18% rate is the new standard for most consumer products and services, and the 40% rate is for luxury and "sin" goods.
- On 22<sup>nd</sup> September 2025, the government, through the GST Council, moved to a simplified tax framework of 5% and 18% with the removal of the current 12% and 28% tax rates.

# Benefits / Advantages of GST

## 1. GST Eliminates the Cascading Effect of Tax:

- GST is a comprehensive indirect tax that was designed to bring indirect taxation under one umbrella. More importantly, it has eliminated the cascading effect of taxes that was evident earlier. Cascading tax effect means 'Tax on Tax' where tax is levied on an already tax-imposed value.

## 2. Higher Threshold for Registration:

- Earlier, in the VAT structure, any business with a turnover of more than Rs.5 lakh (in most states) was liable to pay VAT. Please note that this limit differed state-wise. Also, service tax was exempted for service providers with a turnover of less than Rs.10 lakh.
- Under GST regime, however, the GST registration threshold has been increased to Rs.20 lakhs (Rs.40 lakhs for supply of only goods), which exempts many small traders and service providers.

## 3. Composition Scheme for Small Businesses:

- Under GST, small businesses (with a turnover of Rs.20 to Rs .1.5 crore) can benefit as it gives an option to lower taxes by utilizing the Composition scheme. This move has brought down the tax and compliance burden on many small businesses.

# Benefits / Advantages of GST

## 4. Simple and Easy Online Procedure:

- The entire process of GST (from GST registration to filing returns) is made online, and it is super simple. This has been beneficial for start-ups especially, as they do not have to run from pillar to post to get different registrations such as VAT, excise, and service tax.

## 5. The Number of Compliances is Lesser:

- Earlier, there was VAT and service tax, each of which had its own returns and compliances. Under GST, however, there are fewer returns to be filed. Therefore, the number of returns to be filed has come down. There are about 11 returns under GST, out of which 4 are basic returns that apply to all regular taxable persons under GST.

## 6. Unorganized Sector is Regulated under GST:

- In the pre-GST era, it was often seen that certain industries in India like construction and textile were largely unregulated and unorganised.
- Under GST, however, there are provisions for online compliances and payments, and for availing of input credit only when the supplier has accepted the amount. This has brought in accountability and regulation to these industries.

# Benefits / Advantages of GST

## 7. Special Treatment for e-Commerce Operators:

- Before GST regime, supplying goods through the e-commerce sector did not have separate rules. It had variable VAT laws.
- These differential treatments and confusing compliances have been removed under GST. For the first time, GST has clearly mapped out the common provisions applicable to the e-commerce sector across India and since these are applicable all over India, there should be no complication regarding the inter-state movement of goods anymore.

## 8. Improved Efficiency of Logistics:

- Earlier, the logistics industry in India had to maintain multiple warehouses across states to avoid the Central Sales Tax and state entry taxes on inter-state movement. These warehouses were forced to operate below their capacity, giving room for increased operating costs.
- Under GST, however, these restrictions on inter-state movement of goods have been lessened.
- As an outcome of GST, warehouse operators and e-commerce aggregators players have shown interest in setting up their warehouses at strategic locations such as Nagpur (which is the zero-mile city of India), instead of every other city on their delivery route.

# Limitations/ Disadvantages of GST

- **Implementation challenges:** Initial adoption involved teething issues and a period of adaptation for many businesses.
- **Increased costs for small businesses:** Smaller businesses may face higher initial compliance costs, software purchase costs, and operational costs to meet requirements.
- **Complexity for some:** The complexity of tax filings and the need to choose between different regimes can be challenging for some businesses, especially SMEs.
- **Potential for inflation:** Some sectors have experienced inflation due to the implementation of GST.
- **Impact on the unorganized sector:** Some businesses in the unorganized sector, not previously taxed, may struggle to adapt to the new system.

# Public Expenditure

- Public expenditure is that expenditure which is incurred by the public authorities like Central, State & Local government, to satisfy those common wants which the people in their individual capacity are unable to satisfy efficiently. Public expenditure thus, tends to satisfy collective social wants.
- Technically, in budget public expenditure is classified into two categories viz., current expenditure & capital expenditure.

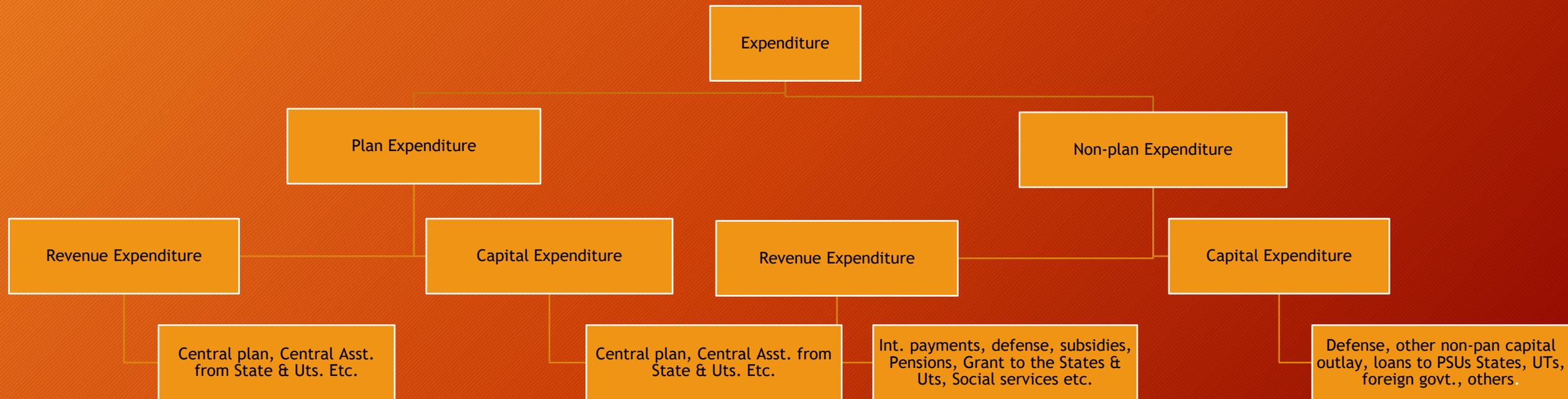
# Types of Public Expenditure

## Current & Capital Expenditures

**Current Expenditure** : All sorts of administrative & defense as well debt services are included in current expenditure which are unproductive in nature so it is also called as ***non-development expenditure***.

**Capital Expenditure**: These expenditures are intended for the creation of new productive assets in the economy. These expenditures are therefore, productive in nature so it is to be called as ***development expenditures***.

# Detailing of Public Expenditure



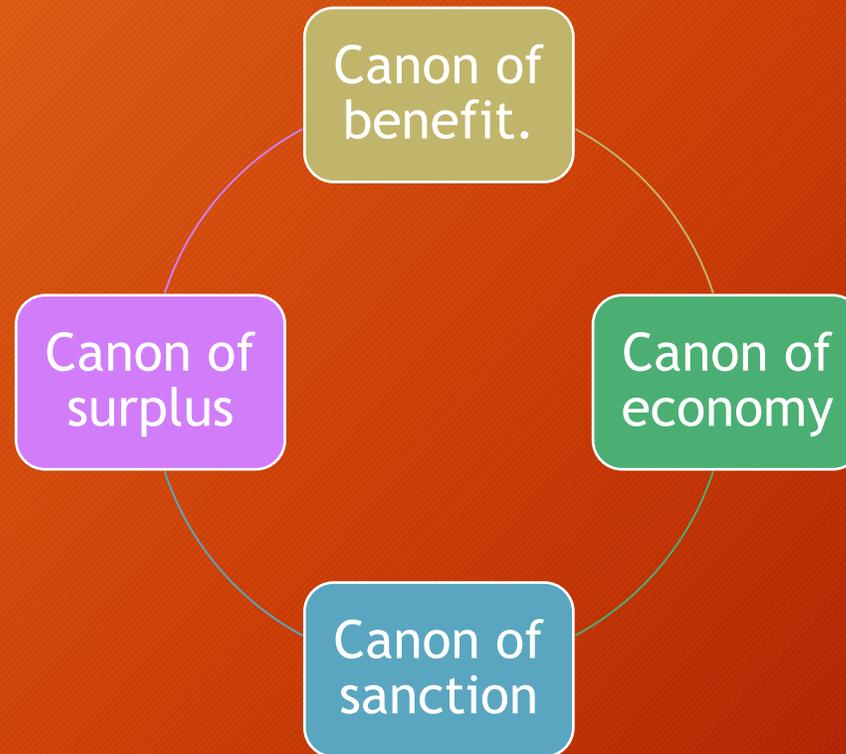
# Objectives of Public Expenditure

- ❑ Administration of law, order & justice.
- ❑ Maintenance of police force.
- ❑ Maintenance of army & provision of defense goods.
- ❑ Maintenance of diplomats in foreign countries.
- ❑ Public administration.
- ❑ Servicing of public debts.
- ❑ Development of Industries.
- ❑ Development of transportation & communication.
- ❑ Provision of public health.
- ❑ Creation of social goods.

# Causes of Growth in Public Expenditure

1. Income elasticity & increase in per capita income.
2. Welfare state ideology & Wagner's law.
3. Effects of war & need for defense.
4. Resource mobilization & ability to finance.
5. Inflation.
6. Role of democracy & socialism.
7. The effect of urbanization.
8. The rural development effect.
9. The population effect.
10. The growth of transportation & communication.
11. The planning effect.

# Canons of Public Expenditure



# Effects of Public Expenditure

Consumption

Production

(Efficiency, Incentive & allocation effect)

Distribution

(Income, wealth & resources)

# Public Debts

- Public debt is an fiscal instrument.
- Borrowings taken by the public authorities is called as public debts.
- Public debt is an obligation of government....(Britannica).
- In any budget, the proceed from public borrowings constitute the revenue of a capital nature, while the provision for their payments & servicing is regarded as an expenditure of a capital nature.

# Types of Public Debt

Internal & External Debts.

Productive & Unproductive Debts.

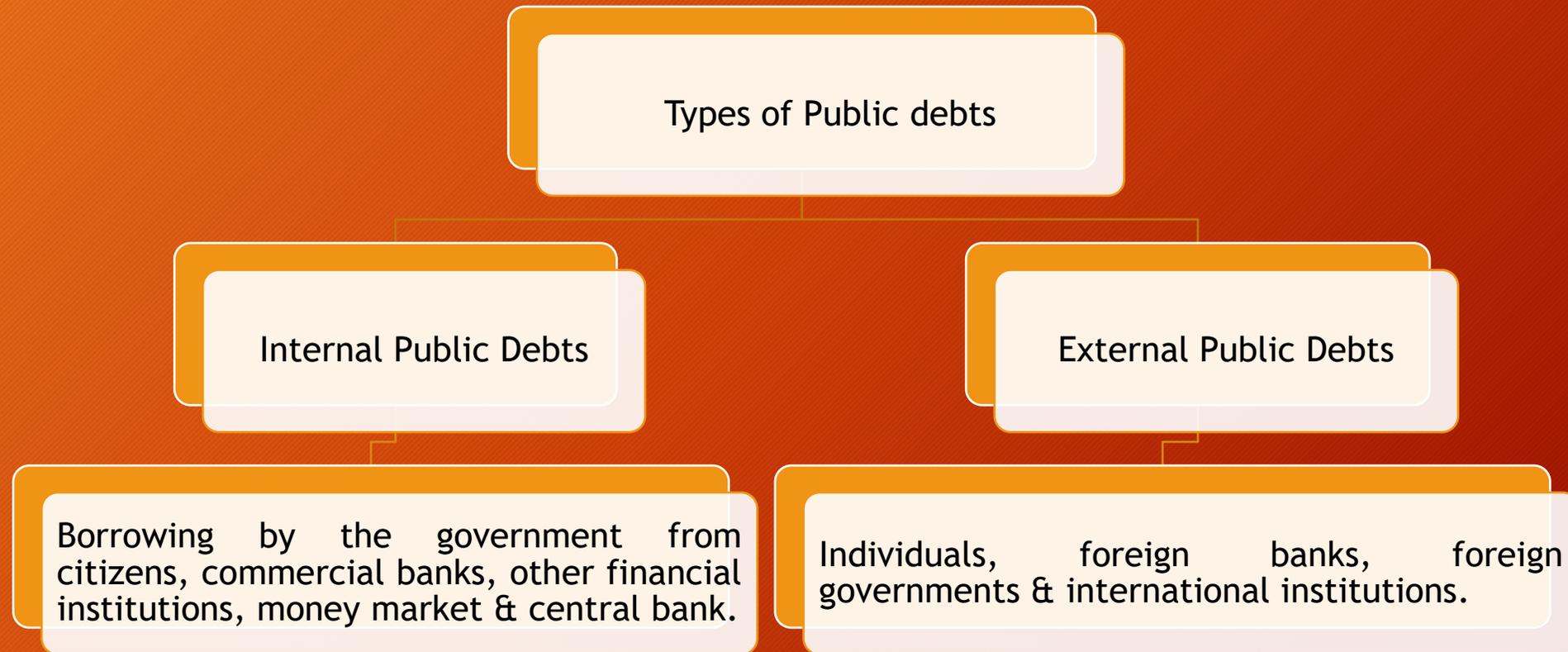
Compulsory & Voluntary Debts.

Redeemable & Irredeemable Debts.

Funded & Unfunded Debts.

Short term, Medium term & Long term Debts.

# Sources of Public Debt



# Need for Public Debt

1. During war time.
2. During the time of depression.
3. To meet unprecedented expenses.
4. To curb inflation.
5. Development finance.

# Burden of Public Debts

- Internal & External burden of public debt.
- Present & future burden of public debt.

# Methods of Redemption of Public Debts

1. Refunding.
2. Conversion.
3. Surplus budget.
4. Sinking funds.
5. Terminable annuities.
6. Additional taxation.
7. Capital levy.

# Concepts of Deficit

Deficits:	Actuals
Fiscal Deficit [=Total Expenditure- (Total Revenue+ Grants)]	4.4 % of G.D.P.
Revenue Deficit [=Revenue Expenditure- Current Revenue]	3.1 % of G.D.P.
Primary Deficit [=Fiscal Deficit - Interest Payments]	1.1 % of G.D.P.

# Fiscal Policy

- Fiscal policy is the use of government spending and taxation to influence the economy. Governments typically use fiscal policy to promote strong and sustainable growth and reduce poverty.
- For example, governments can lower taxes and raise spending to boost the economy if needed; typically, they spend on infrastructure projects that create jobs and income and social programs.
- Fiscal policy is based on the theories of the British economist John Maynard Keynes, whose Keynesian economics theorised that government changes in the levels of taxation and government spending influence aggregate demand and the level of economic activity.
- Fiscal policy in India aims to raise a considerable quantity of money to fund the government's various programmes through taxes. It aims to eliminate inequality in income and wealth distribution by giving sufficient incentives to the private sector.

# Types of Fiscal Policy

Types	Description
Neutral	...is usually undertaken when an economy is in neither a recession nor an expansion. The amount of government deficit spending (the excess not financed by tax revenue) is roughly the same as it has been on average over time, so no changes to it are occurring that would have an effect on the level of economic activity.
Expansionary	..is used by the government when trying to balance the contraction phase in the business cycle. It involves government spending exceeding tax revenue by more than it has tended to, and is usually undertaken during recessions. Examples of expansionary fiscal policy measures include increased government spending on public works (e.g., building schools) and providing the residents of the economy with tax cuts to increase their purchasing power (in order to fix a decrease in the demand).
Contractionary	is a measure to increase tax rates and decrease government spending. It occurs when government deficit spending is lower than usual. This has the potential to slow economic growth if inflation, which was caused by a significant increase in aggregate demand and the supply of money, is excessive.

# General Objectives of Fiscal Policy

- To raise Economic Growth.
- To attain Full employment.
- To Control debts.
- To Redistribute resources (income & wealth).
- To Control inflation.

# Objectives of Fiscal Policy in India

- To attain high economic growth.
- To maintain price stability.
- To reduce inequalities.

Thank You