Consumption Function

Sri K. Vasudeva Rao
Lecturer in Economics, Government Degree College, Srungsvarapukota.VZM.

***Abstract*—The consumption function is a fundamental concept in macroeconomics that explains the relationship between the household consumption expenditure and disposable income. It posits that consumption is determined by a mix of autonomous spending and income induce spending typecally expressed through the marginal propensity to consume (MPC). The function provides insight into how changes in income levels influence consumer behavior and consequently, aggregate demand.over time theoretical advancements - including Keynesian, lifecycle permanent income hypothesis - have enriched the understanding of consumption patterns by incorporating expectations wealth and intertemporal choices.emperical studies continue to refine the function by accounting for socio economic factors,credits constraints and behavioral influences. Overall the consumption function remains central to economic analysis and policy formulation, especially in forecasting demand and evaluating fiscal interventions.**

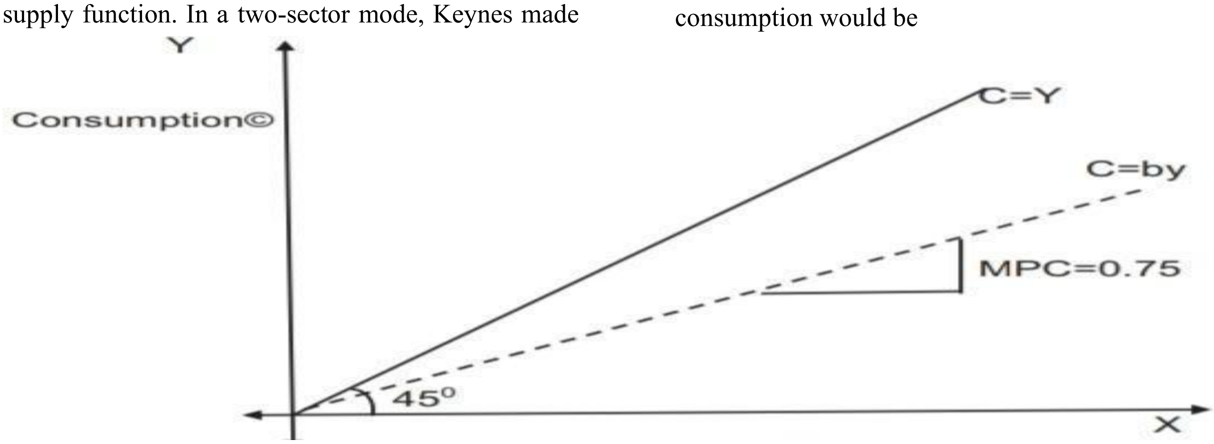
I. INTRODUCTION

The word famous modern economist Lord J M. Keynes wrote a well-known book –General theory of employment, interest and money in 1936. Keynes theory of income and employment states that the volume of employment in the economy depends upon the level of effective demand function and aggregate supply function. In a two-sector mode, Keynes made use of two components of aggregate demand viz. Consumption expenditure and investment expenditure . consumption expenditure is an important constituent of aggregate demand in an economy. Keynes was not interested in the factors determining aggregate supply since he was concerned with short run and existing productive capacity.

The Concept of Consumption Function : As demand of a commodity depends upon its price similarly the consumption of a commodity depends upon the level of income . The Consumption or propensity to consume refer to an empirical income Consumption relationship. It is a functional relationship indicating how consumption varies as income varies. Consumption function is a simple relation between Income(y) and Consumption (C) ; Symbolically ;

C = f (Y) where C : CONSUMPTION, Y = INCOME f= functional relationship.

In the functional relation, consumption is dependent variable and income is independent variable. Hence consumption is dependent on income. Apart from income there are many other subjective and objective factors which can influence consumption. But income is an important factor. Thus the consumption function Is based on ceteris paribus assumption. The functional relationship between income and consumption can take different forms. The simplest form of consumption would be



Income (Y)

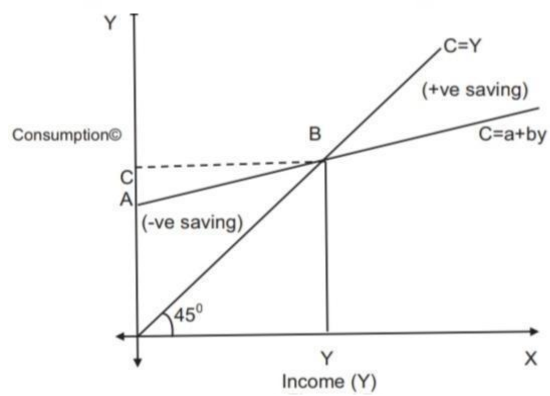
The consumption function expressed above shows that consumption is a constant proportion of income. This consumption function is shown diagrammatically. In the above diagram income is measured on X- axis and consumption is measured on Y- axis .the line ie. C=Y shows that consumption is equal to income. The curve C = bY .. is the consumption function curve (if b = or 0.75)the consumption function curve C = bY indicates that if income is zero consumption will be zero. But in practice this is not true. However at zero income. Consumption is positive (because it is function is sometime expressed in the following form. C = a + by where; C: consumption; a : autonomous consumption ; b :marginal propensity to consume Y = Income

In fact consumption function is a schedule of various amounts of consumption expenditure corresponding to different level of income. The schedule of consumption function is illustrated in the following table

Schedule of Consumption function (Rs. crores)

Income (Y) =	Consumption (C) +	Savings (S)
00	20	-20
70	80	-10
140	140	00
210	200	10
280	260	20
350	320	30
420	380	40

The above table shows that consumption is an increasing function of income. When income is zero people spend out of their past savings or borrowed income on consumption because they must eat in order to live. When income increases in the economy to the extent of RS. 70 crores. But it is not enough to meet the consumption http of RS. 80 crores (negative saving) when both income and consumption expenditure are equal RS. 140 crores . it is basic consumption level, when saving is zero. After this income is shown to increase by RS.70 crores and consumption by RS. 60 crores i.e. saving by 10 crores This implies a stable or constant consumption function during the short run as assumed by Keynes.



The above diagram explains the above schedule in the diagram income is measured on X – axis and consumption measured on Y – axis. Y = C line I the unity line where at all levels consumption and income are equal. The C = a+bY curve is linear consumption function curve which is based on the assumption that the short run consumption changes by the equal amount. C = a +bY curve slopes upward from left to right which indicated that consumption is an increasing function of income. It also indicated that at zero level of income consumption is positive to the extent of OA. At point B consumption function curve intersect to unity line where consumption is OC and income is OY. In the diagram point B is the breakeven point where consumption is equal to income (c = y). Before the breakeven point consumption is greater than (C < Y). Above the breakeven point saving becomes positive and below the breakeven point saving becomes negative.

The concept of consumption function given by J.M. Keynes is not a linear consumption function form as explained in the above diagram. But it is in the form of non-linear consumption. To explain the concept of consumption function. Keynes most probably never used any statistical information. Hence Keynes law of consumption function is mainly based on general observation and deductive reasoning to discover relationship between income and consumption.

Concepts of Consumption Function: In this analysis Keynes has used two technical attributes or properties of consumption function.

1. Average Propensity to Consume (APC), and
2. Marginal Propensity to Consume (MPC).

AVERAGE PROPENSITY TO CONSUME (APC): Average propensity to consume refers to the ratio of consumption expenditure to any particular level of income. Symbolically;

Where C = Consumption; Y = Income $APC = C / Y$

Average propensity to consume is expressed as the percentage of proportion of income consumed.

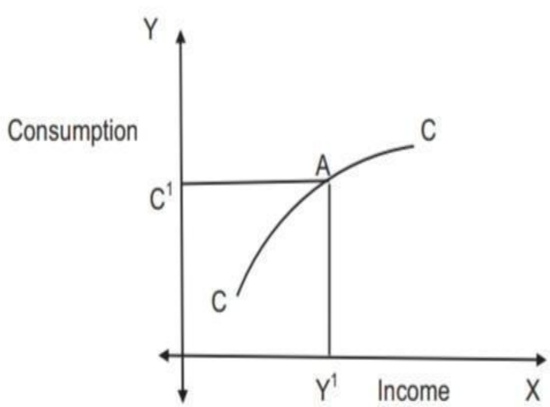
Consumption Function Schedule

(1) Income (Y)	(2) Consumption (C)	(3) Saving (S) (1) – (2) = (3)	(4) APC 2 + 1 = 4	(5) MPC $MPC = \frac{\Delta C}{\Delta Y}$	(6) APS 1 – APC	(7) MPS 1 – MPC
1200	1200	00	---	---	---	---
1800	1700	1000	0.94	0.83	0.08	0.17
2400	2200	2000	0.91	0.83	0.09	0.17
3000	2700	3000	0.90	0.83	0.10	0.17
3600	3200	4000	0.88	0.83	0.12	0.17

The APC is shown in the above table which shows that APC falls as income increased because the proportion of income spent on consumption decreases but APS increased Average Propensity to Save.

APS = 1 - APC

T



Diagrammatically APC is shown above diagram in which any point on consumption function curve measures the APC of the consumption function curve CC which is OC / OY. the flattening of the consumption function curve the right shows declining APC.

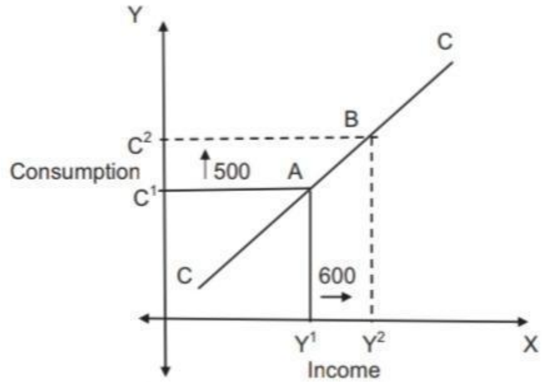
MARGINAL PROPENSITY TO CONSUME (MPC) : Marginal propensity to consume refers to the rateof change in consumption to the change in income. Symbolically;

$MPC = \Delta C / \Delta Y$ WHERE; ΔC = change in Consumption; ΔY = Change in Income.

Marginal propensity to consume (MPC) is the ratio of change in the average propensity to consume as income changes. The above table MPC is constant at all level of income. The marginal propensity to save zero (MPS= 0) can derived from the formula.

MPC = 1 – MPS OR MPS = 1 – MPC

The above table shows that as income increases from RS. 1200, rS.2400, RS. 3000, RS. 3600 etc.consumption also increases from RS. 1200, RS. 1700, RS. 2200, RS. 2700, RS. 3200.respectively. But each level of increased income increases consumption at a constant rate.



Therefore, we get a stright line curve which slopes upward from left to right. This diagram shows that CC curve is linear consumption function curve which is positive slope. If income increasesfrom OY1 to OY2, consumption will also increase from OC1 to OC2. The net change in income Y1 Y2(ΔY) leads to a net change in consumption to the extent of C1 to C2 ΔC. as income increases consumption also increases but at constant rate MPC = ΔC / ΔY = ΔC1 / ΔY1

MPC = C1 C2 /Y1 Y2 = 500/600 = 5/6 = 0.83 In the above diagram and table the value of MPC is 0.83 at all levels of income. if the value of MPC is falling then the slope of consumption function curve will be non- leaner consumption curve shows that as income increases consumption also increases but at a diminishing rate.

II. FEATURES OF MPC

The value of MPC is greater than zero but less than one (0 <MPC < 1)

… MPC cannot be negative, always positive.

…As income increases MPC may fall.

… MPC may rise; fall or constant depends upon subjective and objective factors.

RELATIONSHIP BETWEEN APC AND MPC: * when the consumption function is linear (C =a+ bY) MPC is constant but APC is declining as income increases.

*Ordinarily APC and MPC both declines as income increases but MPC declines at a faster than decline in APC. If consumption function line passes through the origin, APC and MPC will be equal and constant.

SIGNIFICANCE OF MPC

1. According to Keynes the value of MPC will always lie between zero and 1 (0< MPC < 1)

2. The MPC is important for filling the gap between income and consumption through planned investment to maintain desired level of income.

3. The MPC is useful to the multiplier theory .Higher the MPC higher will be multiplier and vice versa.

ASSUMPTIONS: KEYNES LAW IS based on the following Assumptions.

1. It Assumes a constant Psychological and Institutional Complex: This law is based on the assumption that the Psychological and Institutional complexes influencing consumption expenditure remain constant. Such complexes are income distribution, tastes, habits, social customs, price movements. Etc. in the short run, they do not change and consumption depends on income alone. The constancy of these complexes is the fundamental cause of the stable consumption function.
2. It Assumes the Existence of Normal Conditions: This law holds under normal conditions. If however the economy is faced with abnormal and extraordinary circumstances like, war or hyperinflation the law will not operate. People may spend the whole of increased income on consumption.
3. It Assumes the Existence of a Laissez-Faire Capitalist Economy: The law operates in a rich capitalist economy Where there is no government intervention. People should be free to spend increased income. in the case of regulation of private enterprise and consumption expenditures by the state , the law break down

Professor Kurihara opines that Keynes law based on this assumption may be regarded as a rough approximation to the actual macro behavior of free consumers in the normal short period.

III. DETERMINANTS OF CONSUMPTION/ PROPENSITY TO CONSUME:

J.M. Keynes divided the factors determining the propensity to come into two groups they are 1. Subjective factors 2. Objective factors which effect the consumption function of a community.

Subjective: Among the subjective factors are included those factors which induce and prompt people to save some part of income.

- People because they want to provide for unforeseen contingencies, such as illness, unemployment, accidents, etc.
- People are induced to save because they want to provide for the expected future needs such as education of the children, marriages of their children etc.
- Several people income Wish to save from their current income so that they may be able to use accumulated savings for investment which will increase their future income investments will bring

Them more income in the form of more profits and interest.

- People are motivated to save so that they can accumulate large wealth which will increase their social status. CbCBesides, several people are prompted to save for the sake of leaving a good fortune for their heirs and children.
- Many people save because of their miserly instinct and habits. The accumulation of more wealth gives them a great psychic satisfaction.

The above subjective factors increase the propensity to save and therefore reduce the propensity to consume. These subjective factors play a crucial role in determining the level and shape of the consumption. Function.

IV. OBJECTIVE FACTORS

1. PRICES: The general price level is an important factor which influences the consumption of a community. When the general prince level increases or, in other words, when inflation occurs, the consumption function shifts downward. This is because the rise in the general price level, real value (that is purchasing power) of people's money balances and financial assets with fixed monetary values declines. This causes a downward shift in the consumption function. This is called real balance effect. Similarly when the general price level falls real value of money balances and financial assets increases. This will induce people to consume relatively more out of their current income. This will cause an upward shift in the consumption function.

- 2. FISCAL POLICY: Fiscal policy of the government especially taxation policy affects the propensity to consume of the country. by levying excise duties, sales tax, the government can cut down the consumption and thereby increase savings of the community. When the government reduces taxes consumption of the people increases and this raises the propensity to consume. In the modern times, pursuing of the welfare state policy by the government under which progressive taxes have been levied on the rich people and the revenue obtained from them have been spent to provide many social security benefits and amenities to the poor people. Has tended to raise the consumption function.

3. RATE OF INTEREST: Rate of interest also affects the propensity to consume and save. It is generally believed that higher rate of interest induces the people to save more and this results in reducing their propensity to consume. But this is not true in the case of all the people. Some individuals are of such a type who wants a certain fixed income in the feature.

And when the rate of interest rises these individuals consume more and save less because with higher rate of interest, they can obtain the given fixed income with lesser savings. Therefore, when the rate of interest rises such individuals save less than before, thus it cannot be said with certainty whether with the changes in the rate of interest the propensity to consume of the whole community will change or not.

4 STOCKS OF WEALTH: The stock of wealth owned by the households in the economy is also an important factor that determines propensity to consume. In wealth we include not only real assets such as land, houses, automobiles but also financial assets such as cash balances, saving and fixed deposits with banks, stocks and bonds possessed by households in the economy. The greater is generally the propensity to consume.(i.e. the greater amounts of consumption out of any level of current income.)

The important motive of the people to save is to accumulate wealth. Generally speaking, the greater the wealth which people have accumulated. The weaker is the incentive to save fuether.in other words the other things remaining the same the increase in wealth generally causes an upward shift in the consumption function and decreases is wealth causes a downward shift in the consumption function.

5. CREDIT CONDITIONS AND CONSUMER INDEBTEDNESS: The availability of easy credit causes an increase in consumption function upward. It is now a common experience in India that in recent years lowering of lending interest rates by Indian

banks on loans for houses, cars, computers, and other durable consumer goods has greatly increased the consumption of the people and shifted consumption function upward.

On the other hand, tightening of credit produces an opposite effect that is causes a downward shift in the consumption function. Similarly, the level of consumer indebtedness also greatly effects the propensity to consume of the people. If the households are heavily indebted say 25 to 30 percent of their current they are committed to save to that extent so that they are able to pay their installments of the previous credit taken. Thus the greater the degree of indebtedness of households in the economy, the higher will be the consumption function curve and vice versa.

6 INCOME DISTRIBUTION: Lastly distribution of income in a society also determines the level of consumption. If national income is more unequally distributed the lower will be the propensity to consume. This is because propensity to consume of the rich is relatively less as compared to that of the poor. Therefore if inequalities in income distribution increase this reduces the consumption out of any given level of national income and thus causes a downward shift in the consumption function.

7. WINDFALL GAINS AND LOSSES: Unexpected changes in the stock market leading to gains or losses tend shift the consumption function upward or downward. For instance the phenomenal windfall gains due to the stock market boom in the American economy after 1925 led to a rise in the consumption spending of the stockholders by roughly in proportion to the increased income and as a result the consumption function shifted upward. Similarly unexpected losses in the stock market lead to the downward shifting of the C curve.

CHANGES IN THE WAGE LEVEL: If the wage rate rises, the consumption function shifts upward. The workers having a high propensity to consume spend more out of their increased income and this tend to shift the C curve upward. I f however the rise in the wage rate is accompanied by a more than proportionate rise in the price level, the real wage rate will fall and it will tend to shift the C curve downward. A cut on the wage rate will also reduce the consumption function of the community due to a fall in income, employment and output. This will shift the curve downward.

9. CHANGES IN EXPECTATIONS: Changes in future expectations also affect the propensity to consume. If a war is expected in the near future, people start hoarding durable and semi – durable commodities in anticipation of future scarcity and rising prices.

10. FINANCIAL POLICIES OF CORPORATIONS: Financial corporations with regard to income retention, dividend payments and reinvestments tend to affect the consumption function in several ways. If corporation keep more money in the form of reserves . dividend payments to shareholders will be less, this will have the affect of the reducing the income of the shareholders and the consumption function will shift downward.

11. HOLDING OF LIQUID ASSETS: The amount of liquid assets in the form of cash balances, savings and Government bonds in the hands of consumers also influence the consumption function. If people hold larger liquid assets they will have a tendency to spend more out of their current income and the propensity to consume will move upward and vice versa.

12. ATTITUDE TOWARD SAVING: The consumption function is also influenced by peoples attitude towards saving . if the value future consumption more than present consumption, they will tend to save more and the consumption will shift downward. This tendency may be reinforced by the state through compulsory life insurance schemes to keep the consumption function low. Ina high saving economy, the consumption function is low.

IMPORTANCE OF CONSUMPTION FUNCTION.

The concept of consumption function is greatly important both in theory and actual practice. To remove Unemployment and to control economic Fluctuations in the economy, it is very essential to adopt a proper macroeconomic policy. In the formation of such a policy, Understanding of the concept of propensity of consume is very essential. Therefore Prof.A.H. Hansen has remarked that consumption function is epoch-making contribution of Keynes to economic theory.

V. CONCLUSION

The consumption function remains a vital role in macroeconomics for understanding how households allocate their income between consumption and saving. It highlights the role of disposable income alongside factors such as expectations, wealth and credit conditions. In shaping consumer behavior. Through initially rooted in Keynesian theory modern perspectives like the lifecycle and permanent income hypothesis offer deeper insights into long-term consumption patterns despite its limitations, the consumption function continues to guide economic forecasting

and policy decisions particularly in assessing the impact of fiscal measures on aggregate demand. Ultimately it provides an essential framework for analyzing the dynamics of consumption in both a stable and fluctuating economic environment.

REFERENCES

[1] Permanent income, Current Income and Consumption. Campbell JY and NG Mankiw (1990)
[2] The Time series, Consumption function Revisited, Blinder AS and A Deaton (1985).
[3] A Theory of the Consumption Function, Princeton University Press, Princeton. Friedman M (1957)
[4] International Substitution in Consumption.Journal of Political Economy, Hall RE. (1988)
[5] Gali J 1990. Finite Horizons, Lifecycle savings and Time Series Evidence on Consumption. Journal of Monetary Economics.
[6] Google search