⊛ Keynesian Consumption Functions:

The concept of consumption function plays an important role in Keynes' theory of income and employment. According to Keynes, of all the factors it is the current level of income that determines the consumption of an individual and also of society. Keynes laid stress on the absolute size of current income as a determinant of consumption, for which his theory of consumption is also known as absolute income theory of consumption.

The Keynes' consumption function can be expressed in the following →

$$C = a + bY_d$$

where,

C = consumption expenditure.

Y_d = the real income
a = The constant parameter which reflects autonomous consumption.
b = MPC (Marginal propensity to consume) $\Delta C / \Delta Y$.

the Keynesian concept of consumption function stems from the fundamental psychological law of consumption which states that there is a common tendency for people to spend more on consumption when income increases, but not to the same extent as the rise in income because a part of the income is also saved.

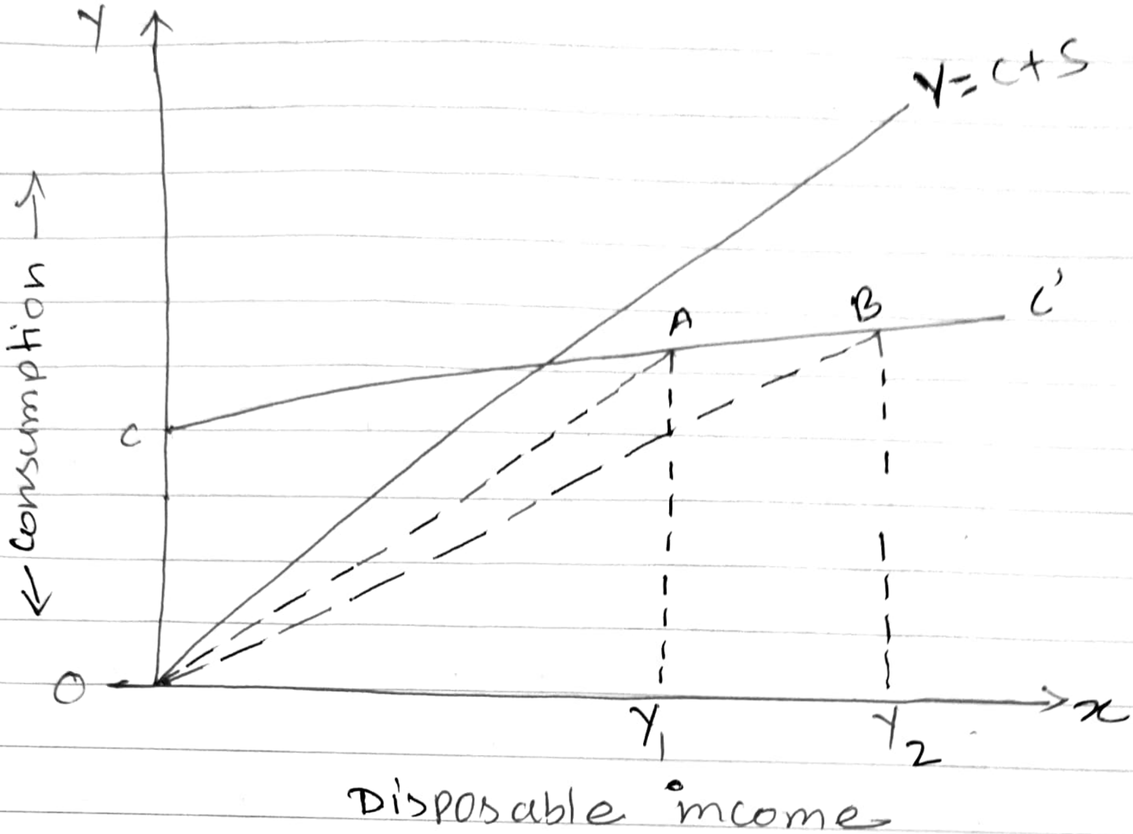
- The fundamental psychological law of consumption is based on three propositions with respect to consumption behaviour.

① When the total income increases, the consumption Expenditure of the Community will also increase, but less proportionately. MPC is less than one but greater than zero ($\therefore$ $1 > MPC > 0$).

② An increment of income will be divided in some ratio between saving and consumption.

③ An increase in income will, thus, lead to an increase in both consumption and savings.

Explain with the help of diagram :



In above fig, we have shown a linear consumption function with an intercept term. In this form of linear consumption function, though marginal propensity to consume ($\Delta C/\Delta Y$) in constant, average propensity to consume is declining with the increase in income as indicated by the slope of the lines OA and OB at levels of income Y_1 and Y_2 respectively. The straight line OB drawn from the origin indicating average propensity to consume at higher income level Y_2 has a relatively less slope than the straight line OA drawn from the origin ~~A~~ to point A at lower income level Y_1.

The decline in average propensity to consume as the income increases implies that the proportion of income that is saved increases with the increase in national income of the country. The fraction of income spent on consumption by rich families is lower than that of the poor families.

* Irving Fisher and Intertemporal choice

Keynes' absolute income hypothesis refers to the current consumption depends only on current income. Irving Fisher argues that current consumption depends on lifetime income. According to him, time of income is irrelevant as the consumer can borrow or lend between periods. On the basis of this argument, Irving Fisher developed a model to analyse how rational, forward looking consumers make consumption choices over a period of time.

Assumptions:

(I) Consumer is forward-looking and choices consumption for the present and future to maximize lifetime satisfaction.

(II) Consumers choices are subject to an intemporal budget constraint a measure of the resources available for present and future consumption.

In the above assumption, Fisher's Model of intertemporal choice illustrate the following three things:

① the Budget constraints faced by consumers.
② the preferences between current and future consumption.
③ How constraints and preferences ~~cons~~ Jointly determine consumer's decision regarding optimal consumption and saving over an Extended period of time.

* <u>The Intertemporal Budget constraint</u>:

Rational Individuals always prefer to increase the quantity or quality of the goods and services they consume. However, most people cannot consume as much as they like due to limited income called budget constraint. Let us assume that our representative consumer lives for two periods:

(a) period-1 represent consumer's youth life.
(b) period-2 represent consumer's old age.

Consumer's income and consumption in the two periods are Y_1 and C_1 and Y_2 and C_2, respectively.

• In the 1st period, Saving (S) is the difference between income and consumption is Expressed :

$$S = Y_1 - C_1 \quad \cdots\cdots \quad (i)$$

In the 2nd period consumption equals the accumulated Saving (which includes the interest (r) earned on that Saving) plus Second-period income which is expressed as —

$$C_2 = (1+r)S + Y_2 \quad \cdots\cdots \quad (2)$$

<u>Deriving the Budget constraint</u> :

We can now derive the consumer's budget constraint by combining equations (i) and (2)

If we substitute the first eqn for S into the second eqn we get —

$$C_2 = (1+r)(Y_1 - C_1) + Y_2$$

$$C_2 = Y_1 + Y_1 r - C_1 - C_1 r + Y_2$$

$$C_2 + C_1 + C_1 r = Y_1 + Y_1 r + Y_2$$

$$C_2 + (1+r)C_1 = (1+r)Y_1 + Y_2 \quad \cdots\cdots \quad (iii)$$

By dividing both sides of eqn (3) by $1+r$ we get :

$$C_2 + \frac{\cancel{(1+r)}C_1}{\cancel{(1+r)}} = \frac{\cancel{(1+r)}Y_1 + Y_2}{\cancel{(1+r)}} \quad \cdots \quad (4)$$

$$\boxed{C_2 + C_1 = Y_1 + Y_2}$$

In the above eqn (4) relates consumption in two periods to income in both the periods, it Expresses the consumer's Standard Intertemporal budget constraint.

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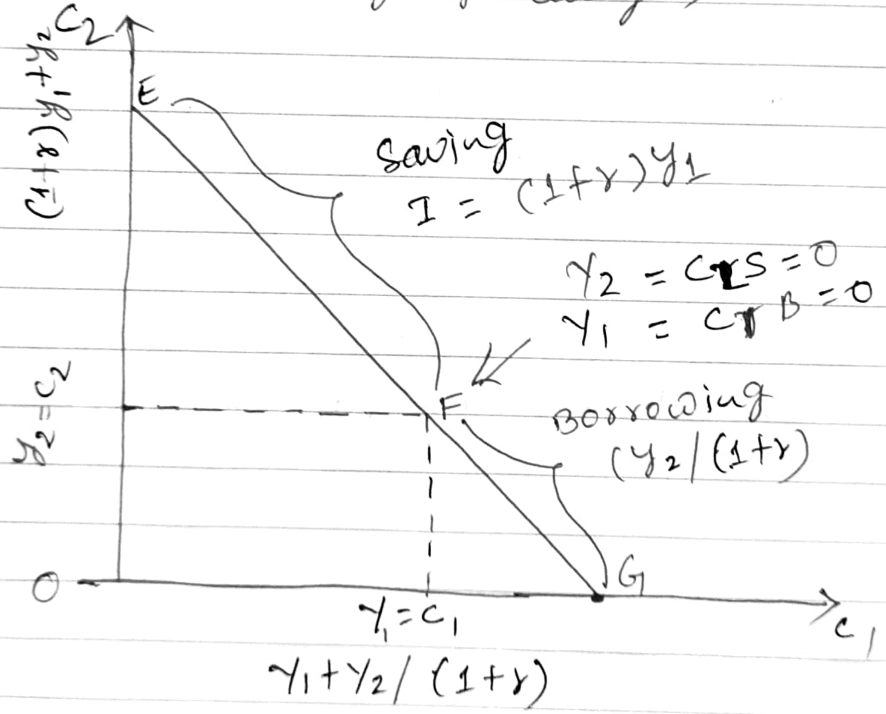
As shown in eqn (4) if $r = 0$, then $C_1 + C_2 = Y_1 + Y_2$, i.e total consumption in the two periods equals total income in the two periods. But if $r > 0$, the future consumption - C_2 and future income - Y_2 are to be discounted by a factor $1+r$ as $1/(1+r)$. the discount factor $1/(1+r)$ measures how much period-1 consumption has to be sacrificed in order to consume 1 unit in period-2.

- Consumer's temporal Budget constraint can be shown graphically ->



The above fig. shows the alternative combinations of period-1 and period-2 consumption the consumer can choose. It is clear from the above figure that —

① if the consumer point **F**, he consumes his entire income both the periods $Y_1 = C_1$, and $y_2 = c_2$, Saving (S) = 0, Borrowing (B) = 0

(2) At point E, $c_1 = 0$ and $y_1 = S$. Therefore, $c_2 = (1+r)y_1 + y_2$. Thus if he chooses points between E and F, he consumes less than his income in period-1 and saves the rest for period-2.

(3) At point G, $c_2 = 0$. This means that the consumer borrows the maximum possible amount against Y_2. This means that c_1 is $Y_1 + Y_2/(1+r)$. Thus if he chooses any point between F and G.

(4) Various other points on the budget line EFG are attainable points.