

Chapter 7

Consumption Function

We studied in the previous chapters about consumption forming the very basis of effective demand, output and employment. Keynes, in his theory of income and employment has devised some valuable tools of analysis in which 'consumption function' is one. In this chapter, we shall study the importance of consumption expenditure and the factors that determine consumption, in national income analysis.

The importance of consumption is very well known to us. It is for this that various activities are carried on in the economy. The major part of our income is made use of in consumption expenditure. Though investment expenditure may be nil in a community, consumption expenditure cannot fall to zero as we have to consume to live.

The important single determining factor in consumption is income. In a general sense, the greater the disposable income, the larger will be the consumption expenditure. Though consumption expenditure depends on income, it need not be equal to it.

Keynes' Psychological Law of Consumption

Keynes has enunciated the psychological law of consumption to explain the relationship between personal income and personal consumption. This is only a statement of common experience that the increase in income will lead to increase in consumption, but the latter will not be as fast as that of the former. Keynes states, "The psychology of the community is such that when aggregate real income is increased, aggregate consumption is increased, but not by so much as income."¹ Keynes cited the law as follows: "The fundamental psychological law, upon which we are entitled to depend with great confidence both a *priori* from our knowledge of human nature and 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 their

¹ J.M. Keynes, *The General Theory of Employment, Interest and Money* (London) 1936 p. 27.

income. This law of Keynes has come to be known as Propensity to consume or Consumption function in macro economics.

The psychological law of consumption is based on three assumptions: (i) the spending habits of people do not change; (ii) when income changes, other variables like income distribution, price level, population, etc., remain unchanged. There is no abnormal condition like war or hyper-inflation in the economy and (iii) there is no interference of government, controlling the consumption of the people.

The law consists of three propositions: (i) When aggregate income increases, the expenditure also increases but the expenditure increases in smaller proportions. The reason is that as the income increases the urgent wants are satisfied and afterwards the consumer is not very eager to spend his extra income; (ii) Secondly, as income increases, the extra income is divided between spending and saving, more go in the latter. This is only the result of the previous proposition. What is not spent is saved; when spending becomes less and less savings become larger and larger; (iii) Thirdly, as income increases, both spending and savings go up.

The assumptions and propositions in the law are not imaginary or unreal. These are practical assumptions and inferences. Keynes' psychological law of consumption is a reflection of the macro behaviour of free consumers.

Significance of Keynes' Law of Consumption

Keynes' Psychological Law of Consumption, otherwise called The Consumption Function (a term coined by Keynes) is a brilliant tool of analysis discovered by Keynes. It has very valuable practical significance and implications.

(1) **Investment** : This tool helps in making vital decisions on investment. Since the law says that there will be a gap between income and consumption as income increases, the widening gap has to be filled in by means of investment to maintain the income of the economy. If adequate investment is not forthcoming, the effective demand will shrink and ultimately the economy would meet with recession and depression. So, this law throws light on investment decisions.

(2) **Repudiation of Say's Law** : The law of Consumption of Keynes completely repudiates the law of markets. Since the consumption grows at a slower pace than income, 'every supply finding its own demand' is only a myth and a general overproduction and unemployment can occur in the economy.

(3) **Need for Intervention** : In the free *laissez-faire* economy, there is no automatic adjusting mechanism to ensure the circular flow of income and expenditure as the entire income is not spent. This repudiates

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the *laissez-faire* doctrine and asserts the need for government intervention to keep the effective demand at a higher level. Similarly, in rich countries there will be an over-saving gap. All these have to be set right only by means of government's intervention.

(4) **Under-employment Equilibrium** : From the law of Keynes, the inference that economy will be in under-employment equilibrium is implicit. Full employment equilibrium could be attained only if investment happens to be equal to the gap between aggregate income corresponding to full employment and aggregate consumption expenditure out of that income. But in practice, typical investment demand would not be adequate to bridge the gap between income at full employment level and consumption. The aggregate demand and aggregate supply would meet at a point less than full employment. Again it is a repudiation of the classical full employment equilibrium and the assertion of under-employment equilibrium.

(5) **Secular Stagnation** : When the income increases, the consumption expenditure lags behind. Consequently, the investment demand becomes weaker. If this condition persists and enlarges, a stage will be reached when the consumption will become poorer and poorer with no outlet for the savings. Such a condition is called secular stagnation. This can be avoided only by increasing consumption and effective demand.

(6) **Turning points in Trade Cycle** : Finally, the law of Keynes is helpful in explaining the turning point in trade cycle. Before Keynes' publication of his *General Theory*, many theories tried to explain the causes that created the turning points in a trade cycle. All these were not satisfactory. Keynes' concept of a stable consumption function offers good explanation. When the business cycle reaches the highest point, consumption does not increase correspondingly to income and the downward swing starts. Similarly, when the cycle reaches the lowest point, income has declined, but consumption does not change or decline to the extent of decline in income, the upward swing starts.

Thus, Keynes' Psychological Law has immense significance and implications.

CONSUMPTION FUNCTION

What is meant by Consumption Function? This is a tool in the Keynesian analysis which establishes the relationship between income and expenditure. The consumption expenditures of the community are determined by the community's level of disposable income. The schedule that relates *consumption* to *disposable income* is called the Consumption Function. This is also called the Propensity to Consume. It is a schedule of intended consumption.

The consumption function is the relationship Y (income) and C (consumption) which can be represented as $C = f(Y)$. At various levels of

income, there will be corresponding levels of consumption and saving measured by the average and the marginal propensities to consume.

Average and Marginal Propensities to Consume

Average propensity to consume refers to the total amount of consumption expenditure out of the given total income at a particular period. Marginal propensity to consume is the incremental change in additional consumption as a result of a given increment in income. It refers to the average propensity to consume out of a given additional income. In short, the marginal propensity to consume is the rate of consumption to income; the change in income.

$$\begin{aligned} \text{Average Propensity to Consume} &= \frac{\text{Total Consumption}}{\text{Total Income}} \\ &= \frac{C}{Y} \end{aligned}$$

where 'C' stands for consumption and 'Y' stands for income. Supposing the community's aggregate income is Rs. 100 crores and its aggregate consumption expenditure is Rs. 75 crores, the average Propensity to consume = $\frac{75}{100}$ or $\frac{3}{4}$ i.e., 75 per cent.

$$\text{Marginal Propensity to Consume} = \frac{\text{Additional expenditure on Consumption}}{\text{Additional Income}} = \frac{\Delta C}{\Delta Y}$$

where ΔC is incremental change in consumption and ΔY incremental change in income. Let us suppose, out of an additional income of Rs. 100, a sum of Rs. 60 has been spent and the rest saved, the marginal propensity to consume = $\frac{60}{100} = 0.6$.

Generally, *APC* is expressed in percentage and *MPC* in fraction.

The normal relationship between income and consumption, indicated already, is that when income rises, consumption also rises, to an extent smaller than the rise in income.

The income of the family or the community is divided into two parts, the Consumption and Savings. Income = Consumption + Savings, i.e., $Y = C + S$. In the same way, we can explain the average and marginal propensity to save. This is just the opposite of consumption. Average propensity to save means the amount of saving out of a given income. Marginal propensity to save implies the amount of additional savings out of additional income.

$$\begin{aligned} \text{APS} &= \frac{\text{Total Saving}}{\text{Total Income}} = \frac{S}{Y} \\ \text{MPS} &= \frac{\text{Additional Saving}}{\text{Additional Income}} = \frac{\Delta S}{\Delta Y} \end{aligned}$$

Since MPS and MPC together constitute ONE, we can find out one with the help of the other. $MPS = 1 - MPC$.

Consumption Schedule : Consumption schedule indicates the quantum of consumption and savings at different levels of income assuming other things constant. Given below is an imaginary schedule showing expenditure on consumption at various levels of income.

TABLE 7.1
EXPENDITURE ON CONSUMPTION AT
VARIOUS INCOME LEVELS

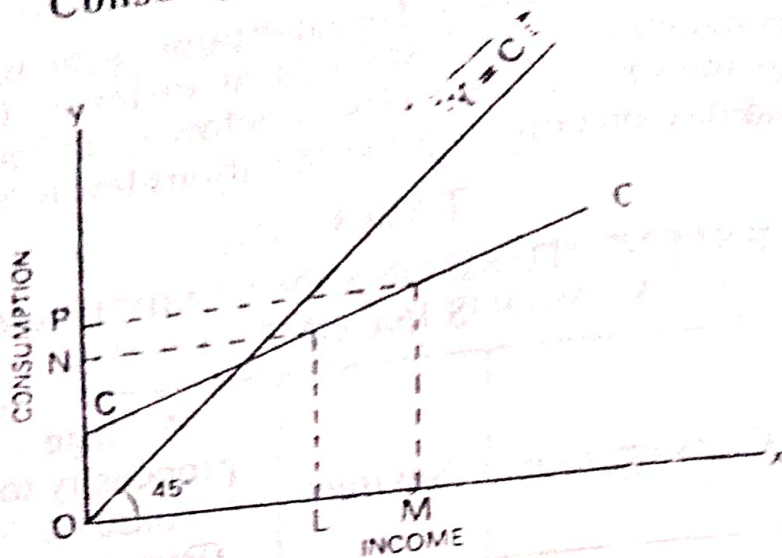
| Monthly Income in Rs. | Consumption | Savings | Average propensity to consume (Percentage) | Marginal propensity to consume |
|-----------------------|-------------|---------|--|--------------------------------|
| 1 | 2 | 3 | $\frac{C}{Y}$ 4 | $\frac{\Delta C}{\Delta Y}$ 5 |
| 1,000 | 1,000 | 0 | 100 | — |
| 2,000 | 1,800 | 200 | 90 | 0.8 |
| 3,000 | 2,500 | 500 | 83 | 0.7 |
| 4,000 | 2,800 | 1,200 | 70 | 0.3 |
| 5,000 | 3,000 | 2,000 | 60 | 0.2 |
| 6,000 | 3,100 | 2,900 | 52 | 0.1 |

In the Table 7.1, Col. 4 shows APC and Col. 5 shows MPC for different levels of income. With increases in income, the expenditure goes up. But the propensity to consume is declining. When the Income is Rs. 2,000, APC is 90 per cent, when the income is Rs. 4,000, it is 70 per cent. So, when the income is increasing, the consumption is not increasing in the same proportion. Similarly, MPC is also declining. At Rs. 2000, MPC is 0.8 and at Rs. 5,000 it is 0.2.

The Consumption Function Curve Figure 7.1 can also be represented in a graph taking income on x axis and consumption on the y axis.

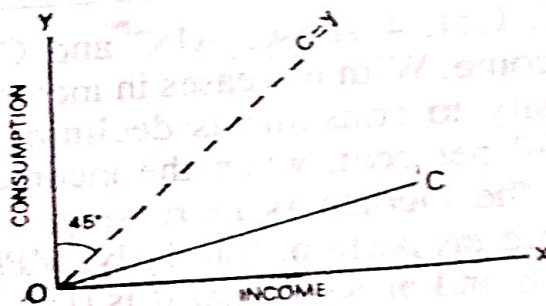
The 45° line is a guideline denoting that any point on the line is equidistant from the two axes. This is a condition where the entire income is spent on consumption ; or $Y = C$. The consumption function line CC is drawn as a straight line with a slope of less than one. When the income is OL, the consumers desire to spend ON. If the income rises to OM, the expenditure increases to OP. The consumers would spend OC even when their income is zero. At this point, the people draw on past savings, borrow or sell property to spend for consumption. The cutting of consumption curve in the y axis shows that a certain minimum amount of consumption expenditure is absolutely necessary irrespective of

FIGURE 7.1
Consumption Function Curve



income. The straight line nature of the curve implies that as income increases, consumers' demand increases by an amount which always bears the same proportion to the increased income. The consumption function curve may be of any shape. It may be above the guideline, or on the guideline, or may occupy a position below the guideline as shown in the Figure 7.2

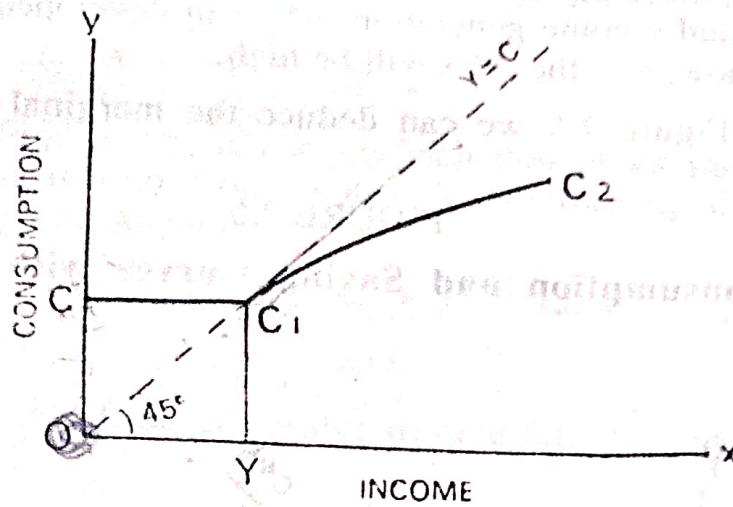
FIGURE 7.2
Consumption curve below the guideline



In the Figure 7.2, OC is a straight line starting from the origin. It implies that the consumers spend more with a rise in income, but also spend the same proportion of income.

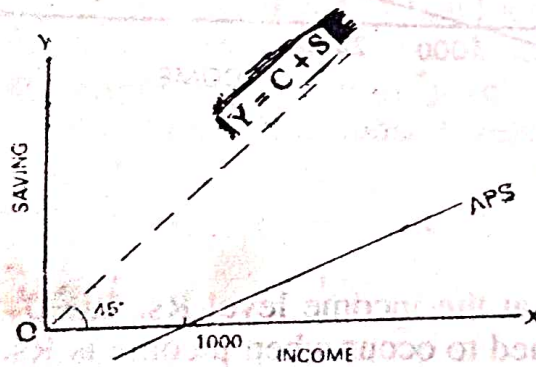
The figure 7.3 indicates that when the income is zero, the consumer incurs a minimum expenditure of OC. This expenditure is kept constant till the income reaches the level of OY. Afterwards, with the rise in income, the consumption increases, but by less than the increase in income. The diminishing slope of the curve between C_1 and C_2 shows that the proportion of income consumed falls progressively with a rise in income.

FIGURE 7.3
Consumption curve with diminishing slope



Besides consumption function, we have shown in the schedule, savings. The average propensity to save curve is drawn by taking different incomes and the corresponding savings. It is drawn in the same way as the consumption curve. APC and APS together will be equal to 45° guideline since $Y = C + S$. The APS curve is given in the Figure 7.4.

FIGURE 7.4.
APS Curve



It may be observed from the Figure 7.4 that at an income of Rs. 1,000 there is no savings as the entire income, is utilized for expenditure. Only beyond the level of Rs. 1,000 income, there is savings. Hence the curve cuts the horizontal axis at a point where $S = \text{Zero}$.

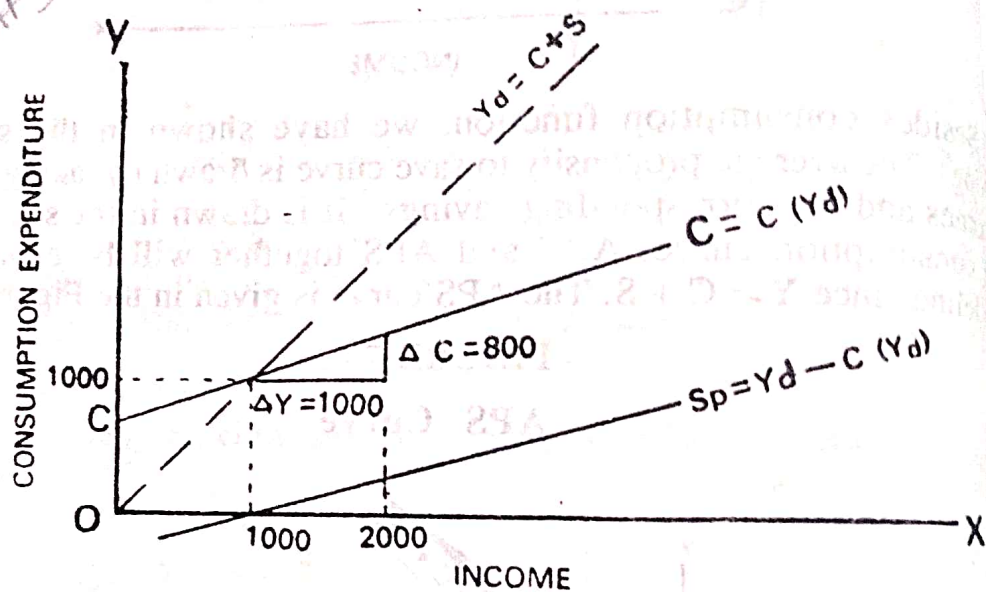
Importance of MPC and MPS

Marginal Propensity to Consume is, as already stated, the ratio of increased expenditure to increased income. This concept is of great

importance in the economy is divided between consumption and saving. This is a vital question relating to Capital Formation. In poor countries the marginal propensity to consume will be greater in the process of development and income generation, while in developed countries MPC will be low, i.e., the APS will be high.

From the Figure 7.5 we can deduce the marginal propensity to consume.

FIGURE 7.5
Consumption and Saving Curves with MPC



The MPC is 0.8 at the income level Rs. 1,000 – 2,000. The point where zero saving is assumed to occur when income is Rs. 1,000. As disposable income rises to Rs. 2,000 consumption rises by only Rs. 800 (0.8 × 1,000) which means that savings must rise by Rs. 200 (0.2 × 1,000). When income rises to Rs. 2,000 the consumption expenditure rises to Rs. 1,800 and savings Rs. 200. At the disposable income level below Rs. 1,000 the community is so poor that it prefers to go into debt rather than spend only its current disposable income on consumption.

Algebraically, we may state the hypothesis that consumption is a linear function of disposable income. This can be written as :

$C = C(Y_d)$ where C stands for aggregate real consumption and Y_d represents aggregate real disposable income. In case the consumption function is linear –

$C = C_0 + bY_d$ where b is the marginal propensity to consume and C_0 is the level of consumption at zero disposable income. In our example $b = 0.8$. Therefore,

$$C = C_0 + 0.8 Y_d$$

From the Figure 7.5, it can be seen that at an income level of Rs.1,000 saving is zero. Consumption is therefore equal to disposable income at this point. Accordingly,

$$1,000 = C_0 + 0.8 \times 1,000$$

$$C_0 = 200$$

In our example, if the disposable income falls to zero, consumption would fall to 200.

The equation for the schedule of intended consumption therefore becomes :-

$$C = 200 + 0.8Y_d$$

because personal savings are only the difference between consumption and disposable income.

$S_p = Y_d - C = Y_d - 200 - 0.8Y_d = -200 + 0.2Y_d$ is the equation for the savings function.

To have simpler explanation, we can say that income not consumed is income saved. So savings-income relation can be deduced from income-consumption relation. Savings at various levels of income can be obtained by subtracting consumption at those levels of income from the incomes.

$$\text{Since } MPC + MPS = 1$$

$$MPS = 1 - MPC; \text{ (or)}$$

$$MPS = 1 - \frac{\Delta C}{\Delta Y}$$

Thus if we know the marginal propensity to consume, we can easily obtain marginal propensity to save by subtracting MPC from ONE.

FACTORS DETERMINING CONSUMPTION FUNCTION

The consumption function or the propensity to consume is not static and there are various factors influencing it for a change. Though in the short period, the propensity to consume will not change - as the spending habit of the society does not change quickly - in a dynamic society, factors will be always operating to make the condition unstable.

We shall discuss some of the important factors that influence the consumption function. Since saving is a complement of consumption,

factors influencing consumption will be automatically affecting as well.

The causes governing consumption function can be classified (i) Subjective factors and (ii) Objective factors. The former is psychological factors by Keynes who lists about eight motives which lead individual to refrain from spending out of their incomes.³

1. Subjective Factors

- (i) To build up a reserve against unforeseen contingencies.
- (ii) To provide for an anticipated future relation between the and the needs of the individual or his family different from the exist at present, as for example, in relation to old age, family ed or maintenance of dependents.
- (iii) To enjoy interest and appreciation i.e., because a la consumption at a later date is preferred to a smaller im consumption.
- (iv) To enjoy a gradually increasing expenditure since it g common instinct to look forward to a gradually improving standa rather than the contrary, even though the capacity for enjoymen diminishing.
- (v) To enjoy a sense of independence and the power to d though without a clear idea or definite intention of specific action.
- (vi) To secure a *masse de manoeuvre* to carry out spec business projects.
- (vii) To bequeath a fortune.
- (viii) To satisfy pure miserliness, i.e., unreasonable, but inhibitions against acts of expenditure as such.

The above subjective motives are summed up by Keynes of Precaution, Foresight, Calculation, Improvement, Inde Enterprise, Pride and Avarice. Keynes lists out the m consumption also. They are Enjoyment, Shortsightedness, C Miscalculation, Ostentation and Extravagance.

In addition to savings accumulated by individuals due motives enumerated already, savings are accumulated by Ce and Local governments, institutions and business firms. The t these savings are Enterprise, Liquidity, Improvement and Prudence.

According to Keynes, the subjective or psychological fac change in the short run and hence consumption function rema the short period.

3 J.M. Keynes. *The General theory of Employment, Interest and Money* (L p. 108-109.

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II. Objective Factors

The list of factors under this category affecting consumption is a big one and we shall take up for discussion only very important factors.

(i) **Money Income** : We have already studied how the money income of the individual is the dominant factor in determining his consumption and we have also studied the relationship between income, consumption and savings.

(ii) **Real Income** : Keynes points out that the consumption is influenced by real income than by money income. A change in the price level will change the value of money and the purchasing power. Fluctuation in prices will affect real income and also the propensity to consume. Phenomenal rise in the price level will reduce the real income and so there will be a fall in the propensity to consume.

(iii) **Distribution of Income** : The most important factor determining consumption function is the manner in which the income or wealth of the community is distributed. Normally the average and marginal propensities to consume will be higher for poor people than the rich; the reason being that the former will be living without many essential and basic needs of life and additional income will be fully made use of in consumption to satisfy basic wants. On the other hand, the rich may not be having many unsatisfied wants and hence their propensity to save will be higher. Statistical studies have proved that a large portion of investment has come only from the savings of the rich. Consumption will be low when there are gross inequalities of income in the country. Reduction of inequalities will increase the propensity to consume in the economy.

(iv) **Fiscal Policy** : The fiscal policy of the government relating to taxation, expenditure and public debt will appreciably affect the propensity to consume. Heavy indirect taxes will leave little money with the people of low-income groups and their consumption will get depressed. A reduction in taxes will leave more disposable income which can be used for consumption. Highly progressive system of taxation will reduce inequalities which will in turn increase the propensity to consume in the economy.

(v) **Financial policies of Corporations** : If joint-stock companies and corporations adopt a 'fat dividend' policy, the disposable income of the shareholders will be high and consequently the propensity to consume will also go up.

(vi) **Expectations of future changes** : If the people in the economy expect sudden changes in the future regarding their income, price-level or shortage of commodities or bumper harvest, the consumption function will change. During war, shortage of commodities will be expected and the consumers will rush to buy far in excess of their

needs. If they anticipate bumper crop or massive import which will reduce the prices in the near future, consumption would be postponed to a future date and hence propensity to consume will become low.

(vii) **Windfall gains and huge losses** : Sudden increase in income or gains will increase the consumption function, while sudden losses will reduce the consumption. In the late twenties, the windfall gains in the stock market of U.S.A., increased the consumption function of the wealthier classes.

(viii) **Liquid Assets** : When people have liquid assets, they will be inclined to spend more and the consumption level will be high. During war periods, increased liquidity due to war financing will lead to increased consumption.

(ix) **Rate of interest** : Views differ regarding the role of interest rate in consumption function. The classicals held the view that if the rate of interest goes up, people will consume less and save more to the advantage of the higher interest rate. When interest rate falls, they will consume more and save less. The classicals held the view that consumption varies inversely with the rate of interest. According to Keynes, the effect of rate of interest on consumption and saving is complex and uncertain. "The short period influence of the interest rate on individual spending out of a given income is secondary and relatively unimportant, except, perhaps where usually large changes in the rate of interest influence social habits of the people which in turn affect consumption. Further changes in the rate of interest affect the purchase of durables on instalment basis. A rise in the rate of interest discourages consumption goods on instalment basis. A rise in the rate of interest makes the instalment purchase more expensive and the customer discouraged to buy goods. A fall in the rate of interest will increase consumption of goods purchased on instalment system.

(x) **Consumer durables** : Consumption expenditure depends on the consumer durable goods available and demanded in the country. If a country had been enjoying prosperity for a long period, the people will be possessing many durable goods with them like motor car, sewing machine, fridge and TV which would serve them for a long time. If the people may not be spending on such items, but would save more of their disposable incomes.

(xi) **Demographic factors** : The consumption expenditure differs from family to family depending on demographic factors, though the income may happen to be the same for all families. 'Large-sized' families will spend more than 'small-sized' families. Occupation, residence, composition of the family will determine expenditure. Normally urban-bred families spend more than rural families. Farmers and small businessmen spend less than professional people. Families having children attending colleges will be spending more. In short, the propensity to consume

depends on tastes, preferences, standard of living and aptitude and attitude of the people.

(xii) **Duesenberry Hypothesis** : Prof. Duesenberry has made two important observations regarding the factors affecting the consumption of an individual : (i) The consumption expenditure of the people not only depends on the current level of income, but also on the standard of living in the past. If income falls, no doubt, the expenditure will also fall, but not to the same extent, as the people will find it difficult to adjust their expenditure to changed conditions. (ii) Another important factor is what may be called the *Demonstration Effect*. An individual's consumption depends not only on the absolute amount of his income, but also on its size relative to incomes of others. For example, the low-income group will try to imitate the consumption standard of high-income groups. They will purchase fashion goods and costly commodities used by rich people. But, the moment low-income groups start using these goods consumed by higher-ups, the latter will avoid consumption of these commodities and go in search of still better or valuable commodities. This is what is called the *Demonstration Effect* which will have mutual reactions resulting in increased consumption function.

THEORIES OF CONSUMPTION FUNCTION

Post war the development of consumption-income analysis by Keynes, general economists had done tremendous research in the theory of consumption function with the purpose of putting the consumption-income relationship in the proper perspective. Economists have developed a series of hypotheses in order to reconcile the short-run non-proportional and long-run proportional consumption functions. We shall study only a few major theories connected with consumption function, i.e., theories of consumer spending behaviour.

The Absolute Income Theory

The basic principle of this theory is that the individual consumer's spending depends on the absolute level of his income. Other things being equal, an increase in absolute income would lead to a decline in the fraction of that income devoted to consumption.

This absolute income hypothesis has been derived from Keynes' Psychological Law of consumption. The hypothesis puts forth three implied generalisations about income-consumption relationship:

- (i) The current absolute consumption is related, as a rule and on the average, to the current absolute real income: $C_t = f(Y_t)$.
- (ii) The consumption-income relationship is reversible, i.e., the people will reduce consumption when their income falls exactly on the same path as it followed by it when there is a rise in income.
- (iii) Consumer's spending patterns are determined autonomously and the consumption pattern of one group of consumers is quite independent of that of others.

In the initial years following the publication of Keynes' *General Theory*, even economists accepted the absolute income theory as correct, but this widespread acceptance of the theory was short-lived.

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The theory states that increases in the aggregate income of all consumers should lead to a decline in the average propensity to consume, or the fraction of this income devoted to consumption. Since the actual level of aggregate income grows larger and larger with the growth of the economy, the theory leads to the conclusion that the Average Propensity to Consume (APC) should be smaller and smaller. But the actual data does not support this conclusion. Estimates of national saving and other aggregates derived by Kuznets and by Goldsmith show that aggregate saving ratio has remained almost constant since the 1870s. The budget studies, however, show that the savings ratio is substantially with the rise in the level of income. An attempt has been made to reconcile the position of the absolute income theory by maintaining that the basic income-consumption relationship is of non-proportional type, but term data exhibits relationship of a proportional type because the basic proportional consumption function has undergone upward shift. consequence of factors other than income influencing the level of consumption, e.g., urbanisation, change in the age-composition of population, appearance of new product etc.

Further, the reversibility of consumption-income relationships and the autonomous character of a consumer's spending pattern from income consumption patterns of other consumers have been forcefully controverted by many prominent writers including Duesenberry.

Relative Income Theory

Relative income hypothesis was first formulated by Dorothy Brady Friedman. Additional empirical support to this hypothesis was provided by the work of Modigliani and James Duesenberry carried out at about the same time. The relative income theory stresses the imitative or emulative character of consumption. The basic principle of this theory is that the fraction of income devoted to consumption depends on the level of its income relative to the income of neighbouring families or other families with which it compares and not on the *absolute* level of the family's income. Thus, if a family's income rises, but its *relative position* on the income scale remains unchanged, i.e., the rate of the incomes of other families with whom it identifies have risen at the same rate, its division of income between consumption and saving remains unchanged. With the rise in family's absolute income, its absolute consumption and absolute saving rises, but the ratio of the income devoted to consumption remains the same at the higher level of absolute income, as it was at the lower level. In case a family's income remains unchanged, but the income of other families has changed, *i.e.*, increased, the relative income of this family would deteriorate, that the deterioration in the relative position of this family would lead to an increase in the ratio of its income devoted to consumption.

income has remained unchanged. The tendency to devote a larger proportion of income to consumption in this case results partly from the pressure on the family to "keep up with the Joneses" and partly from the fact that the family observes in its everyday living what to it are superior goods of other families and would be induced to spend as a result of "Demonstration Effect" stated by Duesenberry.

In some of the advanced countries a peculiar situation arises that almost 75 per cent of families virtually save nothing. The reason is not that they are poor, but the intense social pressure makes them consume more, as they come in contact with the superior spending patterns.

The Permanent Income Theory

Keynes emphasised upon the present income as the determinant of the present consumption spending, since he believed that the optimistic expectations of the consumers off-set their pessimistic expectations and thus the impact of expectations upon the consumption spending could be safely ignored. But, actually such off settings do not occur and the expectations of income in future do influence the consumption spending of the community. On the basis of consumers' expectations of incomes, Milton Friedman formulated this theory of Permanent Income hypothesis. This is very similar to *Life-Cycle* hypothesis developed by Modigliani in collaboration with Brumberg and Albert Ando. Although the two theories are very similar in principle, Friedman's version is more popular.

The Permanent Income theory, like the relative income theory, maintains that the basic relationship between consumption and income is of a proportional type; but according to this theory the relationship is between permanent consumption and permanent income. A family's permanent income in any one year is not indicated by its current income for that year, but is determined by the expected or anticipated income to be received over a long period of time, extending over a number of future years. In Friedman's words, permanent income "is to be interpreted as the mean income regarded as permanent by the consumer unit in question, which in turn depends on its horizon and farsightedness". The time period that is relevant to permanent income is the minimum period of time over which income influences must be maintained in order to make the receiver of that income regard them as permanent.

Friedman divides the family's measured income in the year into permanent and transitory components. Permanent component is the amount which the consumer unit could consume (or believes that it could) while maintaining its wealth intact. The transitory income component denotes unexpected additions and subtractions to income. The transitory income may be positive or negative. If a family wage-earner, for instance, gets a prize in one year which he has no

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reason to expect in the following years, this income element is considered a positive transitory income, and it raises his measured income above permanent income. Similarly, if the family wage-earner suffers an unexpected loss of income, say as a result of lockout in the factory, this income element is considered to be a negative transitory income, and it reduces his measured income below his permanent income. These unforeseen additions to and subtractions from a family's income are expected to cancel out over the long period relevant to permanent income, but they are present in any shorter period.

In the same manner, Friedman divides measured consumption into permanent and transitory components. An article purchased because of an attractive sale price or a normal purchase deferred because of the non-availability of the article would provide instances of positive and negative transitory consumption. As with measured income, a family's measured consumption in any particular period may be larger or smaller than its permanent consumption. With these definitions, Friedman's basic argument is that permanent consumption depends on permanent income. According to him, permanent consumption is a constant proportion of permanent income and this proportion depends only on the rate of interest, the ratio of "non-human" wealth to human wealth (human plus non-human) and tastes. The permanent consumption of different families with the same permanent income will thus differ according to their tastes and other specified characteristics. The ratio of permanent consumption to permanent income is, however, considered to be independent of permanent income. If we consider a group of families with identical tastes and other factors which determines this ratio, the hypothesis in its simplest form holds that the proportion of each such family's permanent income devoted to consumption will be the same irrespective of the level of their income.

Since the Permanent Income theory maintains that the family consumption function relating permanent consumption to permanent income is a straight line from the origin, this theory directly leads to the conclusion that changes in aggregate permanent income result in proportional changes in aggregate consumption. This particular conclusion reached by the permanent income theory is the same as reached by the relative income theory, but differs from that reached by the Absolute Income Theory. It may, however, be pointed out that the conclusions are not strictly comparable, because the absolute and relative income theories are not expressed in terms of the same income and consumption concepts as used in the permanent income theory.

In spite of several weaknesses of this theory, Friedman's hypothesis has an important policy implication that the monetary and fiscal policies should be so managed that the adverse expectational patterns are not generated during a recession, the government slashes certain taxes and the disposable

increases, the consumption spending may not increase because of two reasons: (i) A sudden tax reduction should be treated as a part of transitory income and it cannot influence consumption. (ii) Secondly, if the consumers consider tax reduction as a sign of adverse economic situation in future, they cannot be persuaded to increase the consumption spending even though the disposables have gone up.