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Page: \_\_\_\_\_

U:2 → The Keynesian theory of Determination of National Income

# Important topics for Numerical point of view.

- 1° Equilibrium Income
- 2° Consumption Expenditure
- 3° Saving
- 4° MPC, MPS, APC, APS
- 5° Multiplier: -

- Investment
- Tax
- Foreign Trade.

6° Trade Balance →  $X - M$

# AD → (Aggregate Demand)

- Closed Economy ←
- 2 Sector Eco<sup>y</sup> →  $AD \Rightarrow C + I$
  - 3 Sector Eco<sup>y</sup> →  $AD \Rightarrow C + I + G$
  - Open Eco<sup>y</sup> ← 4 sector Eco<sup>y</sup> →  $AD \Rightarrow C + I + G + N_x$

# AS → Aggregate →  $y$

\* Equilibrium  $\Rightarrow$   $AD \Rightarrow AS$   
 $AD \Rightarrow y$  → Equilibrium.

\*  $\frac{C}{y}$  → Avg. propensity to consume (APC)

★  $\frac{S}{Y}$   $\Rightarrow$  APS

$APC + APS \Rightarrow 1$   
 $MPC + MPS \Rightarrow 1$   
 $MPC \Rightarrow 1 - MPS$

★  $\frac{\Delta C}{\Delta Y}$   $\Rightarrow$  MPC

★  $\frac{\Delta S}{\Delta Y}$   $\Rightarrow$  MPS

★  $A \Rightarrow C + I$   $\rightarrow$  MPC

★  $C \Rightarrow a + b \cdot Y$   $\rightarrow$  MPC  
 $C \Rightarrow 100 + 0.8Y$   
 $MPS + MPC \Rightarrow 1$

Autonomous Consumption.

$MPS \Rightarrow 1 - MPC$ , i.e.  $\Rightarrow 1 - 0.8 \Rightarrow 0.2$

# Savings: -  $\rightarrow$  MPC  
 $C \Rightarrow a + b \cdot Y$   
 $S \Rightarrow -a + (1-b)Y$

$(1-b) \Rightarrow MPS$

$C \Rightarrow 100 + 0.8Y$

$S \Rightarrow -100 + 0.2Y$

★  $Y \Rightarrow C + S$

★  $S \Rightarrow Y - C$

# Investment Multiplier (K) :-

★  $K \Rightarrow \frac{\Delta Y}{\Delta I}$

★  $K \Rightarrow \frac{1}{MPS}$

★  $K \Rightarrow \frac{1}{1 - MPC}$

★  $\frac{\Delta C}{\Delta Y} \Rightarrow MPC$

MPC

$C \Rightarrow 100 + 0.8Y$

$K \Rightarrow \frac{1}{1 - 0.8} \Rightarrow 5$

★ Increase in investment means change in investment.



MPC  $\Rightarrow b$

# Three Sector Ecoy  $\rightarrow (H), (F), (G)$

$$\text{Eq}^b \Rightarrow y \Rightarrow c + I + G$$

↓

$$c \Rightarrow a + y_d \quad \rightarrow \text{Tax}$$
$$\Rightarrow a + y - T$$

\*  $y_d \Rightarrow y - T + TR \rightarrow \text{Transfer Income}$

# 4 Sector Ecoy  $\rightarrow$

\*  $y \Rightarrow c + I + G + (x - m)$

↓

# Foreign trade Multiplier  $\Rightarrow \frac{1}{1 - b + M}$

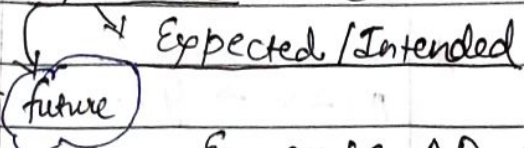
Q.  $C \Rightarrow 10 + 0.8y$   
 $I \Rightarrow ?$

Sol  $\Rightarrow$  Eq<sup>b</sup>  $y \Rightarrow 100$

$$y \Rightarrow c + I$$
$$y \Rightarrow 10 + 0.8y + I$$
$$100 \Rightarrow 10 + 0.8(100) + I$$
$$100 \Rightarrow 10 + 80 + I$$
$$100 \Rightarrow 90 + I, I \Rightarrow 100 - 90 \Rightarrow 10 \text{ Ans}$$

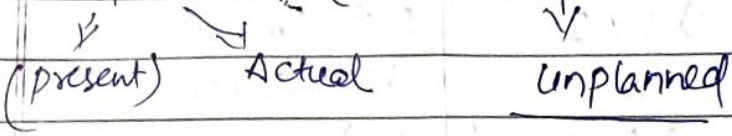
## Theory

# Ex-ante - (Planned)



Ex-ante AD, I, C, S etc.

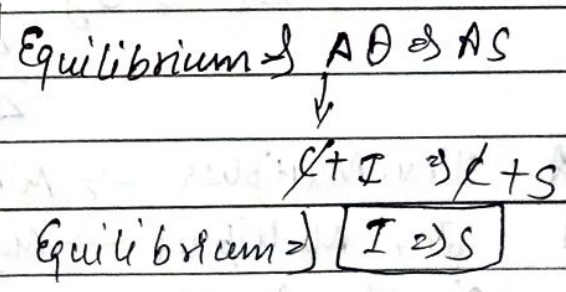
# Ex-Post (Current)



- ★ Autonomous Consumption curve Parallel to x-axis.
- ★ MPC slope will denoted by  $b$ .
- ★  $0 \leq MPC \leq 1$  - lie between 0 to 1
- ★ Investment curve Parallel to x-axis.

★ $y \Rightarrow C + S$ if <span style="border: 1px solid black; padding: 2px;"><math>y \Rightarrow 100</math></span> <span style="border: 1px solid black; padding: 2px;"><math>C \Rightarrow 100</math></span> <span style="border: 1px solid black; padding: 2px;"><math>S \Rightarrow 0</math></span>	$\Rightarrow$ Break Even point.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <math>y \Rightarrow</math> income  <math>C \Rightarrow</math> consumption  <math>S \Rightarrow</math> saving         </div>
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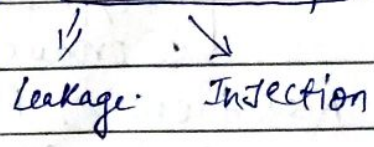
- ★  $y > C \Rightarrow$  saving
- ★  $y < C \Rightarrow$  Dis-saving.



# Injections  $\rightarrow I, \text{Export}$

$S \Rightarrow I \rightarrow \text{Eq!}$

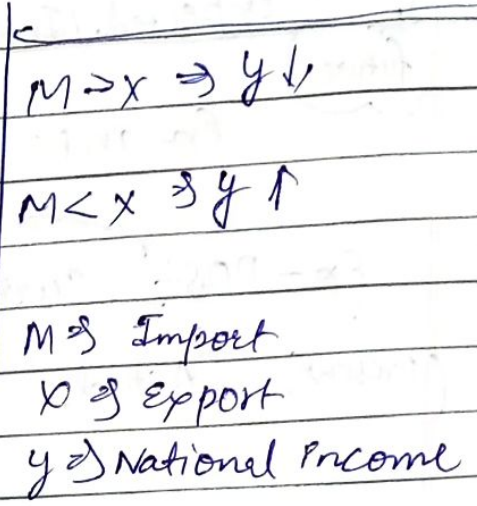
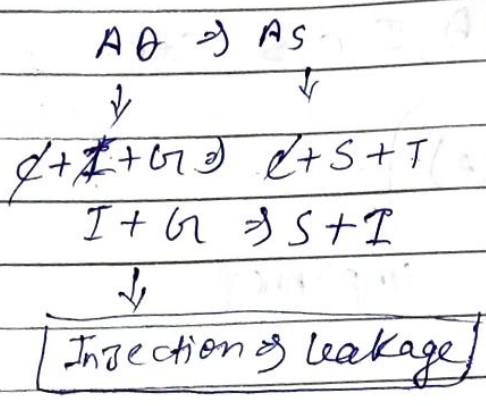
# Leakage  $\Rightarrow$  Saving, Import, Tax



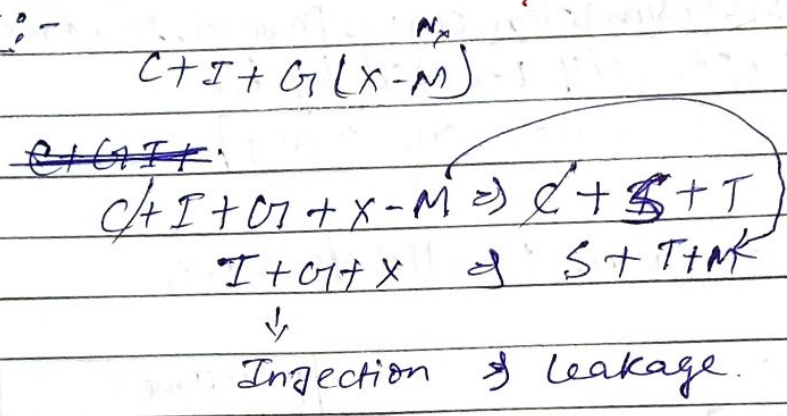


- ★ Excess Demand is also known as Inflationary gap.
- ★ Deficient Demand is also known as deflationary gap.

# 3 Sector :-



# 4 Sector :-

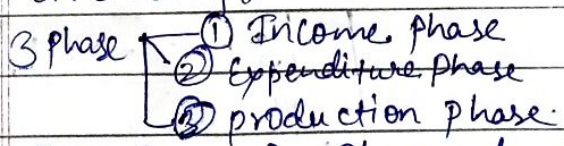


# Investment Multiplier :- (2 sector)

$$\Delta I \rightarrow \Delta Y \quad \frac{\Delta Y}{\Delta I}$$

- ★ Inv. Multiplier  $\rightarrow$  Min. value 1
- ★ Inv. Multiplier  $\rightarrow$  Max. value Infinite

# Circular flow :-



- ★ Real flow & Physical flow.
- ★ Nominal flow & Money flow.

