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Class 12 commerce Sub. ECO/A Date 10.11.2020

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Revision Notes

Macro Economics 04

Determinations of Income and Employment

Aggregate Demand refers to total value of all final goods and services that are planned to buy by all the sectors of the economy at a given level of income during a period of time. **AD** represents the total expenditure on goods and services in an economy during a period of time.

Components of Aggregate demand are:

- (i) Household consumption expenditure (C).
- (ii) Investment expenditure (I).
- (iii) Govt. consumption expenditure (G).
- (iv) Net export (X – M).

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

In two sector economy $AD = C + I$

Aggregate Supply is the money value of all final goods and services available for purchase by an economy during a given period. It is the flow of goods and services in the economy. Since, money value of final goods and services is equal to net value added, **AS is nothing but the national income.**

$AS = C + S$

Aggregate supply represents the national income of the country.

$AS = Y$ (National Income)

Consumption function shows functional relationship between consumption and Income.

$C = f(Y)$

where C = Consumption

Y = Income

f= Functional relationship.

Equation of Consumption Function

$C = \bar{C} + MPC * Y$

C = Consumption

$\bar{C}$ = Autonomous consumption.

MPC(b)= Marginal Propensity to consume

$\bar{C}$ does not changed/affected by change in income. It is minimum level of consumption , even when income is zero. Consumption expenditure at zero level of income is called autonomous consumption. It is income inelastic.

Induced consumption is the expenditure which is affected by change in income. It is indicated by $MPC \times Y$. **Induced consumption** is the portion of **consumption** that varies with disposable income.

Propensity to consume:- It is a schedule that shows consumption expenditure at different levels of income in an economy.

Consumption function (propensity to consume) is of two types:

- (a) Average propensity to consume (APC)
- (b) Marginal propensity to consume (MPC)

Average propensity to Consume (APC): It refers to the ratio between total consumption(C) and total income(Y) at given level of income in the economy.

$$APC = \frac{\text{Consumption(C)}}{\text{Income(Y)}} = \frac{C}{Y}$$

Important Points about APC

- (i) **APC is more than 1:** as long as consumption is more than national income before the break-even point, $APC > 1$.
- (ii) **APC = 1,** at the break-even point, consumption is equal to national income.
- (iii) **APC is less than 1:** beyond the break-even point. Consumption is less than national income.
- (iv) **APC** falls with increase in income.
- (v) **APC** can never be zero: because even at zero level of national income, there is autonomous consumption.

Marginal Propensity to Consume (MPC): Marginal propensity to consume refers to the ratio of change in consumption expenditure to change in income.

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

Important Points about MPC

- (1) **Value of MPC varies between 0 and 1:** If the entire additional income is consumed, then $\Delta C = \Delta Y$, making $MPC = 1$. However, if entire additional income is saved, then $\Delta C = 0$, making $MPC = 0$
- (2) **MPC** is the slope of consumption curve and remain constant throughout in the short run.
- (3) **Value of $APC > MPC$**

Saving function refers to the functional relationship between saving and national income.

$$S = f(y)$$

Equation of Saving function

$$S = -\bar{C} + \text{MPS} \cdot Y$$

where S = saving

Y = National Income

f = Functional relationship.

Saving function (Propensity to Save) is of two types.

(i) Average Propensity to Save (APS)

(ii) Marginal propensity to Save (MPS)

Average Propensity to Save (APS): Average propensity to save refers to the ratio of savings to the corresponding level of income

$$\text{APS} = \frac{\text{Savings}}{\text{Income}} = \frac{S}{Y}$$

Important Point about APS

(1) APS can never be 1 or more than 1 : As saving can never be equal to or more than income.

(2) APS can be zero: At break even point $C = Y$, hence $S = 0$

(3) APS can be negative: At income levels which are lower than the break-even point, APS can be negative when consumption exceeds income.

(4) APS rises with increase in income.

Marginal Propensity to Save (MPS): Marginal propensity to save refers to the ratio of change in savings to change in total income.

$$\text{MPS} = \frac{\text{Change in Savings}}{\text{Change in Income}} = \frac{\Delta S}{\Delta Y}$$

MPS varies between 0 and 1

(i) $\text{MPS} = 1$ if the entire additional income is saved. In such a case, $\Delta S = \Delta Y$, then $\text{MPS} = 1$

(ii) $\text{MPS} = 0$ If the entire additional income is consumed. In such a case, $\Delta S = 0$, then $\text{MPS} = 0$

(iii) Mps is the slope of saving curve.

(iv) MPS remains constant throughout in short run.

Relationship between APC and APS

The sum of APC and APS is equal to one. It can be proved as under we know:

$$\text{APC} + \text{APS} = 1$$

$$Y = C + S$$

Dividing both sides by Y, we get

$$\frac{Y}{Y} = \frac{C}{Y} + \frac{S}{Y}$$

$$1 = APC + APS \left[\begin{array}{l} APC = \frac{C}{Y} \\ APS = \frac{S}{Y} \end{array} \right]$$

$$APC + APS = 1$$

because income is either used for consumption or for saving.

Relationship between MPC and MPS

The sum of MPC and MPS is equal to one. It can be proved as under:

$$MPC + MPS = 1$$

We know

$$\Delta Y = \Delta C + \Delta S$$

Dividing both sides by ΔY , we get

$$\frac{\Delta Y}{\Delta Y} = \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y}$$

$$1 = MPC + MPS$$

$$\left[\because \frac{\Delta C}{\Delta Y} = MPC, \frac{\Delta S}{\Delta Y} = MPS \right]$$

$MPC + MPS = 1$ because total increment in income is either used for consumption or for saving.

Investment refers to the expenditure incurred on creation of new capital assets.