Unit II
Consumption Function
Lesson 1

Introduction:

One of the significant contributions by J M Keynes was a thorough analysis of income consumption relationship. In his seminal work, The General Theory, Prof. Keynes analysed the consumption behaviour with reference to change income.

Consumption function is the mathematical model of Income-Consumption relationship which is depicted below. According to Keynes consumption is determined by current disposable income with the consumers. It is assumed that no other factors other than current disposable income have any impact on consumption behaviour.

$$C = f(Y)$$

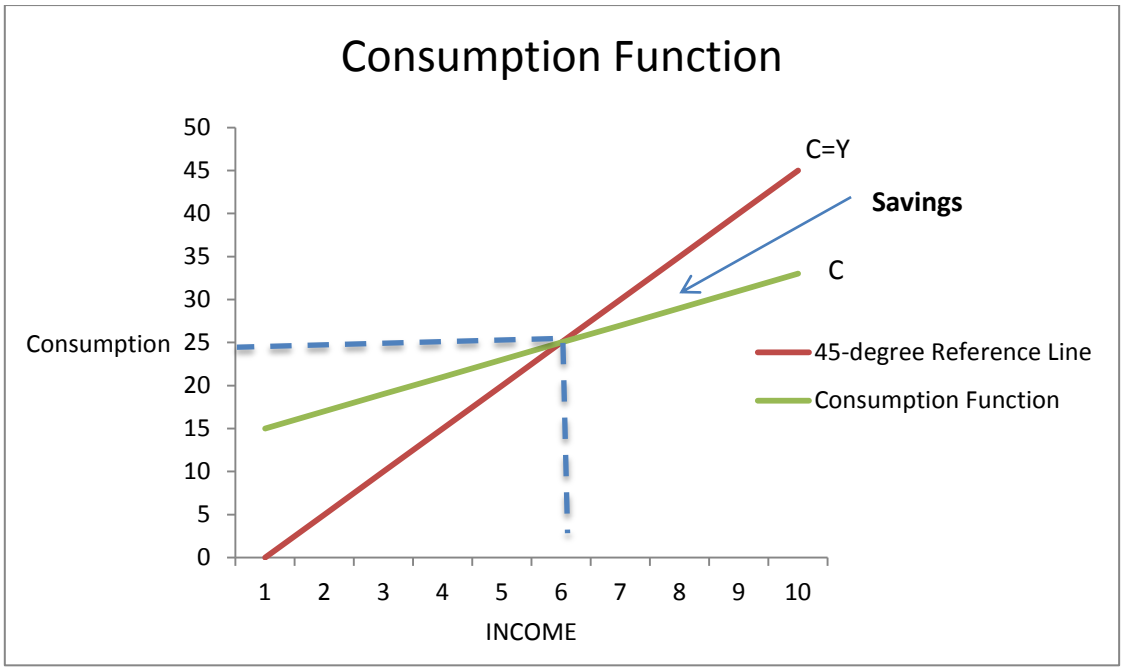
Following table gives an idea of consumption behaviour with reference to change income.

Income (Y) (, 000 Rs.)	Consumption (C)
0	110
130	150
190	190
250	230
310	270
370	310

Two important observations are highlighted in the given table. Consumption behaviour is positive even if the income is zero. This is on account of the reason that consumption at the most basic level is of the nature of subsistence. So consumer shall still be consuming even if his income zero because of survival needs. This type of consumption is called **Autonomous Consumption**. We can see in the table that consumption is increasing with increase in income. Increase in consumption due to increase in income is described as **Induced Consumption**. Induced consumption is directly dependent on the level of income of the society, but Autonomous consumption is not dependent on the level of income of the society. There is a point where consumption expenditure is equal to income. Beyond this point consumption expenditure is also increasing but not the whole income is spent on consumption. This income-consumption gap beyond equality of income-consumption point is **Savings** by the consumer.

This unique consumption behaviour, according to Keynes, is determined by **Marginal Propensity to Consume (MPC)**. MPC is described as the tendency to consume given the change in income. MPC is always greater than zero and less than 1. MPC at 0 indicates that

whole of income is saved and there is no consumption expenditure. MPC at 1 indicates that whole of income is spent on consumption expenditure.
Following diagram depicts the behaviour of consumption with reference to change in income. 45-degree reference line is indicating equality of consumption and income at every point of the slope (C=Y). Consumption function indicates the Autonomous Consumption and Induced Consumption. Consumption is more than the income below the intersection point and less than the income beyond the intersection point. The Slope of Consumption function is determined by MPC.



Properties of Consumption Function:

On a deeper analysis, we can find two technical attributes of consumption function, i.e.

- **Average Propensity to Consume, and**
- **Marginal** Propensity to Consume.

Average Propensity to Consume: - this refers to total consumption at a given level of income. Mathematically, APC is the ratio of Consumption and Income at a given point (C/Y). Diagrammatically, APC declines as income increases because proportion of income spent on consumption decreases with increase in income. Average Propensity to Save is the other side of APC. APS is (1-APC)

Marginal Propensity to Consume: - this refers to change in consumption due to change in income. MPC is the ration of change in consumption with reference to change in income ($\Delta C/\Delta Y$). MPC determines the slope of consumption function. Marginal Propensity to Save is the other side of MPC. MPS is (1-MPC). Normally,

0 < MPC <1

MPC < APC

Following table depicts the behaviour of APC and MPC.

Income (Y)	Consumption (C)	C/Y = APC	ΔC/ΔY = MPC
190	190	190/190 = 1	-
250	230	230/250 = 0.92	40/60 = 0.67
310	270	270/310 = 0.87	40/60 = 0.67
370	310	310/370 = 0.84	40/60 = 0.67
430	350	350/430 = 0.81	40/60 = 0.67
490	390	390/490 = 0.79	40/60 = 0.67

It is clear from the table that Average Propensity to Consume is declining with increase in income and Marginal Propensity to Consume is Constant. Further MPC is less than APC. It has been empirically observed that MPC in real life situation declines with increase in income and MPC increases with decrease in income of the society. Means, MPC approaches 0 with increase in income and it approaches 1 with decrease in income. With increase in income APC declines but slower than MPC. With decrease in income MPC increases but faster than APC. It has further been observed empirically that MPC almost equals to APC in long run.

Keynesian economics has given prominence to Marginal Propensity to Consume for variety of reasons. MPC, according to Keynes, explains the general overproduction and unemployment in society. It also explains the relative stability of highly developed economies.

Psychological Law of Consumption

The fundamental to consumption function is the Psychological Law of Consumption propounded by Keynes. The law states that there is general tendency among people to spend less than the full increment in income. In other words, proportionate increase in consumption expenditure is less than the proportionate increase in income by the consumers. Keynes defined Psychological Law as **"The fundamental psychological law, upon which we are entitled to depend with great confidence both a priori from our knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on the average, to increase their consumption as their income increases but not by as much as the increase in the income."** Following interpretations of law explain the psychological phenomenon clearly:

- Consumption increases with increase in income,
- A part of increase income is saved, thereby
- Proportionate increase in consumption is always less than increase in income.

This clearly means that Marginal Propensity to Consume and Marginal Propensity to Save shall be greater than zero but less than unity. Hence,

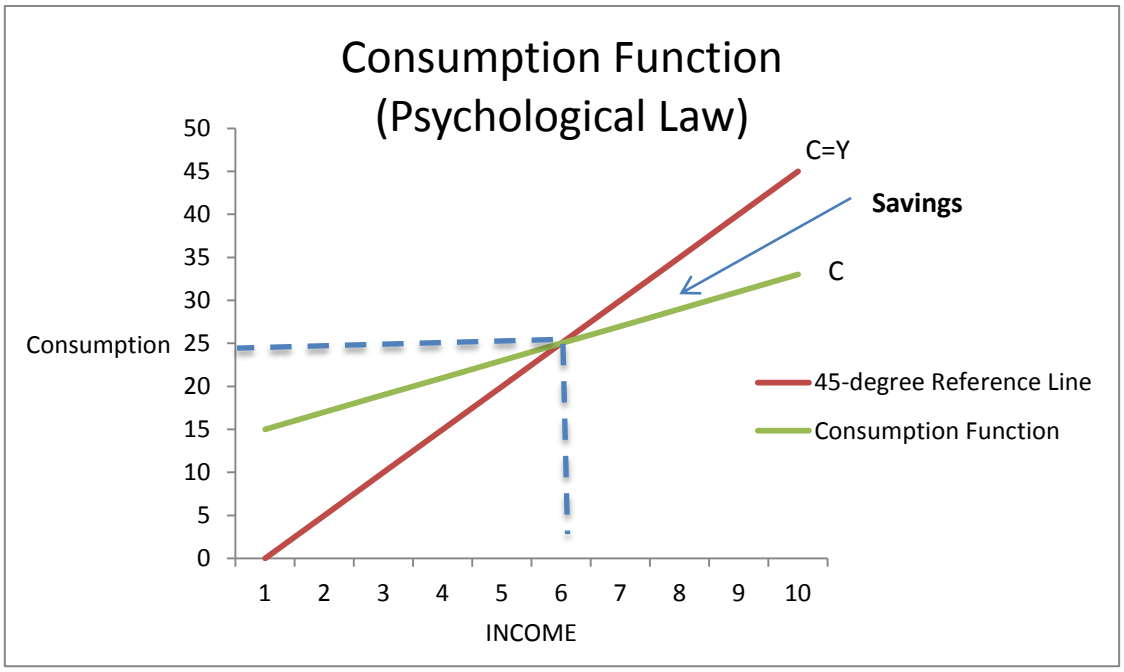
MPC + MPS = 1

Psychological Law is helpful in

- Understanding the mechanism of Marginal Propensity to Consume. It is because of this law that there is tendency to save when income increases.

- Explain the leakages in circular flow of income and expenditure.

The following diagram of consumption function is corollary to Psychological law of Consumption.



Assumptions of Psychological Law of Consumptions

The fundamental Psychological Law assumes:

- **Laissez faire Economy**: The law operates only in open free economy. Free from any government interference. Consumers must be free to spend and save on their own. This law breaks down in socialist controlled economy where there is normally spending and saving behaviour is controlled and directed by government.

- **Normal Condition in the Economy**: The law assumes that normal condition is prevailing in the economy. There should not be any fear relating to abnormal market behaviour due to war, revolution, shocks etc. This kind of fear makes an impact over MPC and MPS and the law will become invalidated.

- **Psychological and institutional complex should remain same**: The law assumes that other than change in income there should not be change in other economic variables like population, taste, habit, prices etc.

Factors determining Consumption Function – The Motives

J M Keynes identified two broad factors that influence consumption and saving behaviour. According to him, individuals tend to save part of their increased income on account of:

- **Subjective Factors**: factors that is purely internal and largely unpredictable. This is because of behavioural dimension to consumption and savings.

- **Objective Factors**: these are factors that are out in the economy, visible and largely predictable.

Subjective Factors

There are, in general, eight main motives or objects of a subjective character which lead individuals to refrain from spending out of their incomes:

(i) To build up a reserve against unforeseen contingencies;

(ii) To provide for an anticipated future relation between the income and the needs of the individual or his family different from that which exists in the present, as, for example, in relation to old age, family education, or the maintenance of dependents;

(iii) To enjoy interest and appreciation, *i.e.* because a larger real consumption at a later date is preferred to a smaller immediate consumption;

(iv) To enjoy a gradually increasing expenditure, since it gratifies a common instinct to look forward to a gradually improving standard of life rather than the contrary, even though the capacity for enjoyment may be diminishing;

(v) To enjoy a sense of independence and the power to do things, though without a clear idea or definite intention of specific action;

(vi) To secure a *masse de manoeuvre* to carry out speculative or business projects;

(vii) To bequeath a fortune;

(viii) To satisfy pure miserliness, *i.e.* unreasonable but insistent inhibitions against acts of expenditure as such.

These eight motives might be called the motives of Precaution, Foresight, Calculation, Improvement, Independence, Enterprise, Pride and Avarice; and we could also draw up a corresponding list of motives to consumption such as Enjoyment, Short-sightedness, Generosity, Miscalculation, Ostentation and Extravagance.

Business Motives

(i) The motive of enterprise — to secure resources to carry out further capital investment without incurring debt or raising further capital on the market;

(ii) The motive of liquidity — to secure liquid resources to meet emergencies, difficulties and depressions;

(iii) The motive of improvement — to secure a gradually increasing income, which, incidentally, will protect the management from criticism, since increasing income due to accumulation is seldom distinguished from increasing income due to efficiency;

(iv) The motive of financial prudence and the anxiety to be "on the right side" by making a financial provision in excess of user and supplementary cost, so as to discharge debt and write off the cost of assets ahead of, rather than behind, the actual rate of wastage and obsolescence, the strength of this motive mainly depending on the quantity and character of the capital equipment and the rate of technical change.

Corresponding to these motives which favour the withholding of a part of income from consumption, there are also operative at times motives which lead to an excess of consumption over income. Several of the motives towards positive saving catalogued above as affecting individuals have their intended counterpart in negative saving at a later date, as, for example, with saving to provide for family needs or old age. Unemployment relief financed by borrowing is best regarded as negative saving.

Objective Factors:

The principal objective factors which influence the propensity to consume appear to be the following:

(1) A *change in the wage-unit*. — Consumption (C) is obviously much more a function of (in some sense) real income than of money-income. In a given state of technique and tastes and of social conditions determining the distribution of income, a man's real income will rise and

fall with the amount of his command over labour-units, *i.e.* with the amount of his income measured in wage-units; though when the aggregate volume of output changes, his real income will (owing to the operation of decreasing returns) rise less than in proportion to his income measured in wage-units.

(2) *A change in the difference between income and net income*. We have shown above that the amount of consumption depends on net income rather than on income, since it is, by definition, his net income that a man has primarily in mind when he is deciding his scale of consumption. In a given situation there may be a somewhat stable relationship between the two, in the sense that there will be a function uniquely relating different levels of income to the corresponding levels of net income

(3) *Windfall changes in capital-values not allowed for in calculating net income*. — These are of much more importance in modifying the propensity to consume, since they will bear no stable or regular relationship to the amount of income.

(5) *Changes in fiscal policy*. — In so far as the inducement to the individual to save depends on the future return which he expects, it clearly depends not only on the rate of interest but on the fiscal policy of the Government.

(6) *Changes in expectations of the relation between the present and the future level of income*. — We must catalogue this factor for the sake of formal completeness. But, whilst it may affect considerably a particular individual's propensity to consume, it is likely to average out for the community as a whole. Moreover, it is a matter about which there is, as a rule, too much uncertainty for it to exert much influence.

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Note

Absolute Income Hypothesis

The consumption behaviour, developed by J M Keynes, as explained above is based on the premise that current disposable income plays the dominant role in determining MPC. No other factors have any role in influencing consumption behaviour. Other economic variables have been assumed to be constant. Economists have termed this as **Absolute Income Hypothesis.**

Other Theories on Consumption Behaviour

Relative Income Hypothesis:

Developed by James Duesenberry, the **relative income hypothesis** offers two main determinants of consumption behaviour. These are:

- **Demonstration Effect**: it states that individual's attitude to consumption and saving is dictated more by his income in relation to others than by abstract standard of living. So an individual is less concerned with absolute level of consumption than by relative levels. The percentage of income consumed by an individual depends on his percentile position within the income distribution.

- **Past Peak of Income:** Secondly it hypothesises that the present consumption is not influenced merely by present levels of absolute and relative income, but also by levels of consumption attained in previous period. It is difficult for a family to reduce a level of consumption once attained. The aggregate ratio of consumption to income is assumed to depend on the level of present income relative to past peak income.

Permanent Income Hypothesis

Developed by Milton Friedman, the **Permanent Income Hypothesis** postulates that consumers behave rationally. According to this theory, income has two components, **permanent** and **transitory (temporary). The Hypothesis** states that consumption behaviour is influenced by permanent component of income not by temporary component of income.

Life Cycle Hypothesis

Developed by Franco Modigliani, the **Life Cycle Hypothesis** states that all individuals choose to maintain a stable life style. In order to do so they plan their consumption and savings behaviour over a long term and try to even out their consumption pattern over their entire lifetime.

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