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# Entire review of Macro-economics

- |   |                             |                  |                       |
|---|-----------------------------|------------------|-----------------------|
| ① | Scarcity<br>Unlimited wants | Opportunity Cost | Factors of Production |
|   | Limited resources.          |                  | Micro-economics       |

Production Possibility Curve

If you make one,  
you cannot make the other.

not similar.

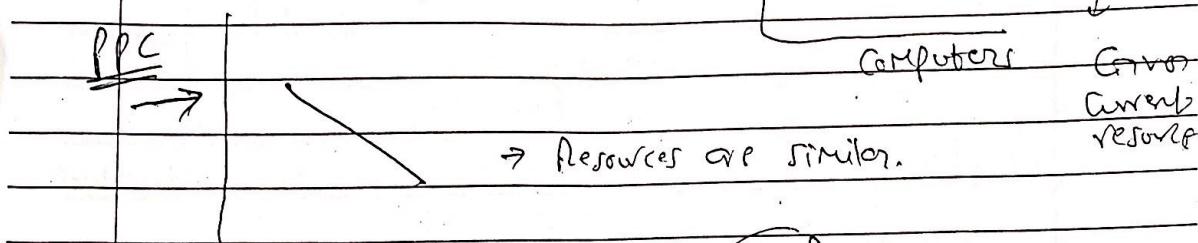
interesting  
off cost

efficient

(In)possible

Unattainable

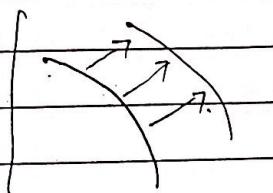
Ineff



Cost opportunity  
Cost

## Positive Analysis:

claims that attempt  
to describe world as it is



Shift PPC

Narrative: claims that  
attempt to prescribe  
how the world should be.

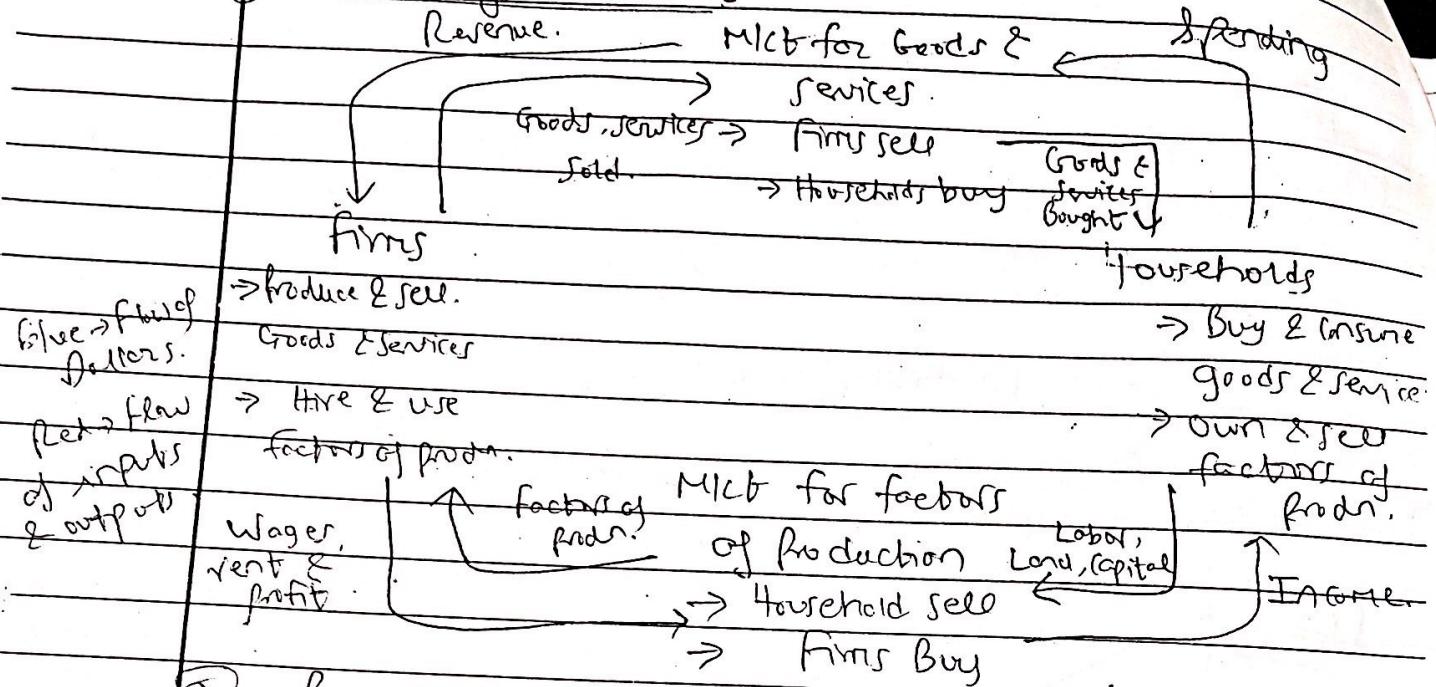
Comparative Advantage - Producer with lowest opp cost.  
This is how countries trade with each other

Absolute Advantage: Producer that can produce most output or requires least amount of inputs (resources)

They should specialize in good that is cheaper for them to produce.

④ Terms of Trade: How much to trade for what quantity.

⑤ Circular Flow Model:

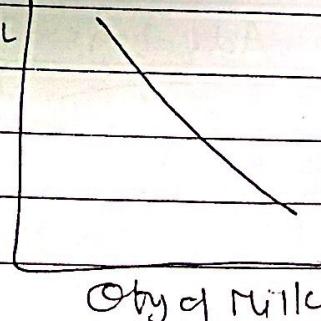


⑥ Private Sector: Part of economy run by individuals & business

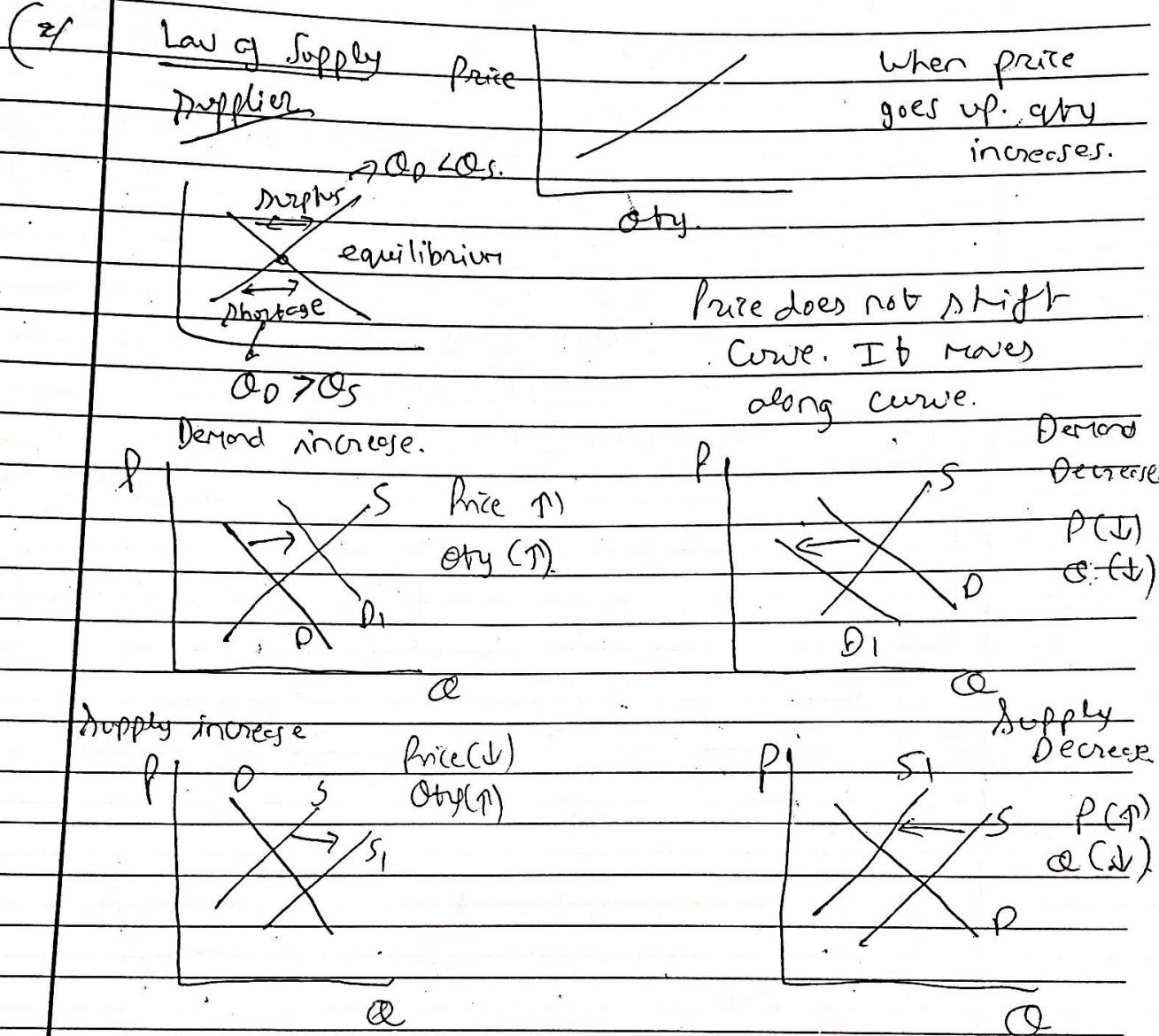
- ① Public Sector: Controlled by government.
- ② Factor Payments: Payment for factors of production i.e. rent, wages, interest & profit.
- ③ Transfer Payments: When the government redistributes income { i.e. welfare, social security, unemployment }
- ④ Subsidies: Govt payments to business.

⑦ Demand & Supply Price of Milk

Law of Demand:  
Inverse relationship betw  
Price & qty demanded.



- under 1
- Substitution effect
  - Income effect
  - Law of Diminishing Marginal Utility
- } → Downward sloping. 3



- (x) Substitutes: Increase in price on one Good, increases demand for other Good.
- (xi) Complements: Increase in price on one good, decreases demand for other good.
- Normal Goods : As income ( $\uparrow$ )  $\rightarrow$  demand ( $\uparrow$ )
- Inferior Goods As income ( $\uparrow$ )  $\rightarrow$  demand ( $\downarrow$ ).

## Volatility

Lam

4

elasticity = How qty changes with change in price.

elastic : Sensitivity

If Price increases  $\rightarrow$  qty demanded will be very less.  
" " decreases  $\rightarrow$  " " will be increasing a lot.

Char:  $\rightarrow$  Many substitutes, Luxury, elasticity co-eff more than 1.

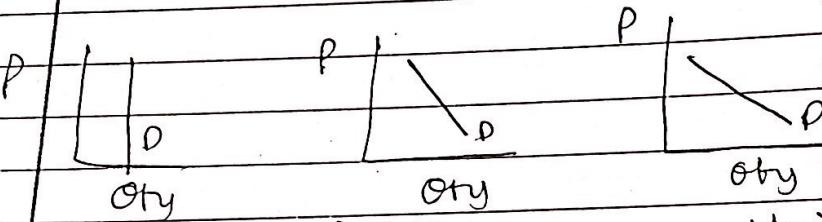
Inelasticity : Not sensitive

Qty is insensitive to change in price,

If  $P \uparrow$   $\rightarrow$  Qty ( $\downarrow$ ) a little.

If  $P \downarrow$   $\rightarrow$  Qty ( $\uparrow$ ) a little.

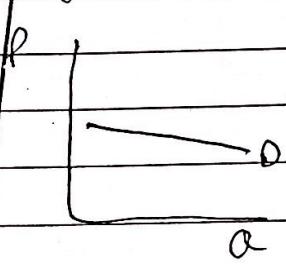
Char: few substitutes, Necessities, elasticity co-eff less than 1.



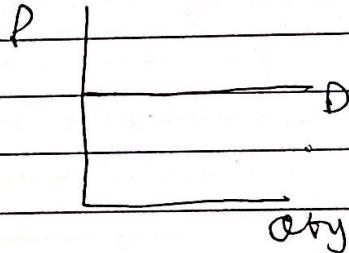
elasticity co-eff = 0

$< 1$

1



$> 1$



$\infty$

F) Cross-Price elasticity of Demand:

How sensitive a product is to a change in price of another Good.

% change in qty of Product 'b'

→ % change in price of product 'a'



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If it is (+ve)  $\rightarrow$  Substitute

If it is (-ve)  $\rightarrow$  Complement.

→ Income elasticity of Demand shows how sensitive a product is to a change in income.

% change in Qty / % change in income.

(+)  $\rightarrow$  Normal Good, (-)  $\rightarrow$  Inferior Good.

(ii) Consumer Surplus

$\downarrow$

What you want to pay

- What you Pay.

1 Producer Surplus:

C-Price.

S.P - Price

iii Price Ceilings

Max legal price a seller can charge for a product.

Price Floor

Min legal price a

seller can sell a product.

International Trade  $\rightarrow$  To take care of shortage.

e.g.: Products from China.

Consumer Choice:  $\rightarrow$  Utility Maximization.

M<sub>UX</sub>

P<sub>X</sub>

M<sub>UY</sub>

P<sub>Y</sub>

Costs of Production & Perfect Competition

Production

I - P - O.

Inputs are used for getting outputs.

1  $\rightarrow$  10

2  $\rightarrow$  15.

As inputs increase,

op might reduce

### Law of Diminishing Marginal Returns:

As Variable resources are added to fixed resources, additional O/P produced from each extra worker will eventually fall.

Costs: Fixed Cost: Costs of fixed resources that don't change with amount produced.

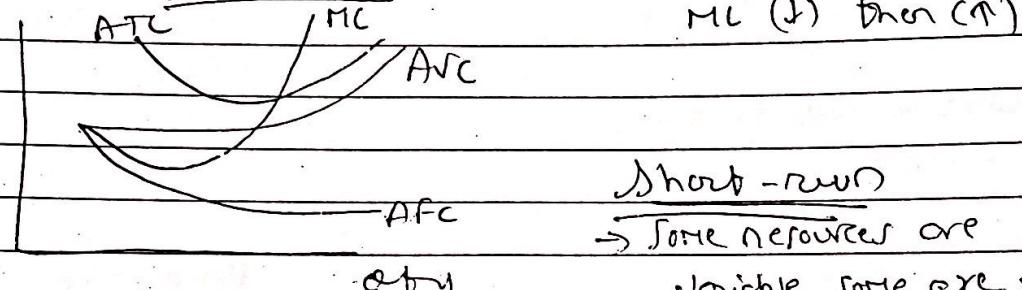
e.g: rent, insurance, Manager's salaries etc.

Variable Cost: Costs for variable resources that do change as more or less is produced.

e.g: RM, Labor, electricity.

Short-run  
Production  
Costs

$$TC = FC + VC$$



Short-run

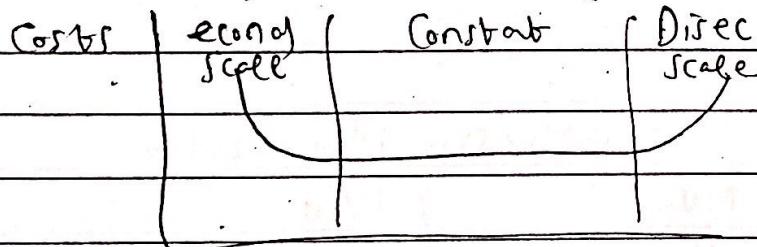
→ Some resources are

variable, some are fixed.

Long-run  
Production  
Costs

Economies of Scale: You use mass production techniques

Long run ATC falls bcoz of this.



Qty

### Market Structures

Many small firms

Perfect Competition: → identical products

(perfect substitutes)

→ Low barriers → easy for firms to enter or exit industry

→ Seller does not need to advertise

Building a bot to play Last Con.  
This is a game where we have a pile of coins  
the aim is to get the most coins  
Last Con. is a game where you have to stack coins on top of each other  
to reach the top of the tower.

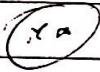


**Mkt**: A group of buyers & sellers of a particular good or service.

**Competitive mkt**: A mkt in which there are many buyers & sellers so that each has negligible impact on mkt price.

**Equilibrium**: A situation in which mkt price has reached level at which q'ty supplied equals q'ty demanded.

**Futurity**: The uncompensated impact of one person's ~~Activity~~ Actions on well-being of a bystander.



### Different kinds of Goods

#### ① Private Goods

L

Both excludable & rival  
in consumption

→ **Most Goods**: → Ice cream cone.

Common resources

#### Public Goods.

Neither excludable  
or rival in consumption

→ A Tornado siren.

#### Club Goods

Rival in consumption

Not excludable

→ Fish in ocean.

They are excludable  
but not rival in  
consumption.

→ fire insurance of house.

Is good excludable? → Can people be prevented from using good?

Is good rival? → Does one person's use of Good reduce another person's ability to use it?



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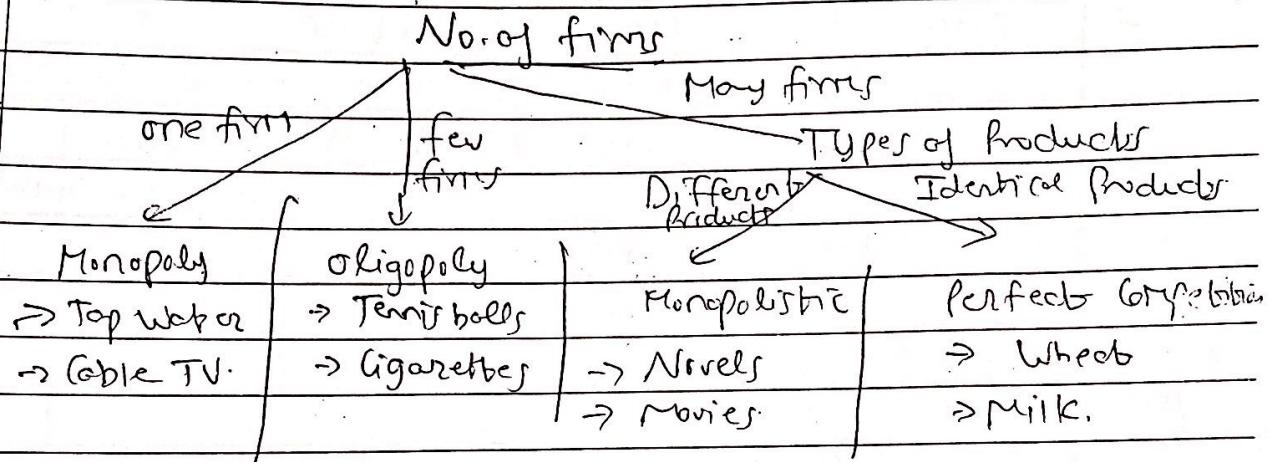
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$$\text{Marginal Cost} = \Delta TC / \Delta Q.$$

- Perfect Competition  $\rightarrow$
- ① Many Buyers & sellers in market
  - ② The goods offered by various sellers are largely same.



### Macro-economics

#### Three Major Economic Goals

- ① Promote economic growth.
- ② Limit unemployment.
- ③ Keep prices stable.

Promote economic growth

GDP: Value of final goods & services produced within a country's border in 1 yr.

GDP per Capita = Identifies on Average  $\Sigma$  per Person's how many products each person makes.

2

$$\% \text{ Change in GDP} = \frac{42 - 41}{41} \times 100$$

Note: included in GDP

→ Intermediate Goods:  
Goods inside final goods don't  
Count & Chip in laptop

→ Non Production Transactions:

(1) Financial Transactions (nothing produced)  
eg: stocks, bonds, real estate.

(2) Used Goods:  
Old cars, used clothes.

→ Non rel & illegal Activities:

(-) Things Made at Home - Household products.  
eg: Unpaid work, black market, drugs.  
exports - imports.

(3) Calculation of GDP

(X - M)

expenditure  
Approach

$$GDP = C + I + G + NX$$

income APP → GDP = Rent + Wages + interest + profit.

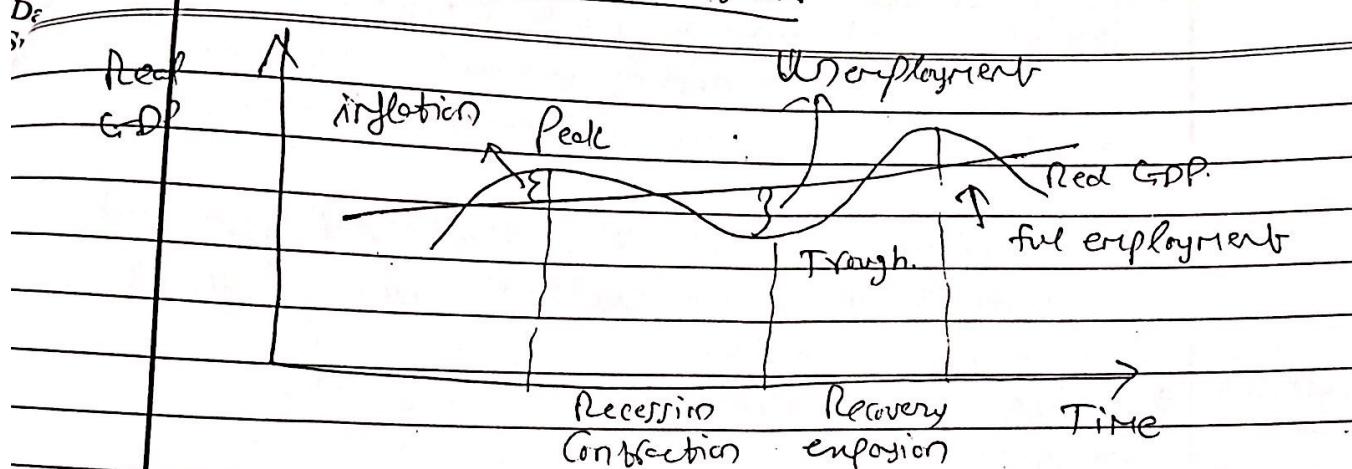
(4) Nominal GDP: GDP is measured in current prices. It does not account for inflation from yr to yr.

Real GDP: Real GDP adjusts for inflation.

↓  
Best measure of economic growth

## Business Cycle

3



### Goal 2 : Limit Unemployment

Unemployment : Workers that are actually looking for a job but aren't working.

$$\text{Unem rate} = \frac{\text{No. of unemployed}}{\text{No. of in labor force}} \times 100.$$

↓  
(Corp of people who capable  
to work)

### Three Types of unemployment

① frictional	Structural.	Cyclical
Temporary unemployment or between jobs. Individuals are qualified workers with Transferable skills.	Changes in labor force make some skills obsolete. Workers must learn new skills to get a job.	unemp caused by recession
Second : Time of yr & Nature of job.	Technological : Where Automation & Machinery replace workers	

Two types are always there  
 → frictional & structural

Natural rate of unemployment (N.R.U.).

F.T.S. → Aim of unemployment which exists when economy is healthy & growing.

Full employment output (Y): Real GDP created when there is no cyclical unemployment.

Criticisms → Discouraged workers  
 → Underemployed "

### Goal 3 Limit Inflation

Inflation is rising general level of prices & it reduces purchasing power of Money.

→ Deflation

/ Disinflation

Inflation is growing  
 But growth rate is lower & lower.

→ Nominal Wage: Wage measured by Rupees & other than purchasing power.

Real Wage: Wage adjusted for inflation.

→ Real interest rates: % increase in purchasing power that borrower pays.

$$\text{Real} = \text{Nominal} - \text{expected inflation.}$$

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### Consumer Price Index : (CPI)

Most commonly used measurement of inflation for consumers is CPI.  
→ Base year is given index of 100.

$$CPI = \frac{\text{Price of Mkt basket}}{\text{Price of Mkt basket in base yr}} \times 100$$

GDP Deflator: Measures prices of all Goods produced.  
→ Includes only those goods & services produced domestically.

$$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

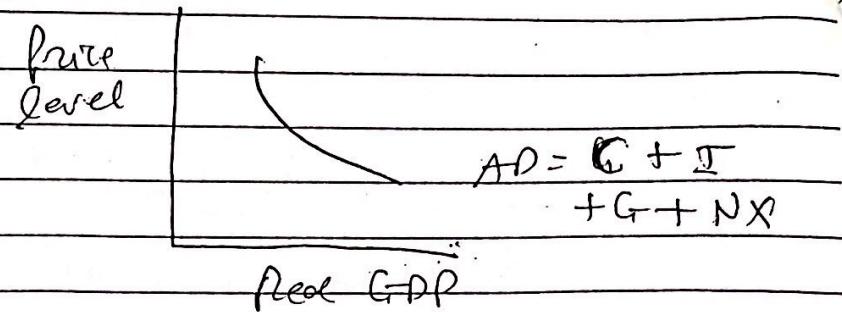
### Three causes of inflation

① Government prints too much Money.  
→ If they print more money to pay debts they end with hyperinflation.

- ② Demand pull inflation  
③ Cost push inflation.

M × V = P × Y      C of Theory of Money  
M → Money Supply.      P → Price level identity:  
V → Velocity.      Y → Qty of GDP.  
Velocity of Money → Average time a dollar is spent & respent in a year.

AD is all goods & services buyers are willing & able to purchase at diff price levels.



Why is AD downward sloping

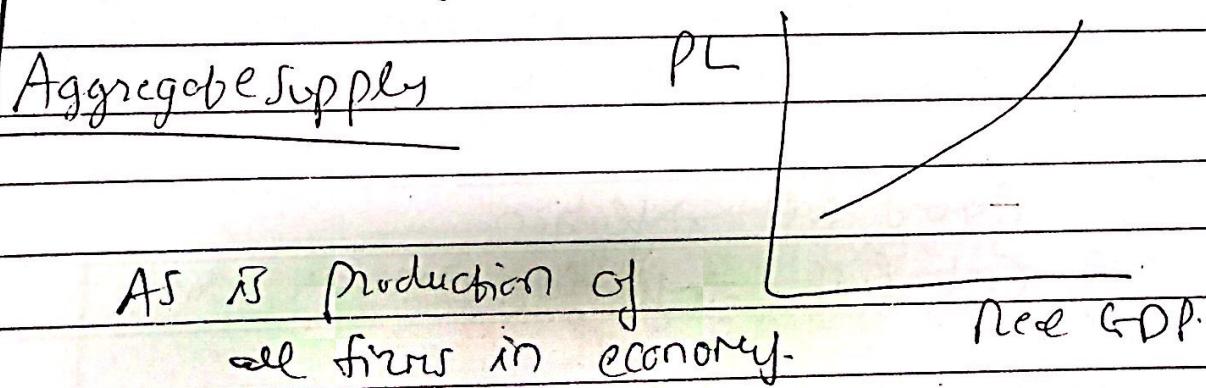
① Wealth effect: Higher price levels reduce purchasing power of money. This decreases qty of expenditures.

② Interest rate effect:

When PL ( $\uparrow$ )  $\rightarrow$  lenders need to charge higher interest rates to get real return on loans. High I.R. discourage consumer spending & business investment.

③ Foreign Trade effect

When PL ( $\uparrow$ ): consumers buy less own country goods & more foreign goods.



In short-run

Multipplier effect → Spends → Income → Spends I (4)

MPC = Marginal Propensity to Consume  
How much people consume rather than save when there is change in income

$$MPC = \frac{\text{Change in Consumption}}{\text{Change in income.}}$$

$$MPS : \frac{\text{Change in savings}}{\text{Change in income}}$$

$$\Delta \text{ spending Multiplier} : \frac{1}{MPS} \text{ or } \frac{1}{1-MPC}$$

③ National Debt: Accumulation of Budget Deficits  
Over time

→ A Budget deficit: Govt's expenses > revenue

④ Money : fiscal policy  
Change in Govt Spending & Taxes.

① expansionary fiscal policy: laws reducing unemployment & increase GDP (close recessionary gap)

→ (T) Gov Spending

→ (V) Taxes ( $\Rightarrow$  ↑ Disposable income)

→ Combi of Two

② contractionary fiscal Policy

laws that reduce inflation, Decrease GDP (close inflationary gap)

4

- (J) Govt spending
- (T) Taxes
- Comb of Two

Total change in GDP =

multiplier  $\times$  initial change in  
Spending

→ National Debt: Accumulation of all Budget Deficits of all time

→ Budget Deficit: Govt expenditures > revenue.

②

## Money

Barter System

Commodity Money: Something that performs the function of money & has intrinsic value  
e.g.: Gold, Silver . . .

Fiat Money: Something that serves as money but has no other value or uses.

e.g.: Paper Money, Coins, Digital Currency.

## functions of Money

①

Medium of exchange: Money can be used to buy goods & services with no complications of Barter system.

②

Unit of Account: Money measures value of all Goods & Services. Money acts as measurement of value.

③

Store of Value: Money allows you to store purchasing power for future.



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~~area of spending multiplier. What is reserve~~

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$$\text{Money Multiplier} = \frac{1}{\text{Reserve Ratio}}$$

Reserve Ratio

Money Mkt Graph.

Nominal interest rate

MD

① Transaction Demand

② Asset Demand. { People hold }

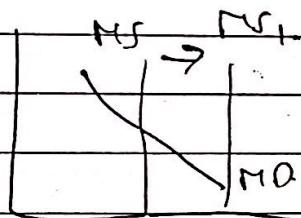
Qty of Money

Money Supply  $\rightarrow$  NIR

MS

(Money demand)

MS  $\rightarrow$  set by Govt.



(↓) IR

Qty

MS

MD

(↑) IR

expansionary monetary policy.

Contractionary Monetary Policy

Increase  $\rightarrow$  (↓) I.R  $\rightarrow$  (↑) investment

(↓) Mon Supp  $\rightarrow$  (↑) IR

Money Supply

↓

↑

(↑) AD

(↓) Investment

↓

(↓) AD

What shifts Money Supply Curve:

① Reserve Ratio:

② Discount note.

Interest rates which RBI charges

Commercial Banks.

③ Open Market Operations.  
When RBI buys or sells Govt Bonds (Securities)

## International Trade & foreign exchange

Balance of Payments (BoP).: Summary of Country's international Trade

### Current Account

Balance of Trade

(+) Trade Surplus :  $X < M$

" Deficit :  $X > M$ .

### Financial Account

Amount of Money coming in & out.

→ Net exports. (Trade in Goods & Services imported from China)

→ Investments income (Money <sup>coming</sup> by Japanese cor. more in India).

→ Net Transfers.

Money flows from private or publc. sec