

# Keynesian Consumption Function

# What is 'Keynesian Economics'

**Keynesian** economics deals with the various theories about how in the short run, and especially during recessions, economic output influences employment, wage rate, price level, rate of interest, Government spending and all the related macro indicators.

It can be stated as an economic theory of total spending in the economy and its effects on output and inflation.

Keynesian economics was developed by the British economist John Maynard Keynes during the 1930s in an attempt to understand the Great Depression. Keynes advocated increased government expenditures and lower taxes to stimulate demand and pull the global economy out of the Depression. Subsequently, the term “Keynesian economics” was used to refer to the concept that optimal economic performance can be achieved and economic slumps can be prevented by influencing aggregate demand through activist stabilization and economic intervention policies by the government. Keynesian economics is considered to be a “demand-side” theory that focuses on changes in the economy over the short run.

**Prior to Keynesian economics, classical economic thinking held that cyclical swings in employment and economic output would be modest and self-adjusting. According to this classical theory, if aggregate demand in the economy fell, the resulting weakness in production and jobs would precipitate a decline in prices and wages. A lower level of inflation and wages would induce employers to make capital investments and employ more people, stimulating employment and restoring economic growth.**

## Now what was wrong about Classical Economics?

The basic concept of Classical Economics depended on “Says Law”, which states that Supply Creates its own demand. It implies that whatever will be supplied in the economy will be demanded. Here lies the fault. Supply cannot control the whole economy. Say for example, classical economists believed that the total labour supply in the economy will get employment, which will influence the real wage rate and the output of the economy. It was believed that there cannot be any unemployment problem as the supply function controls the whole economy. Whatever labour is supplied, it will be demanded. That is the total labour supply in the economy will get employment. The flexibility of the real wage will clear out the excess supply of labour. During the great depression of 1930s, it was sincerely felt that this cannot be the fact. When the effective demand lacks, the whole economy crashes down like a catastrophe. Labour demand falls and severe unemployment can break out. Therefore, it was felt that demand is the controlling factor of the economy. And Keynes came out with his new idea of effective demand, monetary illusion of wage rate, consumption function, investment multiplier, etc. Keynesian economics is strongly influenced by aggregate demand (total spending in the economy). The central point of this idea is the definition of the aggregate consumption function of the economy. This was the first idea of a consumption function and till now, which is very relevant. Later different economists came out with their ideas of consumption function but they can be termed as different editions of the Keynesian Consumption Function.

## Why Keynesian Economics?

The most basic principle of Keynesian economics is that if an economy's investment exceeds its savings, it will cause inflation. Conversely, if an economy's saving is higher than its investment, it will cause a recession. This was the basis of Keynes belief that an increase in spending would, in fact, decrease unemployment and help economic recovery. Keynesian economics also advocates that it's actually demand that drives production and not supply. In Keynes time, the opposite was believed to be true.

With this in mind, Keynesian economics argues that economies are boosted when there is a healthy amount of output driven by sufficient amounts of economic expenditures. Keynes believed that unemployment was caused by a lack of expenditures within an economy, which decreased aggregate demand. Continuous decreases in spending during a recession result in further decreases in demand, which in turn incites higher unemployment rates, which results in even less spending as the amount of unemployed people increases.

Keynes advocated that the best way to pull an economy out of a recession is for the government to borrow money and increase demand by infusing the economy with capital to spend. This means that Keynesian economics is a sharp contrast to laissez-faire in that it believes in government intervention.

John Maynard Keynes was a 20th-century British philosopher and economist who spent his working years with the East India Company and is known as the father of Keynesian economics. He is specifically known for his theories of Keynesian economics that addressed, among other things, the causes of long-term unemployment. In a paper titled "The General Theory of Employment, Interest and Money," Keynes became an outspoken proponent of full employment and government intervention as a way to stop economic recession.

❖ He is regarded as the founder of macroeconomics. He introduced Keynesian principles to the world that created a revolution in economic thinking with its unconventional approach. It challenged classical economics and brought to the forefront the importance of state intervention to moderate the economic activity of the country and control the 'boom' and 'bust' phases. His 1936 book 'The General Theory of Unemployment, Interest and Money' was path-breaking in terms of content.

❖ Through his book, he argued that full employment could be maintained only with the help of government spending and that it could not always be reached by making wages sufficiently low.

❖ He believed that unemployment is basically caused if people don't spend enough money. Lower spending results in demand falling further and a vicious circle commences which leads to job losses and a further fall in spending.

❖ Keynes' solution to the problem was that governments should borrow money and boost demand by pushing the money into the economy. Once the economy has recovered and is expanding, governments should pay back the loans.

❖ Keynes was also responsible for the foundation of the International Monetary Fund (IMF) and World Bank (WB). Till date, he is best remembered as one of the world's most influential economists of all time

**John Maynard Keynes was born in 1883 and grew up to be an economist, journalist and financier in Cambridge to economist father John Neville Keynes and social reformer mother Florence Ada Keynes. Keynes' father was an advocate of laissez-faire economics, and during his time at Cambridge, Keynes himself was a conventional believer in the principles of the free market. However, Keynes became comparatively more radical later in life and began advocating for government intervention as a way to curb unemployment and resulting recessions. He argued that a government jobs program, increased government spending, and an increase in the budget deficit would decrease high unemployment rates**

# Principles of Keynesian Economics

- ❖ Given the aggregate supply, the level of income or employment is determined by the level of aggregate demand; the greater the aggregate demand, the greater the level of income and employment and vice versa.
- ❖ Keynes was not interested in the factors determining the aggregate supply since he was concerned with the short run and the existing productive capacity. We will also not explain in detail the factors which determine the aggregate supply and will confine ourselves to explaining the determinants of aggregate demand.
- ❖ Aggregate demand consists of two parts—consumption demand and investment demand. In this article we will explain the consumption demand and the factors on which it depends and how it changes over a period of time. Consumption demand depends upon the level of income and the propensity to consume. We shall explain below the meaning of the consumption function and the factors on which it depends.

## **The Concept of Consumption Function:**

- As the demand for a good depends upon its price, similarly consumption of a community depends upon the level of income. In other words, consumption is a function of income. The consumption function relates the amount of consumption to the level of income. When the income of a community rises, consumption also rises.
- How much consumption rises in response to a given increase in income depends upon the marginal propensity to consume. It should be borne in mind that the consumption function is the whole schedule which describes the amounts of consumption at various levels of income.
- 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 the rate of interest may have some influence on 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.
- 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. Here, we are considering a straight line consumption function and so the MPC is constant for all income level.

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 or the output produced in the economy. 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.

- ❑ Now we have to know, what is APC and MPC. APC implies Average Propensity to Consume and MPC implies Marginal Propensity to Consume .
- ❑ Average Propensity to consume is the average calculation . That is how much does a society consume out of income on an average. And the Marginal Propensity to Consume calculates how much additional change is incurred in a society for a small increase in income.

**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 on consumption defined as  $C/Y$  should be decreasing as income increases. From the relation between marginal and average we know that, when average falls, 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.
- (5) There is an autonomous part of consumption, which does not depend on income. In Keynesian consumption function, this can be defined as subsistence level of consumption and denoted by “a”. This level of consumption of an economy does not depend on the level of real income or output and is required for bare subsistence. This “a” level of income is afforded by savings or borrowings at an aggregate level.

These five 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  $45^\circ$  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 assumption that MPC is greater than zero but lesser than 1 is itself a historic assumption as this assumption says that all the increase in income will not be demanded for consumption. Therefore, the total supply in the economy will never be realized by effective demand and a gap will exist between demand and supply.

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

- a) It represents a stable relationship between C and Y.
- b) The slope of the line PQ represents the marginal propensity to consume (MPC) which has a positive slope. Again the consumption function cuts the  $45^\circ$  line from above. This means consumption function (PQ) is flatter than the  $45^\circ$  line and its slope is less than  $45^\circ$  line. The slope of PQ = MPC and the slope of the  $45^\circ$  line =  $\tan 45^\circ = 1$ . Thus, it satisfies the second characteristic that  $0 < MPC < 1$ .
- c) 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,  $APC = C/Y = OP/O = \infty$ .

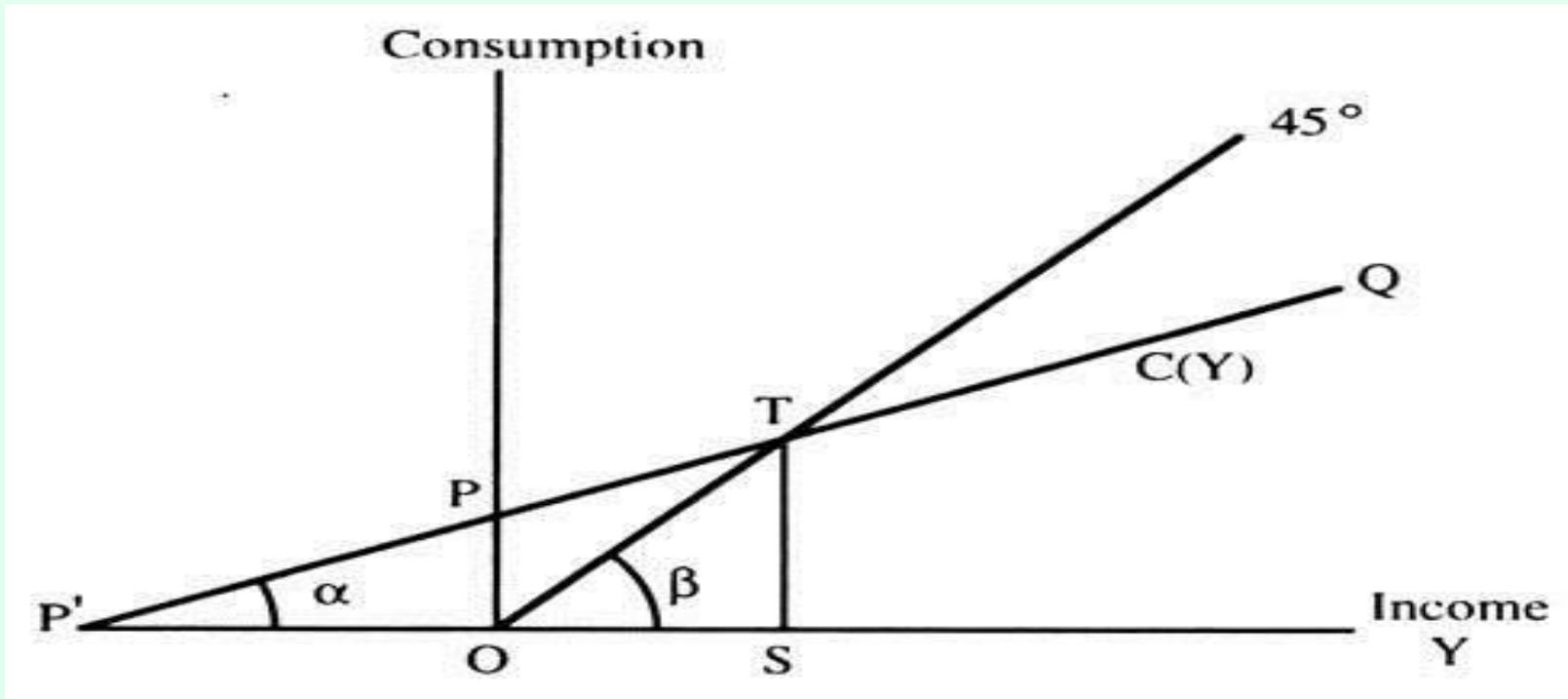
It means at point P, the APC is infinity ( $\infty$ ). Again consider the point T where consumption is TS and income is OS, so that,  $APC = TS/OS = \text{slope of OT} = 1$ . Thus, APC at point T is one. The APC at any point on the consumption function is slope of the line joining that point with the origin. To the left of T, the APC is greater than one and to the right of T, APC 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.

- i. At low incomes, people will spend a high proportion of their income. The average propensity to consume could be one or greater than one. This means people spend everything they have. When you have low income, you don't have the luxury of being able to save. You need to spend everything you have on essentials.
- ii. However, as incomes rise, people can afford the luxury of saving a higher proportion of their income. Therefore, as income rise, spending increases at a lower rate than disposable income. People with high incomes have a lower average propensity to spend.

- d) 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 will decrease as income increases, if the consumption function is 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  $APC = C/Y = a/Y + dc/dY = MPC + x$ .  $\therefore APC > MPC$ .
- e) Fifthly, the consumption function has a positive intercept ( $a$ ), which does not depend upon the level of income or output and can be

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.



### Simple Keynesian Consumption Function

The **consumption function**, or **Keynesian consumption function**, is an economic formula representing the **functional** relationship between total **consumption** and real national income.

Where  $C$  = Aggregate Consumption of the economy .  $b$  = Marginal propensity to **consume**.  
 $Y$  = Real income or the total output.

- In Keynesian economics, we will see that this marginal propensity to consume denoted by “ $b$ ” plays a vital role in income determination and thus employment.
- Consumption demand depends on income and propensity to consume. Propensity to consume depends on various factors such as price level, interest rate, stock of wealth and several subjective factors. Since Keynes was concerned with short-run consumption function he assumed price level, interest rate, stock of wealth etc. constant in his theory of consumption. Thus with these factors being assumed constant in the short run, Keynesian consumption function considers consumption as a function of income. Thus  $C = f(Y)$
- **In a specific form, Keynesian function can be written as:**  
 $C = a + f(Y)$

Which is popularly represented by Keynes as  $C = a + bY$

Where  $a$  and  $b$  are constants. While  $a$  is intercept term of the consumption function,  $b$  stands for the slope of the consumption function and therefore represents marginal propensity to consume.