

Unit-2

Consumption: Meaning, Types and Importance of Consumption

Meaning of Consumption:

The department of Economics which deals with wants and their satisfaction is known as Consumption.

By consumption we mean the satisfaction of our wants by the use of commodities and services:

When we use a commodity, we really use its want-satisfying quality or utility. Hence, consumption means using up of utilities. When we take a glass of water to quench our thirst, we are said to consume water. While sitting on chairs in the class-room, the students are consuming the chairs. A person is sick; he calls in a doctor.

He has 'consumed' the doctor's service. Whenever we make use of any commodity or service for the satisfaction of our wants, the act is called consumption. It deals with wealth-using activities of man as distinguished from wealth-getting activities, which are dealt with in Production. Thus consumption deals with the satisfaction of wants.

Consumption has also been defined as destruction of utility:

Man cannot create matter nor can he destroy it. Matter is there in the world, it will remain there; man can only change its form. When a man eats, a mango, he does not destroy the matter of which it is composed; he has only changed its form. Formerly, it could satisfy a human want, i.e., it possessed utility; now that want-satisfying power is gone. In other words, man has destroyed its utility in the act of eating it. The mango has been consumed.

The destruction of utility in consumption may be quick and immediate as in the case of a mango or a glass of milk. Or it may be a prolonged and slow process as in the case of furniture. In both cases, utility or want-satisfying power is being destroyed. But mere destruction of utility does not mean consumption. If a house catches fire and is destroyed, it has not been 'consumed' in the economic sense. Consumption implies the satisfaction of a human want.

The emphasis is on the satisfaction of wants rather than on the destruction of utility. If no want has been satisfied, it is not consumption. For practical purposes, consumption means the spending of money income. Milk, food and other goods that we consume

cannot be had free we must pay for them. Consumption, thus, involves expenditure of income or wealth-using activity of man.

Types of Consumption:

Consumption is known as direct or final consumption, when the goods satisfy human wants directly and immediately. The goods have reached their final destination, e.g., wearing a shirt or eating a mango or using furniture, in which case the act of consumption is not a single process but is of a continuing nature.

On the other hand, consumption is called indirect or productive consumption when the goods are not meant for final consumption but for producing other goods which will satisfy human wants directly, e.g., using a sewing machine for making clothes.

The use of the instruments of production is a case of indirect or productive consumption. Consumption may be useful or wasteful. When there is destruction by fire or earthquake or by any other natural calamity, the goods are just destroyed and not usefully consumed.

Types (Kinds) of Consumers:

According to the nature of consumption, consumers are of following types:

(i) Direct Consumers:

History tells us that at the very early stage of civilisation producers produced all the basic needs of life for themselves and their families. All the basic needs like food, clothing and shelter they produced for their own and their family's consumption. Hence, the producers were producing goods for their self- consumption. Thus, they were called as direct consumers or direct producers also.

(ii) Consumers by Exchanging Products:

With passage of time and civilisation people understood the benefits of exchange. Hence, they tried to specialise on a particular or few products and then tried to exchange the product with the other product(s). The exchange started with barter system and now continuing with monetary system.

This will create the concept of marketable surplus, i.e., the producers are not only producing goods for self-consumption, but some excess or surplus product(s) they are keeping to get other product(s) in exchange. For example, a farmer producing pulse not

only for self-consumption but the extra or surplus pulse he will exchange with the producer of other product, say paddy.

(iii) Modern Consumers:

These consumers only go to the market to buy the goods and services available in the market through money only. Here, the producers are also producing goods or services directly sent to the market for the consumers. These consumers buy all the goods and services in lieu of money. The modern consumers are the outcome of monetary system.

Importance (Significance) of Consumers:

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The importance of consumers in different avenues is discussed below:

(i) Encourage Demand:

Consumers are the main source of demand for all the goods. The producers of industrial goods or the producers of agricultural products are all producing the various items according to the demand in the market. According to Prof. Marshall, it is the demand which controls the production or market. Hence, the consumers create demand in the market and producers produce goods or services accordingly.

(ii) Create Demand for Various Products:

The different consumers have different types of demand or a single consumer can also demand different types of products. These will encourage the producers to produce various types of products in the market. For example, some consumers want to consume paddy, whereas some consumers want to consume wheat.

However, there are some consumers; who want different qualities of paddy and wheat also. Thus, there are some consumers who prefer red colour soap whereas other' consumers prefer green colour soap. Therefore, to satisfy all the types of consumers, producers must increase the production of various products.

(iii) Increase Demand for Consumer Goods:

Consumers create more demand for all the types of consumer goods, like durable, semi-durable and perishable goods. Durable consumer goods include furniture, utensils, televisions, etc. and for semi-durable goods like clothes, books, shoes etc. On the other hand, perishable goods like bread, butter, vegetables, fruits etc. are all demanded by the consumers for their consumption purposes. Naturally, all these create an atmosphere to increase demand for consumer goods.

(iv) Enhance Service Diversification:

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Consumers not only consume different varieties of goods, but also consume large varieties of services to maintain the standard of living. These include health service, educational service, banking and insurance service, transport and communication service, etc. Day by day the consumption of these services is rising. This will lead to expansion or enhancement of service sector within the economy.

Simple Keynesian Model (SKM): Assumptions, Conditions and Defects

Let us make an in-depth study of the Simple Keynesian Model (SKM). After reading this article you will learn about: 1. Assumptions of the Simple Keynesian Model
2. Conditions for Equilibrium of SKM 3. Defects of SKM.

Assumptions of the Simple Keynesian Model:

The simple Keynesian model of income determination (henceforth the SKM) is based on the following assumptions:

1. Demand creates its own supply.
2. 2. The aggregate price level remains fixed. This means that all variables are real variables and all changes are in real terms.
3. Therefore if aggregate demand increases, output will increase, prices remaining the same. And due to the existence of excess production capacity and unemployed resources (especially manpower) the economy will reach the point of full employment – if there is sufficient demand stimulation.
4. 3. The economy has excess production capacity.
5. 4. The economy is closed – there is no export and import.
6. 5. There is no retained earnings. All profits are assumed to be distributed as dividends among the shareholders.
7. 6. Firms are assumed to make no tax payments; all taxes are paid by households. The central proposition of the simple Keynesian model (the SKM) is that national output (income) reaches its equilibrium value when output is equal to aggregate demand.
8. In the SKM the condition for equilibrium can be expressed as:
9. $Y = E - (1)$
10. ADVERTISEMENTS:
11. Where Y is equal to total output (GDP) and E equals aggregate demand or desired expenditure on output. Aggregate demand or desired expenditure (E) has three

components, viz., household consumption (Q, derived business investment demand (I) and government demand for (currently produced) goods and services. Thus the equilibrium condition of national income in a closed three-sector economy is

12. $Y = E = C + I + G \dots (2)$

13. This means that income received (K) is equal to desired expenditure (E). Here we do not distinguish between gross and net investment. So we ignore depreciation. Moreover we take GDP and national income as equivalent concepts. Thus, we ignore net indirect business, taxes — which cause discrepancy between the two totals.

14. Since national product (output) Y also measures national income, we can write

15. $Y = C + S + T \dots (3)$

16. This equation is basically an identity. It suggests that national income, all of which is assumed to be paid out to households in the form of factor incomes (such as rents, wages, interest and dividends) is partly consumed (C) partly saved (S) and partly paid in taxes (T).

17. Moreover, since Y is national product, we can write

18. $Y = C + I_r + G \dots (4)$

19. This means that national product is equal to consumption plus realised investment (I_r) plus government spending.

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29. ADVERTISEMENTS:

30. From the definitions given in equation (3) and (4) we can rewrite the condition for equilibrium income given in equation (2) in two alternative ways.

31. From equation (2) we have $Y = C + I + G$ in equilibrium, and from equation (3) we have $Y = C + S + T$, which is a definitional identity. In equilibrium, therefore, we have

$$32. C + S + T = Y = C + I + G \dots (5)$$

$$33. \text{or, } S + T = I + G,$$

34. ADVERTISEMENTS:

35. In a like manner, from equations (2) and (4) we can express the equilibrium condition as

$$36. C + I_r + G = Y = C + I + G$$

$$37. \text{or, by cancelling common terms, } I_r = I \dots (6)$$

38. Conditions for Equilibrium of SKM:

39. Thus, there are three equivalent ways to state the condition for equilibrium in the SKM:

40. ADVERTISEMENTS:

$$41. Y = C + I + G \dots (2)$$

$$42. S + T = I + G \dots (5)$$

$$43. I_r = I - (6)$$

44. These conditions are illustrated in Fig. 8.1. which is a circular flow diagram of income and output for a three-sector economy:

45. ADVERTISEMENTS:

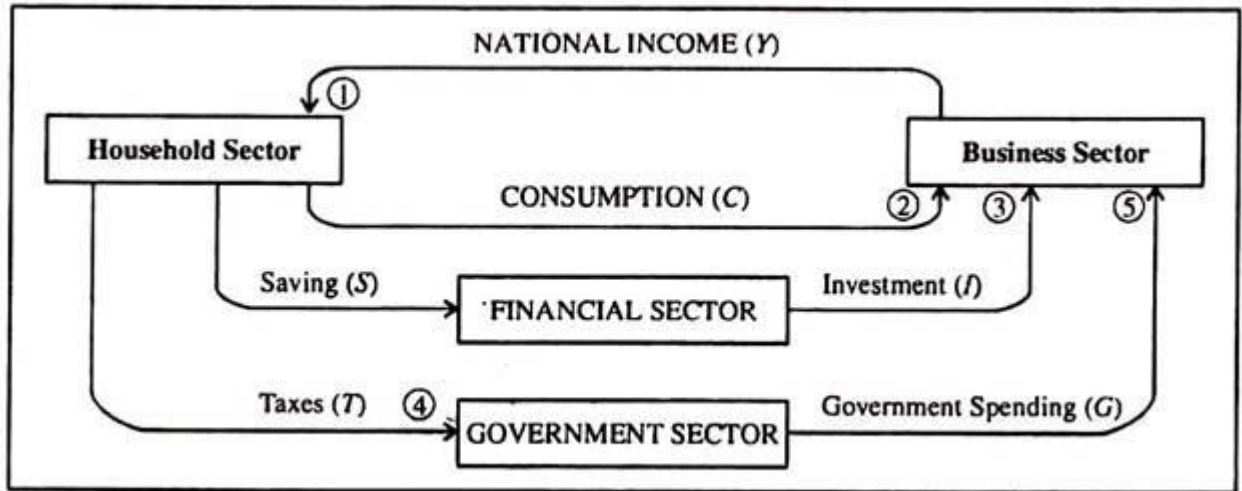


Fig. 8.1 The Circular Flow of Income and Output in a Closed Economy

46.

47. The revenue of the business sector is used for paying rent, wages, interest and dividends to the household sector. A portion of income received by the household sector (10 is used

48. by the households for consumption (C) which goes to the business sector as income. Another portion which is saved (S) goes to the business sector as investment (I) sector And the last portion goes to the government in the form of taxes (T) which finance government expenditure (G) which, in its turn, is spent on goods and services produced in the business sector.

49. Injections and Leakages:

50. In this context we draw a distinction between injections and leakages. Anything which exerts an expansionary pressure on national income is an injection and anything which exerts a contractionary pressure on national income is a leakage. Investment and government expenditure are injections into the circular flow of income, while savings (S) and taxes (T) are leakages from the circular flow of income.

51. Examination of the Three Equilibrium Conditions:

52. The three equilibrium conditions of national income given by equations (2), (5) and (6) may now be examined in detail. Production of a certain level of output, Y, generates the same amount of income to households. A portion of this income directly comes back to the firms as demand for consumption goods.

53. National output will reach its equilibrium level if this demand (C), when added to desired investment expenditure of firms (I) and government spending (G), produces a total demand equal to Y — that is, if

$$54. Y = C + I + G$$

55. The second equilibrium condition of income

$$56. S + T = I + G$$

57. suggests that a flow rate of output will be an equilibrium rate if the sum-total of leakages (S + T) is just balanced by the sum-total of injections (I + G).

58. This condition ensures that the amount of income households does not spend on output (S + T) and, therefore, the amount of output that is produced but not sold to households ($Y - C = S + T$) is exactly equal to the amount the other two sectors wish to buy (I + G). Thus total output equals aggregate demand.

59. Equation (6) states that in equilibrium desired (planned) investment must equal realised (actual) investment. What is the significance of the divergence of desired investment from realised investment? Total business investment has two broad components viz., fixed asset investment (or business spending on plant, equipment and machinery) and inventory investment (or increase or decrease in the stocks of finished goods and raw materials).

60. It is quite reasonable to assume that desired spending on plant and equipment equal actual spending. But desired inventory investment varies from realised inventory investment, in national income accounts, all goods that are produced by a firm and not sold are treated as inventory investment — whether such investment was intended or not.

61. In order to realise the difference between realised and intended investment totals, we have to see what happens when a level of output ($Y = C + I_r + G$) is produced that exceeds aggregate demand ($Y = C + I + G$).

62. In this case we have the following inequality:

$$63. Y > E$$

$$64. C + I_r + G > C + I + G > \dots(7)$$

$$65. I_r > I$$

66. where $I_r - I$ is the undesired (unintended) accumulation of inventory. The excess of I_r over unintended inventory accumulation. It indicates the amount by which output exceeds aggregate demand, i.e., the output which will remain unsold over and above the amount of inventory investment the firms desired.
67. In the opposite situation, if aggregate demand exceeds output, we have
68. $E > Y \dots$ (g)
69. $C + I + G > C + I_r + G$
70. $I > I_r$
71. where the excess of I over I_r ($I - I_r$) is the unintended inventory shortfall. Since aggregate demand exceeds aggregate output, firms end up selling more than what they planned. Inventories fall below their desired levels. At equilibrium, $I = I_r$.
72. This means that the firms' both production and sales plans are correct in the sense that, after selling their output, their inventory investment is just at its desired level. This is the level at which output equals aggregate demand, as is clear from equation (7) or (8).
73. We may now explain why equilibrium level of national income cannot occur at any other point. If, at a given level of output, firms are accumulating unintended inventories or are finding their inventories depleted, output has a tendency to rise or fall. This is because the firms' sales plans are fulfilled, but production plans are not. If production exceeds demand ($Y > E$), firms are accumulating undesired inventories ($I_r > I$).
74. In such a situation there is a tendency for output to fall as firms reduce their volumes of production in order to reduce their inventory levels. If, on the other hand, demand exceeds production ($E > Y$) there is an inventory shortfall ($I_r < I$). So there is a tendency for output to rise because firms will try to prevent further fall in inventories. So it logically follows that when aggregate demand equals output, output has no tendency to either rise or fall, i.e., it is in equilibrium.
75. In such a situation there is neither an unintended accumulation of inventory nor a shortfall. Both the output and sales plans of the firms have been fulfilled. Thus inventory changes play a very important role in the SKM.
76. The Components of Aggregate Demand:
77. Since the level of income in the SKM is determined by aggregate demand, we have to study the factors determining each component (viz., consumption, investment and government expenditure). Since consumption and saving on the

one hand, and government expenditure and taxes on the other are mirror image concepts, we have to study the determinants of saving and the role of taxes.

78. Since private consumption expenditure is the most important component of aggregate desired expenditure, our discussion starts with consumption.

79. i. Consumption:

80. According to Keynes the level of consumption expenditure is a stable function of disposable income which is national income less taxes paid ($Y_d = Y - T$).

Although consumption is affected by various other variables (called non-income determinants of consumption), income is the main factor influencing consumption.

81. This is why in his discussion of consumption function. Keynes ignored all other factors influencing consumption.

82. The Keynesian short-run consumption function showing consumption-income relationship is expressed as:

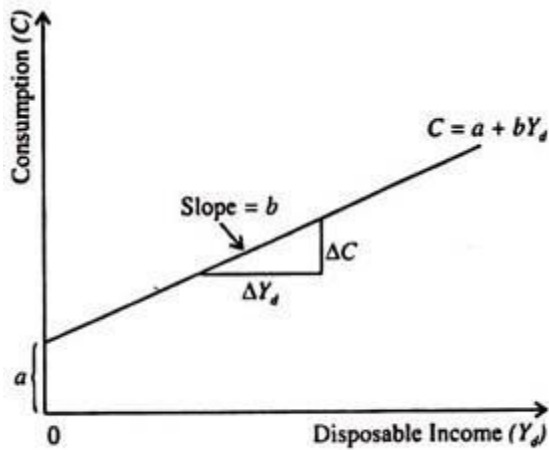
$$83. C = a + bY_d$$

$$84. a > 0, b < 1 \dots(9)$$

85. This income-consumption relation is shown in Fig. 8.2. Here the intercept term, a indicates autonomous consumption which has no relation to Y_d . The parameter, 'b', is slope of the function, i.e., $b = \Delta C / \Delta Y$. It is called the marginal propensity to consume (MPC).

86. It gives the increase in consumer expenditure per unit increase in Y_d . It can be defined as the ratio of the change in C brought about by certain change in Y_d . Consumption is primarily induced expenditure, meaning expenditure that depends directly on the level of income.

87. According to Keynes 'b' is greater than zero but less than one. In other words, it lies in-between zero and one. This simply means that consumption will increase with an increase in disposable income ($b > 0$) but the increase in consumption will be less than the increase in disposable income ($b < 1$).



88. Fig. 8.2 The Keynesian Consumption Function

89. In SKM, where the economy is closed, we have

90. $Y = C + S + T \dots(10)$

91. where all the terms have their usual meanings.

92. Or $Y_d = Y - T = C + S$

93. This means that disposable income is, by definition — consumption plus saving. Thus the relation between saving income is automatically determined from the consumption- income relationship. In the SKM, we have

94. $S = - a + (1 - b) Y_d \dots(11)$

95. When $Y_d = 0$, we get

96. $S = Y_d - C = 0 - a = - a$

97. Thus what is not spent on consumption goods is automatically saved. If a one-unit increase in Y_d leads to an increase of b units in consumption, the remainder of the one- unit increase $(1 - b)$ is the increase in saving:

98. $\Delta S / \Delta Y_d$

99. This increase in saving per unit increase in Y_d , i.e., $(1 - b)$ is called the marginal propensity to save (MPS). The saving function (5) is shown graphically in Fig. 8.3. It shows the level of savings (S) at each level of disposable income (Y_d). The intercept of the saving function ($- a$) is the negative level of saving (called dissaving) at a zero level of disposable income. The slope of the function is the MPS ($= 1 - b$), the increase in saving per unit increase in Y_d .

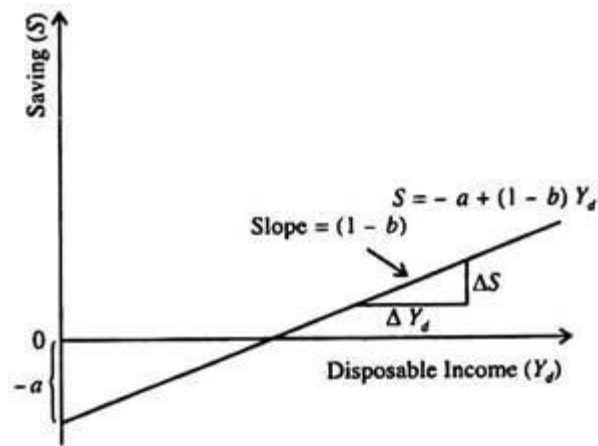


Fig. 8.3 The Keynesian Saving Function

100.

101. ii. Investment:

102. According to Keynes the level of aggregate demand (desired expenditure) depends on two things, viz., the desire to consume and the inducement to invest. So like consumption, investment is also a key variable in SKM. One main factor causing changes in equilibrium income in SKM is desired business investment expenditure.

103. According to Keynes, national income in a closed economy moves up or down due to changes in aggregate demand and Keynes looked at those components of aggregate demand which were autonomous, i.e., independent of current income. Changes in autonomous (income-independent) components of aggregate demand cause national income to vary.

104. Keynes believed that consumption was a fairly stable function of Y_d . But investment was the most volatile component of autonomous demand and investment fluctuations were primarily responsible for income fluctuations or business cycles.

105. In fact, the Keynesian theory of business cycle goes in terms of income fluctuations, which are caused by fluctuations in expectations of the future profitability of investment prospects.

106. According to Keynes there are two primary determinants of investment expenditure in the short-run the interest rate (which is a policy variable) and the expected rate of return on new investment projects, called the marginal efficiency of capital (MEC).

107. If we assume that the rate of interest remains constant in the short run, then investment can be taken as determined solely by MEC, which is determined by the state of business expectations.
108. Since investment depended upon expectations of the future (which could shift frequently, and at times drastically, in response to new information and events) and the future was uncertain, Keynes felt that investment was unstable.
109. In the SKM all investment is taken as autonomous. Hence the investment demand schedule is a horizontal straight line with zero slope. This means that a fixed level of investment takes place at all levels of income.
110. Government Spending and Taxes:
111. Government spending (G) is a second component of autonomous expenditures. It is autonomous because it is fully controlled by the government and does not depend on national income in any way.
112. Like government expenditure the level of tax revenue (T) is also controlled by the policymaker — the finance-minister and is thus a policy variable like government expenditure and the rate of interest.
113. Graphical Illustration of the SKM:
114. Fig. 8.4 shows how equilibrium income is determined in the SKM. We measure income on the horizontal axis and the components of aggregate demand on the vertical axis. We draw a 45° line as an guideline. Any point on the line indicates that aggregate expenditure ($C + I + G$) equals aggregate output (income), Y . The consumption function ($C = a + bY$) as also the aggregate expenditure schedule $C + I + G$ are shown separately.
115. The schedule is derived by adding up the two components of autonomous (income-independent) expenditure, viz., investment and government spending, at each level of income to consumption expenditure (which is partly autonomous and largely induced).
116. Since the autonomous components of expenditure do not depend directly on income, the vertical distance between the C schedule and $(C + I + G)$ schedule is the same at all levels of income.

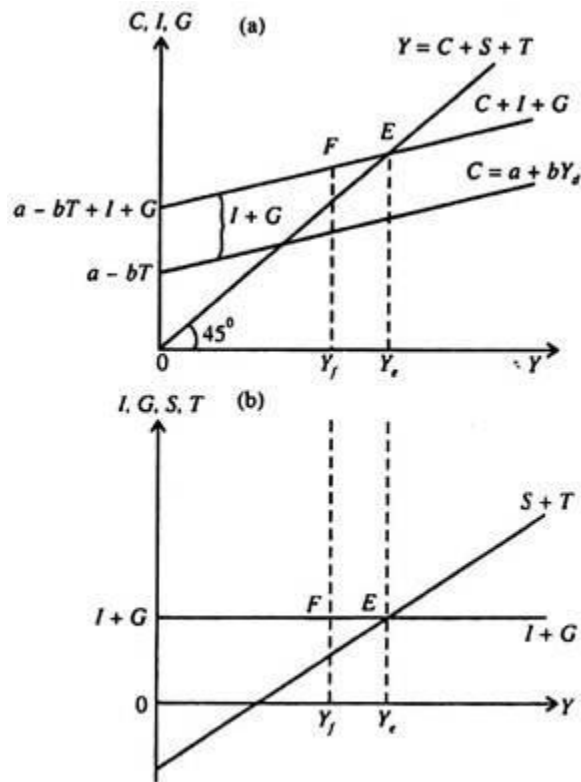


Fig. 8.4 The Determination of Equilibrium Income

117.

118. In part (a) of Fig. 8.4 the equilibrium level of income is Y_e . It corresponds to point E, where the $C + I + G$ schedule intersects the 45° line and $Y = C + I + G$, i.e., income received = desired expenditure as is shown by equation (2). This is the condition of equilibrium in the SKM according to the income-expenditure approach.

119. In part (b) we plot the $(I + G)$ schedule as a horizontal line, implying that its level does not depend on Y . The line $S + T$ is upward sloping because saving varies directly (though not proportionately) with income. In equilibrium, $S + T$ has to be equal to $I + G$. This is the second condition equilibrium income in the SKM, as is shown by equation (5).

120. i. The Logic of Equilibrium:

121. In order to prove that E is the only point of equilibrium, we have to disprove that no other point can be an equilibrium point. For example in part (a) income corresponding to point F (which is to the left of point E), the $C + I + G$ schedule lies above the 45° line. Similarly, at this point $I + G$ exceeds $S + T$ in part (b). This is a disequilibrium situation in the sense that desired expenditure ($C + I + G$) exceeds actual output.

122. This means that desired investment will exceed actual investment at this level of income, i.e., $C + I + G > Y = C + I_r + G$. This means that $I > I_r$. There will be an undesired shortfall of inventory at a level of income which is less than Y_e . As soon as inventory is exhausted, the stage will be set for fresh production. Consequently output has to rise to meet the extra demand.
123. The converse is also true. If actual income exceeds its equilibrium level Y_e , output will exceed aggregate demand, i.e., $Y > C + I + G$. Since the entire output cannot be sold, there will be undesired accumulation of inventories ($Y = C + I_r + G > (C + I + G)$ (or $I_r > I$). So, a cutback in production is inevitable. As a result output will tend to fall.
124. Thus it logically follows that only when actual output attains its equilibrium value (Y_e) there is neither undesired running down or accumulation of inventories. Consequently there is no tendency for output (income) to rise or fall. In other words, national income has reached its equilibrium level. Thus inventory changes play a very important role in the SKM. This point may now be discussed in detail.
125. (a) Consider a simple Keynesian model where $C = 50 + 0.6Y$ and $I = 30 + 0.2Y$. The country is closed without government. Determine the equilibrium national income of the country.
126. (b) Suppose that in this country last year's aggregate demand determines this year's production. If autonomous investment rises from 30 to 40 then what will be the national income in three years' time?
127. (c) If, starting from the situation described in (a), the investment function changes to $I = 30 + 0.4K$, what will happen to national income?

Solution. (a) Equilibrium level is attained at the point where aggregate demand equals aggregate supply

$$Y = C + I + G.$$

Since, in the given problem, $G = 0$ we have :

$$Y = C + I \quad \dots (1)$$

Substituting given values of C and I in (1) :

$$Y = 50 + 0.6Y + 30 + 0.2Y$$

$$\text{or, } Y = 0.8Y + 80$$

$$\text{or, } Y - 0.8Y = 80$$

$$\text{or, } 0.2Y = 80$$

$$\text{or, } Y = \frac{80}{0.2}$$

$$\text{or, } Y = 400$$

\therefore equilibrium income is 400 units.

(b) Now investment increases by 10 units (from 30 to 40).

In the first year Y increases by 10 units and AD -increases by $10(0.6 + 0.2) = 8$ units.

So in the second year Y increases by 8 units but AD increases by $8(0.6 + 0.2) = 6.4$ units.

And in the third year Y increases by 6.4 units.

Thus, increase in Y over the three years is :

$$10 + 8 + 6.4 = 24.4$$

Y was initially 400 units

So the output level now becomes

$$Y = 400 + 24.4 \quad \text{or, } Y = 424.4 \text{ units}$$

$$\text{(c) } Y = 50 + 0.6Y + 30 + 0.4Y$$

$$\text{or, } Y = 80 + Y$$

$$\text{or, } Y - Y = 80$$

$$\text{or, } Y(1 - 1) = 80$$

$$\text{or, } 0.Y = 80$$

$$\text{or, } Y = \frac{80}{0}$$

$$\text{or, } Y \rightarrow \infty.$$

128.

129. The consumption function for a simple economy is given by $C = 310 + 0.7$

Y_d

130. (a) Write an expression for saving in the economy.

131. (b) Express consumption in terms of Y when direct taxation is levied (i) as a lumpsum tax, $T = 300$, or (ii) as a proportional income tax, $t = 0.4$. Add these consumption functions to your diagram showing the consumption function without taxation and comment.

132. Solution

133. (a) Using the relationship $S = Y_d - C$ we substitute the consumption function and obtain
134. $S = Y_d - (310 + 0.7 Y_d) = Y_d - 310 - 0.7 Y_d$
135. Collecting terms gives the saving function
136. $S = -310 + 0.3 Y_d$
137. With no direct taxation, $Y_d = Y$ and the consumption and saving functions become
138. $C = 310 + 0.7 Y$
139. $S = -310 + 0.3 Y$
140. (b) (i) With direct taxation, $Y_d = Y - T$. When $T = 300$, the consumption function becomes
141. $C = 310 + 0.7 (Y - 300)$ or
142. $C = 310 + 0.7 Y - 210 = 100 + 0.7 Y$
143. A lumpsum tax shifts as consumption function down parallel to the original consumption function. (Students should check this point by drawing a suitable diagram.)
144. (ii) Using the relationship that with a proportional income tax $Y_d = (1 - t) Y$, since $t = 0.4$ we have $Y_d = (1 - 0.4) Y = 0.6 Y$. Substituting this in the consumption function gives
145. $C = 310 + (0.7 \times 0.6 Y) = 310 + 0.42 Y$
- 146.

What is the Keynesian Multiplier?

The Keynesian Multiplier is an economic theory that asserts that an increase in private consumption expenditure, investment expenditure, or net government spending (gross government spending – government tax revenue) raises the total Gross Domestic Product (GDP) by more than the amount of the increase. Therefore, if private

consumption expenditure increases by 10 units, the total GDP will increase by more than 10 units.

Keynesian Economic Theory

In 1936, economist [John Maynard Keynes](#) published a text that would change the course of economic thought. Titled "The General Theory of Employment, Interest, and Money," or simply as "The General Theory," it is considered one of the classical works in economics. The book attempted to explain short-term economic fluctuations in general, especially the fluctuations observed during the [Great Depression](#) in the early 1930s.

The main idea put forth by Keynes in The General Theory was that recessions and depressions could occur because of inadequate demand in the market for goods and services.

The General Theory was intended not just for economists but also for policymakers across the world. In response to widespread unemployment and low levels of economic activity across the world, Keynes called for an increase in government spending in order to boost demand for goods and services in the market. The thinking went against the existing classical economic policy of [laissez-faire](#) and minimal government interference.

Components of the Keynesian Theory

The three main components of the Keynesian Theory are:

1. [Aggregate demand](#) is influenced by the decisions in the private and public sector. The level of demand by the private sector could exert an effect on macroeconomic conditions. For example, a decrease in aggregate spending can bring the economy into a recession. However, the negative impact of private decision-making can be mitigated through government intervention with a fiscal or monetary stimulus.
2. Prices such as wages are often slow to respond to changes in demand and supply. It is why there are many instances of a shortage or an excess in the supply of labor.
3. A change in aggregate demand causes the greatest impact on the output and employment in the economy. Keynesian economic theory says that spending by consumers and the government, investment, and exports will increase the level of output. Even a change in one the components will cause total output to change.

The concept of the change in aggregate demand was used to develop the Keynesian multiplier. It says that the output in the economy is a multiple of the increase or decrease in spending. If the fiscal multiplier is greater than 1, then a \$1 increase in spending will increase the total output by a value greater than \$1.

(Image) The increase from AD1 to AD2 leads to an increase in output from Y1 to Y2. But with a multiplier, there is a rise to AD and a further increase in output at Y3. (Image) The increase from AD1 to AD2 leads to an increase in output from Y1 to Y2. But with a multiplier, there is a rise to AD and a further increase in output at Y3.

Calculating the Keynesian Multiplier

The value of the multiplier depends on the marginal propensity to consume and the marginal propensity to save.

1. Marginal Propensity to Save

The change in total savings as a result of a change in total income is known as the marginal propensity to save. When an individual's income increases, the marginal propensity to save (MPS) measures the proportion of income the person saves rather than spend on goods and services. It is calculated as $MPS = \Delta S / \Delta Y$.

Suppose an individual receives a year-end bonus of \$600 and spends \$300 on goods and services. The MPS is $(600 - 300) / 600 = 0.5$.

2. Marginal Propensity to Consume

The change in total consumption as a result of a change in total income is known as the [marginal propensity to consume](#). The marginal propensity to consume (MPC) measures how consumer spending changes with a change in income. Using the figures above, the MPC is $\Delta C / \Delta Y = 300/600 = 0.5$.

The Keynesian Theory states that an increase in production leads to an increase in the level of income and therefore, an increase in spending. The value of MPC allows us to calculate the size of the multiplier using the formula:

$$1 / (1 - MPC) = 1 / (1 - 0.5) = 2$$

This means that every \$1 of new income will generate \$2 of extra income.

Types of multiplier:

- Employment Multiplier: It refers to type of a multiplier measure by Kahn's where the number of employment is created, activated and supplied from the base or primary jobs.
...
- Fiscal Multiplier: ...
- Money Multiplier: ...
- Income Multiplier: ...
- Negative/Reverse Multiplier: ...
- Tax Multiplier:

Importance of Multiplier:

The introduction of multiplier analysis in income theory is one of Keynes' path-breaking contributions, in as much as it has not only enriched economic analysis but also profoundly affected economic policies. "It is true that Lord Keynes did not discover the multiplier, that honour belongs to Mr. R.F. Kahn. But he gave it the role, it plays today, by transforming it from an instrument for the analysis of 'road-building' into one for the analysis of 'income building'. From his own and subsequent work, we now have a theory, or at least its sound beginning, of income generation and propagation, which has magnificent sweep and simplicity. It set a fresh wind blowing through the structure of economic thought".

From the foregoing qualifications and limitations it should never be concluded that the concept of multiplier is of little use. Despite the structures, multiplier has been of great importance both to economic theory and policy. Firstly, it established the immense importance of investment as the major dynamic element in the economy. Not only did it indicate the direct creation of employment, it also revealed that income was generated throughout the system like a stone causing ripples in a lake.

On the side of practical economic policy it is of the utmost importance because the case for public investment has all the more been strengthened by the introduction of this concept; it tells us that a small increment in investment leads to a large increase in investment and employment. A knowledge of multiplier is of vital importance during the course of business-cycle studies and for its accurate forecasting and control. Further, it is a useful analytical tool for following suitable employment policies. Thus, we find that the theory of multiplier has brought almost a virtual revolution in the thinking of economists and policy-makers alike. With the use of this concept, the approach has radically changed from 'no intervention' to the growth of the public sector in practically all the countries of the world.

Leakages in The Working Of Multiplier:

We have learnt about the timeless and instantaneous multiplier. But in actual practice the working of the multiplier is affected by a large number of considerations. We see that the whole of the increment in income is not spent on consumption nor is it entirely saved. Therefore, the value of the multiplier is neither one nor infinity. This is because there are several leakages from the income-stream as a result of which the process of income propagation is slowed down.

Important leakages are as follows:

1. Saving:

Saving constitutes an important leakage to the process of income propagation. If the whole of the increment in income was to be spent on consumption (i.e., if MPC is one) then, 'once-for-all' increase in investment would go on creating additional consumption so that the full employment would ensure. This is not the case in actual practice, because a part of the increased income is not spent on consumption but saved and 'peters out' of the income stream, thereby limiting the value of the multiplier. In fact, the whole of saving forms a sort of leakage and higher the propensity to save, the lower is the value of multiplier. Further, for various reasons these savings constitute an important leakage.

2. Debt Cancellation:

It has been observed that part of the income received by the people in the economy may be used for paying off old debts to the banks and individuals, who may, in turn, fail to spend. As such, the consumption is not stimulated and the value of the multiplier is thereby reduced.

3. Imports:

If there is an excess of imports over exports, part of the increased income as a result of increased investment will go to increase income in the foreign countries at least in the short period. It is argued that in the long period, the increased income in the foreign countries will go to increase the demand for exports and thus will have beneficial effects on the income of the country importing goods. But this may or may not be the case, as it presupposes free trade. In this way imports and the money spent on the imported goods constitute an important leakage.

4. Price Inflation:

Price inflation constitutes another important leakage from the income stream of an economy. As long as there is unemployment of resources and factors of production, increase in investment will have expansionary effects. But once that full employment or near full employment of the resources has been attained, increase in investment will go

to raise prices and the cost of the factors of production, because at this level the factors of production become scarce and a competition ensues between the consumer goods industries and investment goods industries for securing the scarce resources even at higher prices. Thus, as a result of price inflation a major part of the increased income is dissipated instead of promoting consumption, income and employment.

5. Hoarding:

Hoarding or the tendency of the people to hold idle cash balances forms another leakage. If the people have high liquidity preference and a tendency to keep idle cash balances they will diminish the expenditure on consumption in the economy, thereby restricting the value of the multiplier.

6. Purchase of Stocks and Securities:

Sometimes, people purchase old stocks and securities with the newly created income and do not spend it on increased consumption. Some of them purchase new insurance policies. Thus, this type of financial investment severely restricts the value of the multiplier, as the increased incomes, instead of being spent on consumption, are spent on nominal (not real) investments.

All these factors constitute potential leakage from the income stream resulting from an expansion of new investment. This new income under such circumstances, does not give rise to secondary consumption expenditures. It is, therefore, highly desirable that to have the desired results of multiplier, these leakages should be plugged. To the extent these leakages from the income stream can be controlled, the original increase in investment will have greater multiplier effects.

Criticism:

Criticism is leveled on the ground that Keynes' theory of multiplier rests on the simple assumption of increases in consumption as a result of increases in income and, further, on the MPC being less than one. Actual studies show that the relationship between income and consumption is not so simple as presumed by Keynes, nor is consumption the function of income alone. Multiplier depends upon a large number of limitations and qualifications like the availability of consumer goods, maintenance of investment, direction of investment, multiplier period, and takes no account of the effect of induced consumption on investment, besides completely overlooking the time-element.

Keynes' logical theory of the multiplier takes into consideration the effects of increases in consumption as a result of increases in income, but it takes no account of the effects of increases in consumption on investment (induced investment). On this ground alone,

the theory has been severely criticized by D.H. Robertson, R.M, Goodwin and A.P. Lerner.

These writers rightly grudge the undue importance and attention given to the multiplier, which they feel, in a way, is too bad; “since the concept, often seems like nothing but a cheap jack way of getting something for nothing and appears to carry with it a spurious numerical accuracy.” Prof. A.G. Hart has insisted, no doubt correctly, that the multiplier concept is a useless ‘fifth wheel’. It adds nothing to the ideas or result already implied in the use of consumption function. Haberler with some justice, accused Keynes of dealing in tautology when he discussed the multiplier—that is of defining something as necessarily true, and then proclaiming as discovery the ‘truth’ of the relationship made inevitable by definition.

Prof. Hazlitt has also criticized the concept of multiplier rather bitterly. He calls it ‘strange concept’, ‘a myth, much ado about nothing’. He asks, “What reason is there to suppose that there is such a thing as the multiplier”? He doubted if there could be any precise or mechanical relationship between social income, consumption, investment and extent of employment. He called it a worthless toy made familiar by monetary cranks. According to Prof Hutt, “the conventional multiplier apparatus is rubbish and that it should be expunged from the text books”.

Thus, the main points of criticism against the concept of multiplier as given by Keynes are that:

- (i) It assumes an instantaneous relationship between income, consumption and investment—it is a timeless phenomenon.
- (ii) It is of static nature which is unsuited to the changing process of the dynamic world, it fails to reckon the influence of time lags and its results are obtained only under static conditions,
- (iii) It ignores the influence of induced consumption on induced investment, i.e., there is a relationship between the demand for capital goods and the demand for consumption goods, i.e., the demand for capital goods is a ‘derived demand’,
- (iv) Further, its sole emphasis on consumption is also not proper. It would be more realistic to speak of a ‘marginal propensity to spend’ rather than to consume,
- (v) Again, Haberler feels that this multiplier theory is an un-verified hypothesis because Keynes offers no adequate proof except a number of vague observations,

(vi) Prof. L.R. Klein has pointed out that empirical studies in respect of the behaviours of aggregate consumption in relation to aggregate income, show that actual trends in spending have a much more complicated relationship which may be non-linear and the assumption of linear relation between aggregate consumption and aggregate income is open to question.

(vii) Again, consumption is not the function of income alone and the marginal propensity to consume is not constant as was assumed by Keynes as the basis of multiplier.

Nevertheless, the multiplier idea has been widely used as a way of summarising the workings of the Keynesian model, and a whole body of literature has grown up which employs this terminology. A strong defence has been put up by writers like Harrod, Hansen and Samuelson who have tried to deal with the criticism and made the whole analysis dynamic. In the words of S.E. Harris, we may sum up the position as follows: “On the discussion of the multiplier, many economists have gone on fishing expeditions, but though they had many bites they did not catch any large fish. Indeed, they have added much to Keynes’ relatively simple and unverified presentation”.

