

Chapter 3 · Determination of Income and Employment

CBSE Class 12 Economics (030) · Part A Macroeconomics · Unit 3 = 12 marks (largest macro unit) ·

Ultimate Revision Sheet

60-SECOND RECALL

Equilibrium	$AD = AS$ or $S = I$
Consumption function	$C = \bar{C} + b \cdot Y$ ($\bar{C}$ = autonomous consumption, b = MPC)
Saving function	$S = -\bar{C} + (1-b)Y$
Multiplier	$k = 1 \div (1 - MPC) = 1 \div MPS$
Key identity	$MPC + MPS = 1$ $APC + APS = 1$
Excess demand	$AD > AS$ at full employment → inflationary gap
Deficient demand	$AD < AS$ at full employment → deflationary gap

1. Aggregate Demand and Aggregate Supply

DEFINITIONS Aggregate Demand (AD) is the total value of goods and services all sectors of the economy plan to buy at a given level of income during a period.

Aggregate Supply (AS) is the total value of goods and services all producers plan to produce during a period. AS is equal to national income, so $AS = Y$.

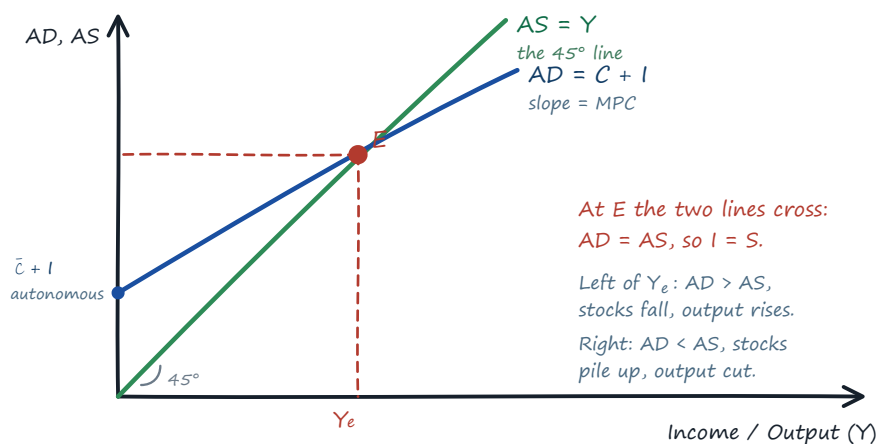
COMPONENTS

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

In the two-sector model used for numericals: $AD = C + I$

$$AS = Y = C + S$$

At equilibrium $AD = AS$, so $C + I = C + S$, which gives $I = S$.



AD is flatter than AS because its slope is the MPC, which is less than 1. They can only meet once.

2. Propensity to Consume and Save

THE FOUR RATIOS

$APC = C \div Y$ — Average Propensity to Consume

$APS = S \div Y$ — Average Propensity to Save

$MPC = \Delta C \div \Delta Y$ — Marginal Propensity to Consume

$MPS = \Delta S \div \Delta Y$ — Marginal Propensity to Save

$APC + APS = 1$ $MPC + MPS = 1$

THE FACTS EXAMINERS TEST • *APC can be greater than 1 (when $Y < C$, i.e. dis-saving at very low income). APS is then negative.*

- *MPC lies between 0 and 1. It can never exceed 1 and never be negative.*
- *As income rises, APC falls and APS rises.*
- *At the break-even point, $Y = C$, so $APC = 1$ and $APS = 0$.*

3. Consumption and Saving Functions

THE EQUATIONS

$C = \bar{C} + b \cdot Y$ where $\bar{C}$ = autonomous consumption, b = MPC

$S = Y - C = -\bar{C} + (1 - b) \cdot Y$

At $Y = 0$, consumption is $\bar{C}$ (funded by past savings) and saving is $-\bar{C}$ (dis-saving).

WORKED EXAMPLE Given $C = 100 + 0.8Y$ and $I = 200$.

At equilibrium $Y = C + I$

$$Y = 100 + 0.8Y + 200$$

$$Y - 0.8Y = 300 \rightarrow 0.2Y = 300 \rightarrow Y = ₹1,500$$

Check via $S = I$: $S = -100 + 0.2(1500) = -100 + 300 = 200 = I \checkmark$

Multiplier $k = 1/0.2 = 5$. Autonomous expenditure = 300, so $Y = 300 \times 5 = 1,500 \checkmark$

4. The Investment Multiplier

FORMULAS

$k = \Delta Y \div \Delta I$

$k = 1 \div (1 - MPC) = 1 \div MPS$

$\Delta Y = k \times \Delta I$

MPC

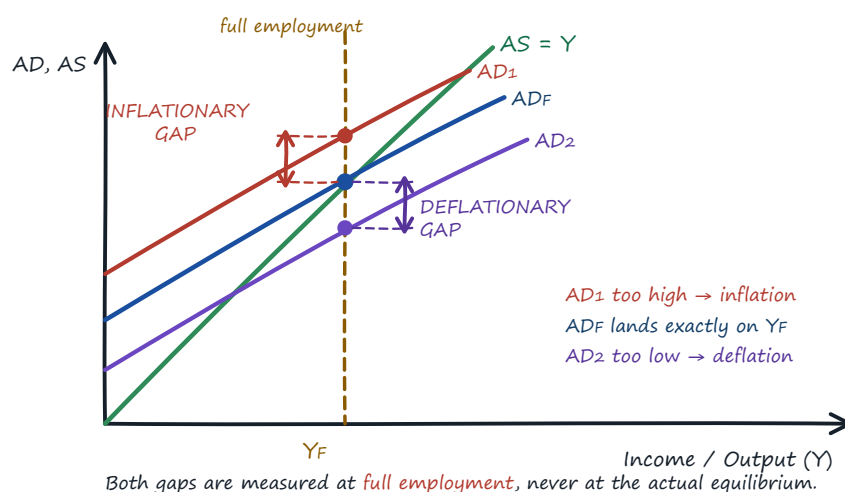
MPS

Multiplier k

0.5	0.5	2
0.75	0.25	4
0.8	0.2	5
0.9	0.1	10

TRAP Higher MPC $\rightarrow$ larger multiplier. The range of k is 1 to infinity: when $MPC = 0$, $k = 1$; when $MPC = 1$, $k = \infty$. The multiplier can never be less than 1.

5. Excess Demand and Deficient Demand



The gap is the **vertical distance between AD and AS at full employment** — that is the whole definition.

Basis	EXCESS DEMAND	DEFICIENT DEMAND
Meaning	$AD > AS$ at full employment	$AD < AS$ at full employment
Gap	Inflationary gap	Deflationary gap
Effect on output	No rise — already at full capacity	Falls — unemployment rises
Effect on prices	Prices rise — inflation	Prices fall — deflation
Effect on employment	No change	Involuntary unemployment

CORRECTIVE MEASURES — the 6-marker

Policy	Excess demand (inflation)	Deficient demand (deflation)
MONETARY	Raise CRR, SLR, Repo, Bank rate · Sell securities · Raise margin requirement	Lower CRR, SLR, Repo, Bank rate · Buy securities · Lower margin requirement
FISCAL	Reduce government spending · Raise taxes · Raise public borrowing · Cut subsidies and transfers	Raise government spending · Cut taxes · Reduce borrowing · Raise subsidies and transfers

TRAP — the two unemployments **Voluntary unemployment:** a person is **not willing** to work at the prevailing wage.

Involuntary unemployment: a person is **willing and able** to work at the prevailing wage but **gets no work**. Only this one is an economic problem, and it is what deficient demand causes.

6. Question Triggers what the wording is really asking

If the question says...	Do this
" $C = 200 + 0.75Y$, $I = 500$, find equilibrium Y "	$Y = C + I$, solve for Y
" $MPC = 0.8$, investment rises by ₹100"	$k = 5$, so $\Delta Y = \text{₹}500$
"APC is 1"	Break-even point: $Y = C$, saving = 0
"saving is negative"	Income below break-even → dis-saving
"AD exceeds AS at full employment"	Excess demand → inflationary gap
"there is involuntary unemployment"	Deficient demand → deflationary gap
"suggest measures to correct"	Give both monetary and fiscal measures
"can APC be greater than 1?"	Yes , when consumption exceeds income
"can MPC be greater than 1?"	No , it lies between 0 and 1
"ex-ante vs ex-post"	Ex-ante = planned ; ex-post = actual/realised

MOST-ASKED BOARD QUESTIONS

1. [4-6M] Find equilibrium income given the consumption function and investment.
2. [6M] Explain excess demand / deficient demand and the measures to correct them.
3. [3-4M] Explain the working of the investment multiplier with an example.
4. [3M] Distinguish between APC and MPC / voluntary and involuntary unemployment.
5. [1M] Give the relation between MPC and MPS. → $MPC + MPS = 1$
6. [1M] What is the value of the multiplier when $MPS = 0.25$? → 4

THE HABIT THAT SCORES — Solve every equilibrium numerical **twice** — once by $Y = C + I$, once by $S = I$. They must agree. It costs thirty seconds and catches the algebra slip that would otherwise cost the whole 6-marker.