Keynesian Consumption Function: A Close View

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The below mentioned article provides a close view on Keynesian consumption function.

The consumption function states that aggregate real consumption expenditure of an economy is a function of real national income. This is called the Keynesian Consumption Function. The classical economists used to argue that consumption was a function of the rate of interest such that as the rate of interest increased the consumption expenditure decreased and vice versa. Keynes stated that rate of interest may have some influence on consumption or

consumption but the real income was the important determinant of consumption.

It should be remembered that in the consumption function consumption expenditure refers to intended or ex-ante consumption and not actual consumption. Similarly, income refers to anticipated income and not actual income. Therefore, the consumption function shows what consumption expenditure would be at different levels of income. The aggregate consumption in the economy can be found out from the consumption expenditure of different individuals purchasing commodities.

The quantity of the commodities are $q_1, q_2 \ldots\ldots q_n$ and the prices of these commodities are $P_1, P_2 \ldots\ldots P_n$. Hence, the total consumption expenditure of all the individuals in the economy will be equal to $\sum_{i=1}^{n} P_i q_i$. But from the consumer's utility maximisation analysis we know that, the amount of any commodity consumed is a function of all prices and the level of income of the consumer, i.e. $q_i = q_i(P_1, P_2 \ldots\ldots P_n, Y)$ where $i = 1, 2, \ldots\ldots n$ and y is the income of the consumer. Let C_j is the total consumption expenditure of jth individual. Then $C_j = \sum_{i=1}^{n} P_i q_i = \sum_{i=1}^{n} P_i q_i (P_1, P_2 \ldots\ldots P_n, Y_j)$ and C_j is also a function of $(P_1, P_2 \ldots\ldots P_n, Y_j)$. Since $q_i(P_1, P_2 \ldots\ldots P_n, Y_j)$ are homogeneous functions of degree zero, it follows the $C_j(P_1, P_2 \ldots\ldots P_n, Y_j)$ will be homogeneous of degree one.

This means that, when all prices and the level of income change in the same proportion, the consumption expenditure will also change in the same proportion. If we write all prices as P and all money incomes as Y_m, then we can write that $C_m = C_m (Y_m, P)$ where C_m is the aggregate consumption expenditure in money terms. This function will also be homogeneous of degree one in Y_m and P.

Thus, the aggregate consumption function states that real consumption is a function of real income and then the consumption function can be written as C = C(Y) where C is real consumption expenditure and Y is real national income. This is the Keynesian Consumption Function. The straight line consumption function has a constant slope at all points. The (MPC) marginal propensity to consume decreases as income increases.

According to Keynes the consumption function must possess the following characteristics:

(1) Aggregate real consumption expenditure is a stable function of real income.

(2) The marginal propensity to consume (MPC) or the slope of the consumption function defined as dc/dY must lie between zero and one i.e. 0 < MPC < 1.

(3) The average propensity to consume (APC) or the proportion of income spent for consumption defined as C/Y should be decreasing as income increases. From the relation between marginal and average we know that, when average falls, the

marginal is below average. Thus, when the average propensity to consume (APC) falls, the marginal propensity to consume (MPC) must be lower than the APC.

(4) The marginal propensity to consume (MPC) itself probably decreases or remains constant as income increases.

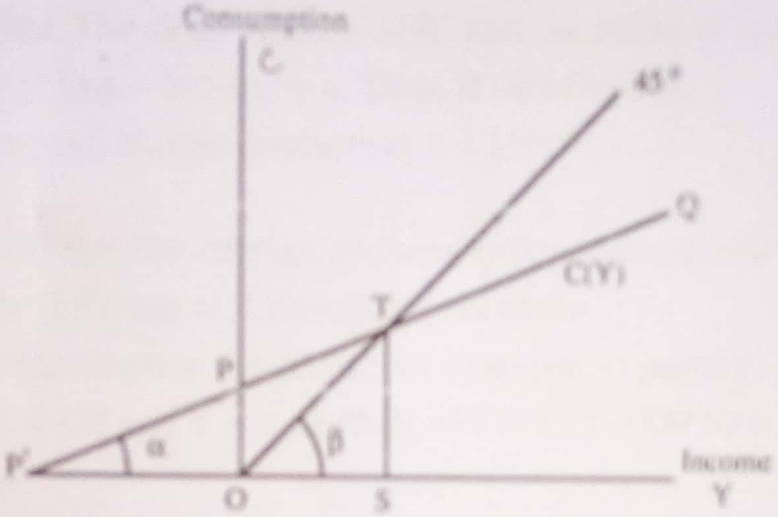

Fig. 12.1 Simple Consumption Function

These four characteristics specify the shape of the consumption function. It can be seen clearly that, if we draw a straight line consumption function with a positive intercept with the vertical axis, and intersecting the 45° line from above, it will satisfy all the four characteristics. In Fig. 12.1 we draw Y on the horizontal axis and C on the vertical axis.

The consumption function, PQ, is a straight line and OT is a straight line passing through the origin making an angle of 45° which intersects the consumption function from below at point T. This consumption function PQ satisfies all the four characteristics.

(i) It represents a stable relationship between C and Y.

(ii) The slope of the line PQ represents the marginal propensity to consume (MPC) which has a positive slope. Again the consumption function cuts the 45° line from above. This means consumption function (PQ) is flatter than the 45° line and its slope is less than 45° line. The slope of PQ = MPC and the slope of the 45° line = tan 45° = 1. Thus, it satisfies the second characteristic that $0 < MPC < 1$.

(iii) But the average propensity to consume will be different at different points of the consumption function. For example, at point P, C = OP and Y = 0, so that, $APC = C/Y = OP/O = \infty$.

It means at point P, the APC is infinity (∞). Again consider the point T where consumption is TS and income is OS, so that, APC = TS/OS = slope of OT = 1. Thus, APC at point T is one. The APC at any point on the consumption function is slope of the line joining that point with the origin. To the left of T, the AFC is greater than one and to the right of T, AFC is less than one. It means, to the left of the point T consumption is greater than income i.e., C > Y, so that, APC = C/Y > 1.

On the other hand, to the right of the point T, consumption is less than income i.e. C < Y, so that, APC = C/Y < 1. Thus, the APC decreases as we move along the consumption function from

left to right. Since the average propensity to consume (APC) decreases as income increases the marginal propensity to consume (MPC) must be less than the average propensity to consume. Thus, the third characteristic is also fulfilled by this straight line consumption function.

Fourthly, if the consumption function is a straight line the slope of the consumption function is constant at all points, i.e. the constant MPC satisfies the fourth characteristic. If the MPC is to decrease as income increases the consumption function has to be non-linear. It will be concave to the horizontal axis. In other words, the equation of a straight line linear consumption function can be written as $C = a + bY$, where a and b are constants. Let us also assume that $a > 0$ and $0 < b < 1$ and $dc/dY = b =$ MPC. Since $b > 0$, the function is upward rising. Again the $APC = C/Y = a/Y + b$. In this case, C/Y will decrease as Y increases. So the $APC = C/Y = a/Y + dc/dY = MPC + x$. $\therefore$ APC > MPC.

These four characteristics of the consumption function mentioned by Keynes were not derived from theoretical analysis or empirical evidence. He derived these proportions from intuition. Keynes called it a **"fundamental psychological law"** that people do not spend the entire amount of the increase in income and save a part of it. This means that marginal propensity to consume (MPC) is positive but less than one. The consumption income ratio falls as income increases which means that

there is a non-proportional relationship between consumption and income.

Subjective and Objective Factors Affecting Consumption Expenditure:

According to Keynes, aggregate real