Macroeconomic Equilibrium Analysis - Unit [6]

Theory Study Material [**TSM**]

SPECIFICALLY DESIGNED FOR ADVANCED LEVEL – **2025 - 2026** EXAMS

FOR THE PURPOSES OF **'RAPID VIRTUAL LEARNING'**

Theory Coverage

COMPREHENSIVE. **ILLUSTRATED**. APPLIED

Brief Content

- ✓ Introduction to Macroeconomics & Macroeconomic Management Process
- ✓ Introduction to Macroeconomic Equilibrium
- ✓ Aggregate Demand [AD] Analysis
- ✓ Keynesian & Circular Flow Models
- ✓ Consumption & Savings Functions
- ✓ Multiplier Effect & Related Concepts
- ✓ Tax & Imports Functions
- ✓ Changes in Equilibrium Income [Graphical Illustration]
- ✓ Special discussion on Output & Expenditure Gaps

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Equilibrium Level of National Income or Output (Ye)

- Aggregate Income or National Output (Y) shall equal Aggregate Expenditure (E): **[Y = E]**
- Total Withdrawals or leakages (W) from the circular flow, shall equal Total Injections (J): **[W = J]**
- Aggregate Demand (AD) shall equal Aggregate Supply (AS): [**AD = AS**]

National Income: Full Employment Vs Macroeconomic Equilibrium

Basic Summary:

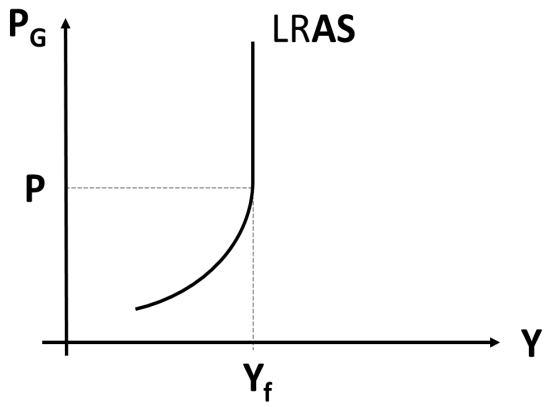
Aggregate Supply (Income or National output)	Aggregate Demand (Overall expenditure)
Y (AS) = C + S + T + M	**E (AD) = C + I + G + [X – M]**

Y = E
W = J

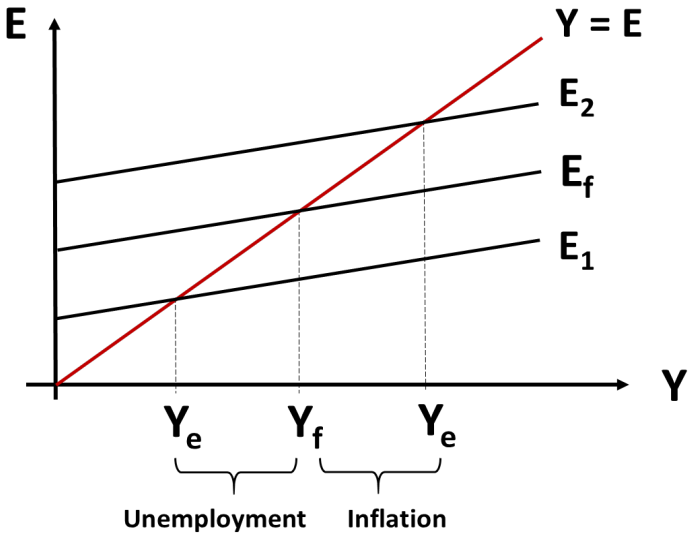
Withdrawals (from circular flow of income)	Injections (to circular flow of income)
W = S + T + M	**J = I + G + X**

Graphical Illustrations [1]

Full Employment Level of (Real) Output or Income [Y_f]



[Y_f] Vs. [Y_e]



Equilibrium Conditions [Simplified]

Simple Economy	Closed Economy	Open Economy
(01) W = J S = I	(01) W = J S + NT = I + G	(01) W = J S + NT + M = I + G + X
(02) Y = E C + S = C + I	(02) Y = E C + S + T = C + I + G	(02) Y = E C + S + T + M = C + I + G + X

[1] Aggregate Demand (AD) or Overall Expenditure (E)

This is the total expenditure flow all economic operators or agents (households, business organizations and government) are planning to incur or spend on goods and services, during a given period of time.

The AD curve represents the total quantities of real output that economic agents plan to purchase at different levels of domestic prices. The AD function pertaining to an open economic model can be presented as follows:

$$\mathbf{AD\ (E) = C + I + G + (X\text{-}M)}$$

Consumption Expenditure (C)
The expenditure incurred by household units to purchase consumer goods and services. Alternatively: C (or PFCE) = HFCE + NPIFCE

Gross Investment / Gross Domestic Capital Formulation (I)
The expenditure incurred on gross fixed capital formulation (plant, machinery, equipment, housing, factories etc), changes in inventories and changes in values.

Government Purchases / Government Expenditure on Goods and Services/ Public Consumption (G)
The expenditure incurred on goods and services by the government or public sector

Net Exports (NX)
The difference between the Export (X) and Import (M) flows of goods and services.

The Curves: [AD] Vs. [E]

[2] Aggregate Supply [AS]:

- ✓ This is the total real output [goods and services] flow all production units are planning to produce and sell (i.e. generate 'income' from), during a given period of time.
- ✓ The AS curve represents the total quantities of real output that businesses plan to produce and sell at different price levels.
- ✓ There is short run aggregate supply (SRAS) curve and long-run aggregate supply (LRAS) curve. The LRAS, indicates an economy's 'Potential Output' or 'Full employment Level of Output' [Yf].

* Learning Key (the Law)

In the Keynesian macroeconomic model/theory; the equilibrium level of national income (Ye) is determined and is subject to change, based on an economy's level of Planned Aggregate Demand (AD) or Expenditure (E).

[AD] Vs. [AS] → Keynesian Economics Approach*

At a given point of time when the value of Real Output or Income (Aggregate Supply) shall equal the value of Overall Planned Expenditure (Aggregate Demand), the economy shall reach macroeconomic equilibrium (Y = E).

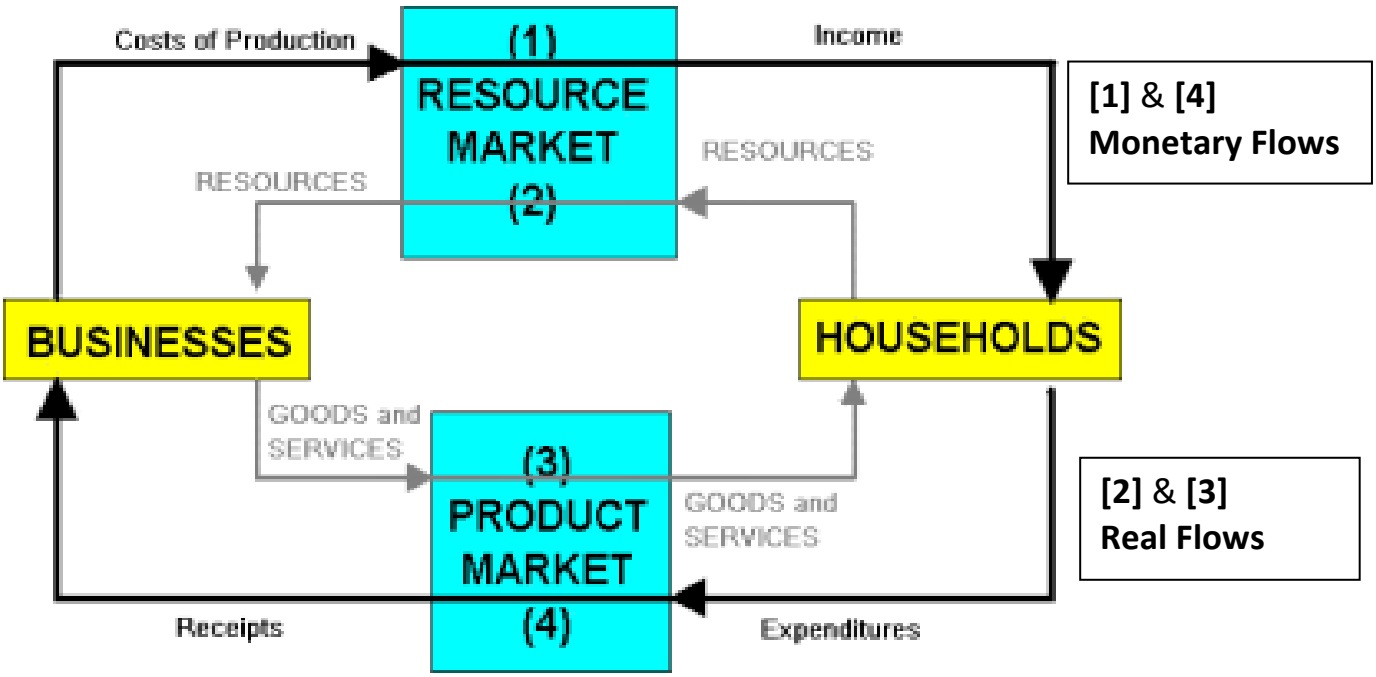
If the value of Aggregate Demand is greater than the value of Real Output [AD (E) > Y (AS)], the income or output level shall expand further. This is a situation of macroeconomic disequilibrium.

If the value of Aggregate Demand is lesser than the value of Real Output [AD (E) < Y (AS)], the income or output level shall contract or reduce further. This is a situation of macroeconomic disequilibrium.

The Circular Flow of Income and Expenditure Model

A diagram which illustrates equilibrium income /output in terms of the flows of income and expenditure around the economy. The circular flow model includes real flows occurring in the economy between households and firms, when supplying labour and other factors in exchange for real goods and services.

In a monetary economy (i.e. money is used as a medium of exchange), real flows translate into monetary flows of income and expenditure.



[1] Injections (J)

An **injection** refers to a **planned monetary inflow** into the circular flow of income and expenditure, which will strengthen or increase the overall expenditure (aggregate demand) flow, leading to an expansion within the economy and increase in national output or income level.

The components of the total planned injection's function relevant to an open economy include the following

J = I + G + X

[**I**]	Investments (Gross)
[**G**]	Government Purchases
[**X**]	Exports of Goods and Services

[2] Withdrawals /Leakages (W)

A **withdrawal** refers to a **planned monetary outflow** from the circular flow of income and expenditure, which will weaken or decrease the overall expenditure (aggregate demand) flow, leading to a contraction within the economy and decrease in national output or income level.

The components of the total planned withdrawals function relevant to an open economy include the following

W = S + NT + M

[**S**]	Savings
[N**T**]	Net Taxes (= T – Tr (Transfers)]
[**M**]	Imports of Goods and Services

Influence of Savings and Investment on (Y)

Savings create a leakage or withdrawal from the expenditure flow, as a result shall contract or decrease aggregate demand. Investments create an inflow or injection of funds into the flow of expenditure and results in expanding or increasing aggregate demand and overall real output or income.

$I > S \rightarrow \Delta AD \uparrow \rightarrow \Delta Y \uparrow$

$I < S \rightarrow \Delta AD \downarrow \rightarrow \Delta Y \downarrow$

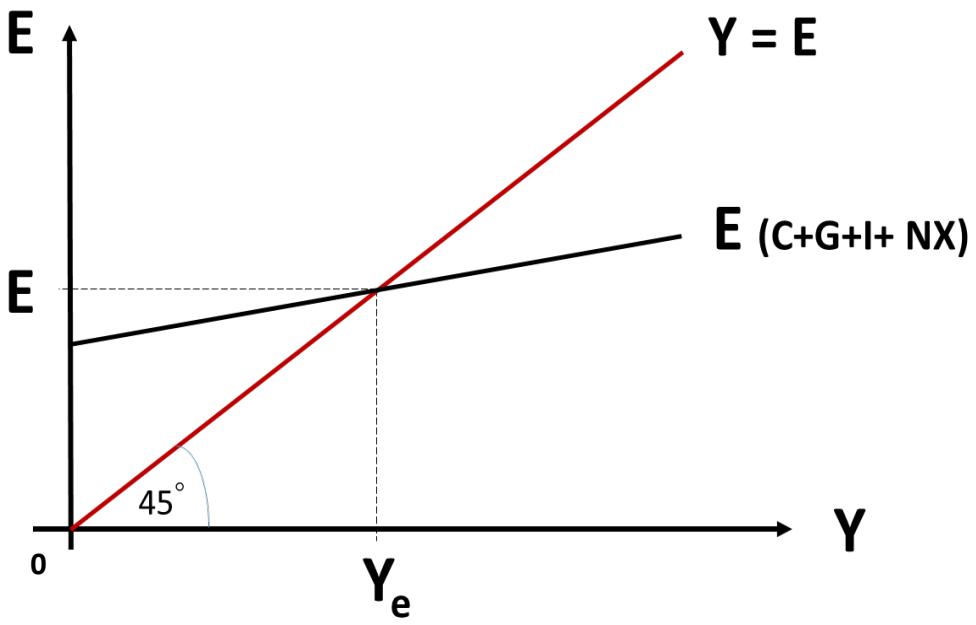
$I = S \rightarrow \Delta AD \updownarrow \rightarrow \Delta Y = 0$

Equilibrium Conditions: **Graphical Approach**

1) **Aggregate Income (Output) – Expenditure Method (Y = E)***
   [The Keynesian Cross Approach]
2) **Total Withdrawals – Injections Method (W = J)**

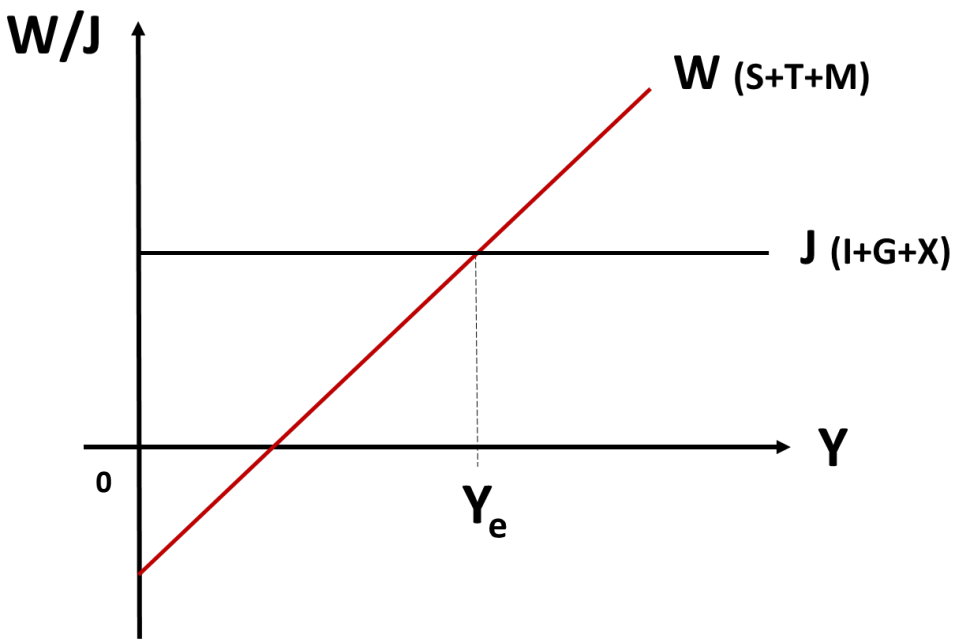
*Aggregate Demand – Aggregate Supply Method (AD = AS)

[1] The Keynesian Cross Approach – [Y=E]



Complementary: **AD = AS Method***

[2] Withdrawals and Injections Approach – [W = J]



Main Features:

- ✓ The horizontal axis is always national income/output (Y)
- ✓ The **vertical axis** indicates **both total planned withdrawals** (W) and injections (J)
- ✓ The (J) curve is parallel to the horizontal axis, due to its autonomous nature and the (W) is upwards sloping, generally originations below zero due to it induced and autonomous elements.