

Keynesian Consumption Function

The consumption function or propensity to consume refers to income consumption relationship. It is a functional relationship between two aggregates, i.e., total consumption and gross national income.

Symbolically, the relationship is represented as-

$$C = f(Y)$$

where C is consumption, Y is income, and f is the functional relationship.

Thus the consumption function indicates a functional relationship between C and Y, where C is dependent and Y is the independent variable, i.e., C is determined by Y.

The function can also be written as

$$C = a + bY$$

where a is the intercept term or the minimum level of consumption even when income is zero, and b is Marginal Propensity to consume or the slope of the consumption function.

This relationship is based on the ceteris paribus (other things being equal) assumption, as such only income-consumption relationship is considered and all possible influences on consumption are held constant.

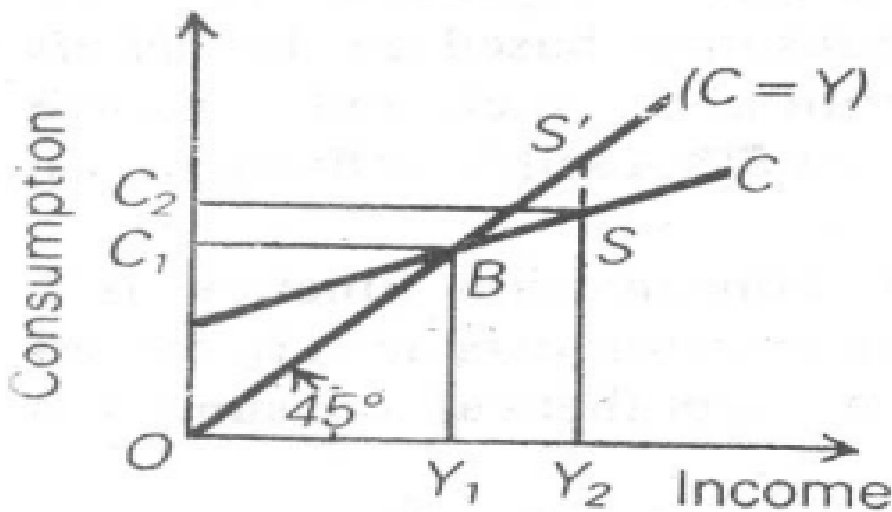
The propensity to consume or consumption function is a schedule of the various amounts of consumption expenditure corresponding to different levels of income. A hypothetical linear consumption schedule is given in Table I. Table I shows that consumption is an increasing function of income because consumption expenditure increases with increase in income. Here it is shown that when income is zero during the depression, people spend out of their past savings on consumption because they must eat in order to live. When income is generated in the economy to the extent of Rs. 60 crores, it is not sufficient to meet the consumption expenditure of the community so that the consumption expenditure of Rs. 70 crores is still above the income amounting to Rs 60 crores. (Rs. 10 crores

are dis-saved). When both consumption expenditure and income equal Rs 120 crores, it is the basic consumption level. After this, income is shown to increase by 60 crores and consumption by 50 crores. This implies a stable consumption function during the short-run as assumed by Keynes.

TABLE I : CONSUMPTION SCHEDULE

(Rs. Crores)

Income (Y)	Consumption $C = f(Y)$
0	20
60	70
120	120
180	170
240	220
300	270
360	320



The above figure illustrates the consumption function diagrammatically. In the diagram, income is measured horizontally and consumption is measured vertically. 45° is the unity-line where at all levels income and consumption are equal. The C curve is a linear consumption function based on the assumption that

consumption changes by the same amount (Rs 50 crores). Its upward slope to the right indicates that consumption is an increasing function of income. B is the break-even point where $C = Y$ or $OY_1 = OC_1$. When income rises to OY_2 consumption also increases to OC_2 , but the increase in consumption is less than the increase in income, $C_1C_2 < Y_1Y_2$. The portion of income not consumed is saved as shown by the vertical, distance between 45° line and C curve, i.e., SS' .

Thus, the consumption function measures not only the amount spent on consumption but also the amount saved. This is because the propensity to save is merely the propensity not to consume. The 45° line may therefore be regarded as a zero-saving line, and the shape and position of the C curve indicate the division of income between consumption and saving.

PROPERTIES OR TECHNICAL ATTRIBUTES OF THE CONSUMPTION FUNCTION

The consumption function has two technical attributes or properties: (1) the average propensity to consume, and (2) the marginal propensity to consume.

(1) The Average Propensity to Consume: The average propensity to consume may be defined as the ratio of consumption expenditure to any particular level of income.

It is found by dividing consumption expenditure by income, i.e.

$$APC = C/Y.$$

It is expressed as the percentage or proportion of income consumed. The APC at various Income levels is shown in column 3 of Table II.

Y	C	APC (C/Y)	APS (1-APC)	MPC ($\Delta C/\Delta Y$)	MPS (1-MPC)
0	20	-	-	-	
60	70	1.16	-0.16	0.83	0.17
120	120	1	0	0.83	0.17
180	170	0.94	0.06	0.83	0.17

240	220	0.92	0.08	0.83	0.17
300	270	0.9	0.1	0.83	0.17
360	320	0.88	0.12	0.83	0.17

The APC declines as the income increases because the proportion of income spent on consumption decreases. But reverse is the case with APS (average propensity to save) which increases with increase in income (see column 4). Thus, the APC also tells us about the APS, $APS=1- APC$.

(2) The Marginal Propensity to Consume: The marginal propensity to consume may be defined as the ratio of the change in consumption to the change in income or as the rate of change in the average propensity to consume as income changes. It can be found by dividing change in consumption by a change in income, or

$$MPC= \Delta C/\Delta Y.$$

The MPC is constant at all levels of income as shown in column 5 of Table II. It is 0.83 or 83 per cent because the ratio of change in consumption to change in income is $\Delta C / \Delta Y=50/60$. The marginal propensity to save can be derived from the MPS by the formula

$$1 - MPC$$

It is 0.17 in our example (see column 6).

Further, $1 > MPC > 0$.

Keynesian Consumption function implies that the $MPC < APC$, because when income increases the consumption expenditure doesn't increase in the same proportion.

Factors affecting the consumption function:

- **Objective factors**

1. The Rate of Interest:

It is assumed that consumption or saving depends on the rate of interest. An increase in interest rate encourages saving and, thus, consumption is discouraged.

2. Distribution of income:

Distribution of income in the society also determines the level of consumption function. If the national income is more unequally distributed, the lower will be the propensity to consume. This is because the average and marginal propensities to consume of the poor are greater than those of the rich. Therefore, if the inequalities in the income increase, this reduces the consumption and cause a downward shift of the consumption function.

3. Fiscal policy: Fiscal policy of the government will also influence the consumption behaviour of an economy. A reduction in taxation will leave more post-tax incomes with the people and this will stimulate higher expenditure on consumptions. Similarly, an increase in taxes will depress consumption.

4. Monetary policy: Easy availability of the credit leads to a higher level of consumption and shifts the consumption function up.

5. Changes in the general price level: Inflation leads to downward shift in consumption function, because inflation reduces their purchasing power. This causes a fall in their consumption.

6. Changes in expectations: Expectations of a higher price in future may increase the current consumption shifting the consumption function up and vice-versa.

7. Windfall gains and losses: The windfall losses and gains arising out of changes in capital values affect the consumption function. E.g. A rise in price of shares will lead to a rise in the shareholder's income and thus an increase in consumption.

8. Stock of wealth: The total wealth position of consumers is considered as an important determinant of consumption. Wealth like shares, bonds, house property, etc., influence consumption decisions. Owners of these assets consume

more at any given level of income. Their desire to save is less since they are already the owners of these assets. Thus a higher volume of wealth leads to an upward shift in the consumption function.

- **Subjective Factors:**

- (a) Individual motives to save:**

- (i) Building of reserves for unforeseen contingencies as illness or unemployment,
 - (ii) To provide for anticipated future needs such as daughter's wedding, son's education, etc.
 - (iii) To enjoy an enlarged future income by investing funds out of current income, etc.

- (b) Business motives:**

- (i) The desire to expand business,
 - (ii) The desire to face emergencies successfully,
 - (iii) The desire to have successful management,
 - (iv) The desire to ensure sufficient financial provision against depreciation and obsolescence.

Importance of consumption function:

1. Helps to invalidate Say's law: Say's law states that there will always be adequate demand in the market that will match the supply, ensuring equilibrium. However, the consumption function shows that not all income that is earned is spent on consumption, but some portion is saved. Thus, there is always a room for inadequate demand.

2. Highlights the importance of investment: The consumption function shows that a gap between income and consumption arises after a certain level of income, i.e. savings. To maintain the desired level of demand and thereby a sufficient level of employment, the gap between income and consumption is required to be bridged by investment expenditure.

3. A starting point of the theory of multiplier: The consumption function acts as a base for the theory of multiplier. The MPC plays an important role in the calculation of multiplier. The value of MPC always being greater than zero makes the multiplier work.

4. Explains why output expected from capital declines over a period of time: Since consumption rises at a slower rate, as explained by the consumption function, the expectations from the capital investment fall too.

5. Helps to understand the business cycles: Consumption function helps us understand why an economy swings down from the peak, explaining reasons behind lack of aggregate demand and investment.