

The Absolute Income Hypothesis

Keynes's consumption income relationship is known as the absolute income hypothesis which states that when income increases consumption also increases but by less than the increase in income, and vice versa. This means that the consumption income relationship is non-proportional. James Tobin⁵ and Arthur Smithies⁶ tested this hypothesis in separate studies and came to the conclusion that the short-run relationship between consumption and income is non-proportional

but the time-series data show the long-run relationship to be proportional. The latter consumption income behaviour results through an upward shift or "drift" in the short-run non-proportional consumption function due to factors other than income. These factors are discussed as under.

First, Professor Tobin introduced asset holdings in the budget studies of Negro and white families to test this hypothesis. He came to the conclusion that the increase in the asset holdings of families tends to increase their propensity to consume thereby leading to an upward shift in their consumption function. Second, since the end of the Second World War, a variety of new household consumer goods have come into existence at a rapid rate. The introduction of such essentials tends to shift the consumption function upward. Third, since the post-War period, there has been an increased tendency toward urbanisation. This movement of population from rural to urban areas has tended to shift the consumption function upward because the propensity to consume of the urban wage earners is higher than that of the farm workers. Fourth, there has been a continuous increase in the percentage of old people in the total population over the long-run. Though the old people do not earn but they do consume commodities. Consequently, the increase in their numbers has tended to shift their consumption function upward.

"Factors, like these, according to the absolute income theory have caused the consumption function to shift upward by roughly the amount necessary to produce a proportional relationship between consumption and income over the long run and thus to prevent the

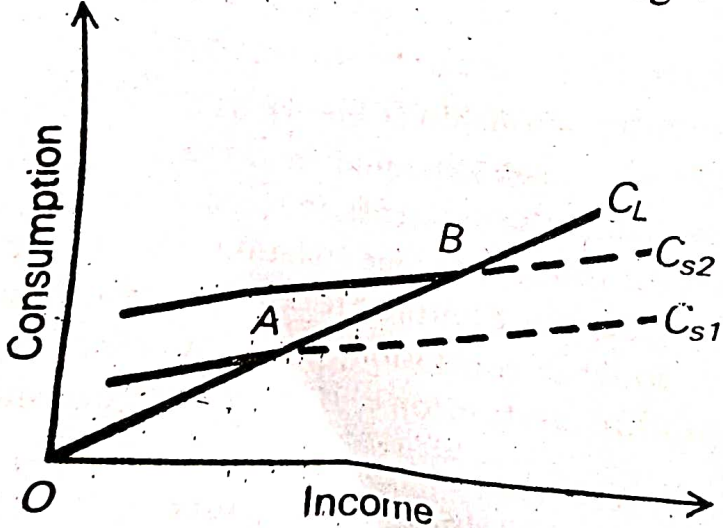


FIG. 9.2

appearance of what would otherwise be the non-proportional relationship that would be expected on the basis of the income factor alone."

The absolute income hypothesis is explained in Figure-9.2 where C_L is the long-run consumption function which shows the proportional

relationship between consumption and income as we move along

the long-run curve. For instance, the APC and the MPC are equal at points A and B on this curve. C_{s1} and C_{s2} are short-run consumption functions. But due to the factors mentioned above, they tend to 'drift' upward from point A to point B along the long-run consumption function C_L . But the movement along the dotted portion of the short-run consumption functions C_{s1} and C_{s2} would cause consumption not to increase in proportion to the increase in income.

The great merit of this theory is that it lays stress on factors other than income which affect the consumer behaviour. But its weakness lies in assuming a non-proportional consumption function. As pointed out by Professor Shapiro, "More and more economists now feel that the basic consumption function is proportional, which amounts to a rejection of the major tenet of the absolute income hypothesis."⁸

The Relative Income Hypothesis

The relative income hypothesis of James Duesenberry⁹ is based on the rejection of the two fundamental assumptions of the consumption theory of Keynes. Duesenberry states that (1) every individual's consumption behaviour is not independent but interdependent of the behaviour of every other individual, and (2) that consumption relations are irreversible and not reversible in time.

In formulating his theory of the consumption function, Duesenberry writes: "A real understanding of the problem of consumer behaviour must begin with a full recognition of the social character of consumption patterns." By the "social character of consumption patterns" he means the tendency in human beings not only "to keep up with the Joneses" but also to surpass the Joneses. In other words, the tendency is to strive constantly toward a higher consumption level and to emulate the consumption patterns of one's rich neighbours and associates. Thus consumers' preferences are interdependent. It is, however, differences in relative incomes that determine the consumption expenditures in a community. A rich person will have a lower APC because he will need a smaller portion of his income to maintain his consumption pattern. On the other hand, a relatively poor man will have a higher APC because he tries to keep up with the consumption standards of his neighbours or associates. This provides the explanation of the constancy of the long-run APC because lower and higher $APCs$ would balance out in the aggregate. Thus even if the

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 absolute size of incomes in a country increases, the APC for the economy as a whole at the higher absolute level of income would be constant.

The second part of the Duesenberry theory is the "past peak of income" hypothesis which explains the short-run fluctuations in the consumption function and refutes the Keynesian assumption that consumption relations are reversible. The hypothesis states that during a period of prosperity, consumption will increase and gradually adjust itself to a higher level. Once people reach a particular peak income level and become accustomed to this standard of living, they are not prepared to reduce their consumption pattern during a recession. In the words of Duesenberry, "It is harder for a family to reduce its expenditures from a higher level than for a family to refrain from making high expenditures in the first place." Thus as income falls, consumption declines but proportionately less than the decrease in income because the consumer dislikes to sustain consumption. On the other hand, when income increases during the recovery period, consumption rises gradually with a rapid increase in saving.

Duesenberry combines his two related hypothesis in the following form:

$$\frac{C_t}{Y_t} = a - b \frac{Y_t}{Y_o}$$

where C and Y are consumption and income respectively, t refers to the current period and the subscript (o) refers to the previous peak, a is a constant relating to the positive autonomous consumption and b is the consumption function. In this equation, the consumption-income ratio in the current period (C_t/Y_t) is regarded as function of Y_t/Y_o , that is, the ratio of current income to the previous peak income. If this ratio is constant, as in periods of steadily rising income, the current consumption income ratio is constant. During recession when current income (Y_t) falls below the previous peak income (Y_o), the current consumption income ratio (C_t/Y_t) will increase.

The relative income hypothesis is explained graphically in Figure 9.3 where C_L is the long-run consumption function and C_{s1} and C_{s2} are the short-run consumption functions. Suppose income is at the peak level of OY_1 where E_1Y_1 is consumption. Now income falls to OY_o . Since people are used to the standard of living at the OY_1 level of income, they will not reduce their consumption to E_oY_o level, but reduce it as little as possible by reducing their current saving. Thus they move backward along the C_{s1} curve to point C_1 and be at C_1Y_o

level of consumption. When the period of recovery starts, income rises to the previous peak level of OY_1 . But consumption increases slowly from C_1 to E_1 along the C_{s1} curve because consumers will just restore their previous level of saving. If income continues to increase to OY_2 level, consumers will move upward along the C_L curve from E_1 to E_2 on the new short-run consumption function C_{s2} . If another recession occurs at

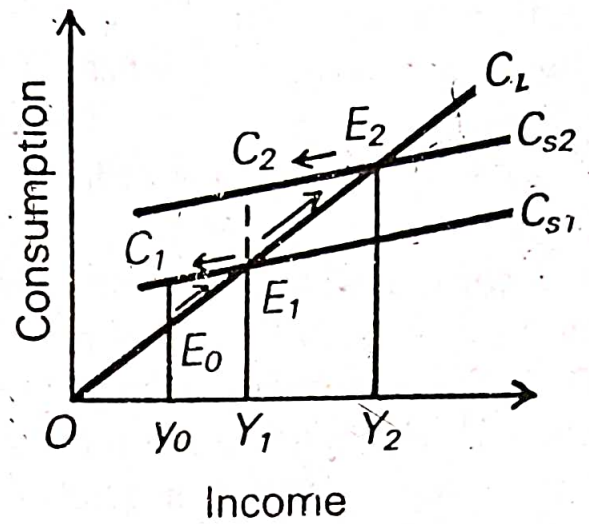


FIG. 9.3

OY_2 level of income, consumption will decline along the C_{s2} consumption function toward C_2 point and income will be reduced to OY_1 level. But during recovery over the long-run, consumption will rise along the long-run consumption function C_L till it reaches the short-run consumption function C_{s2} . This is because when income increases beyond its present level OY_1 , the consumption-income ratio (APC) becomes constant over the long-run. The short-run consumption function shifts upward from C_{s1} to C_{s2} but consumers move along the long-run consumption function C_L from E_1 to E_2 . But when income falls, consumers move backward from E_2 to C_2 on the C_{s2} curve. This has been characterised by economists as the ratchet effect. The short-run consumption function ratchets upward when income increases in the long run but it *does not shift down* to the earlier level when income declines.

Its Criticism. Although the Duesenberry theory reconciles the apparent contradictions between budget studies and short-term and long-term time series studies, yet it is not without its deficiencies.

First, the relative income hypothesis assumes a proportional increase in income and consumption. But increases in income along the full employment level do not always lead to proportional increases in the consumption.

Second, this hypothesis assumes the relation between consumption and income to be direct. But this has not been borne out by experience. Recessions do not always lead to decline in consumption, as was the case during the recessions of 1948-49 and 1974-75.

Third, this theory is based on the assumption that the distribution of income remains almost unchanged with the change in the aggregate level of income. If with increases in income, a redistribution occurs toward greater equality, the APC of all persons belonging to the

relatively poor and relatively rich families will tend to be reduced. Thus the consumption function will not shift upward from C_{s1} to C_{s2} when income increases.

Fourth, according to Micheal Evans, "The consumer behaviour is slowly reversible over time, instead of being truly irreversible. Then previous peak income would have less effect on current consumption the greater the elapsed time from the last peak."¹⁰ Even if we know how a consumer spent his previous peak income, it is not possible to know how he would spend it now.

Fifth, this hypothesis is based on the assumption that changes in consumer's expenditure are related to his previous peak income. The theory is weak in that it neglects other factors that influence consumer spending such as asset holdings, urbanisation, changes in age-composition, the appearance of new consumer goods, etc.

Last, another unrealistic assumption of the theory is that consumer preferences are interdependent whereby a consumer's expenditure is related to the consumption patterns of his rich neighbour. But this may not always be true. Professor George Katona's¹¹ empirical study has revealed that expectations and attitudes play an important role in consumer spending. According to him, income expectations based on levels of aspirations and the attitudes toward asset holdings affect consumer spending behaviour more than the demonstration effect.

The Permanent Income Hypothesis

Another solution to the apparent contradiction between the proportional long-run and non-proportional short-run consumption function is Friedman's¹² permanent income hypothesis. Friedman rejects the use of "current income" as the determinant of consumption expenditure and instead divides both consumption and income into "permanent" and "transitory" components, so that

$$Y = Y_p + Y_t$$

and

$$C = C_p + C_t$$

where p refers to permanent and t refers to transitory income Y and consumption C .

Permanent income is defined as "the amount a consumer unit could consume (or believes that it could) while maintaining its wealth intact." It is the main income of a family unit which in turn depends on its time-horizon and farsightedness. "It includes non-human

wealth that it owns, the personal attributes of earners in the unit . . . the attributes of the economic activity of the earners, such as the occupation followed, the location of economic activity, and so on."

Y being the consumer's measured income or current income, it can be larger or smaller than his permanent income in any period. Such differences between measured and permanent income are due to the transitory component of income (Y_t). Transitory income may rise or fall with windfall gains or losses and cyclical variations. If the transitory income is *positive* due to a windfall gain, the measured income will rise above the permanent income. If the transitory income is *negative* due to theft, the measured income falls below the permanent income. The transitory income can also be *zero* in which case measured income equals permanent income.

Permanent consumption is defined as "the value of the services that it is planned to consume during the period in question. Measured consumption is also divided into permanent consumption (C_p) and transitory consumption (C_t). Measured consumption (or current consumption) may deviate from or equal permanent consumption depending on whether the transitory consumption is positive, negative or zero, Permanent consumption is a multiple (k) of permanent income, Y_a .

$$C_p = k Y_p,$$

and

$$k = f(r, w, u)$$

Therefore,

$$C_p = k(r, w, u) Y_p$$

where k is a function of the rate of interest (r), the ratio of property and non-property income to total wealth or national income (w), and the consumer's propensity to consume (u). This equation tells that over the long period consumption increases in proportion to the change in Y_p . This is attributable to a constant k ($= C_p / Y_p$) which is independent of the size of income. Thus k is the permanent average propensity to consume. Friedman analyses the offsetting forces which lead to this result. To take the rate of interest (r), there has been a secular decline in it since the 1920s. This tends to raise the value of k . But there has been a long-run decline in the ratio of property and non-property income to national wealth (w) which tends to reduce the value of k . The propensity to consume has been influenced by three factors. First, there has been a sharp decline in the farm population which has tended to increase consumption with urbanisation. This has tended to increase k . Second, there has been a sharp decline in the size of families. It has led to increase in saving and reduction in consumption thereby reducing the value of k . Third, larger provision

by state for social security. This has reduced the need for keeping more in savings. It has increased the tendency to consume more resulting in the rise in the value of k . The overall effect of these offsetting forces is to raise consumption in proportion to the change in the permanent income component.

Assumptions. Given these, Friedman gives a series of assumptions concerning the relationships between permanent and transitory components of income and consumption.

1. There is no correlation between transitory and permanent incomes.
2. There is no correlation between permanent and transitory consumption.
3. There is no correlation between transitory consumption and transitory income.
4. Only differences in permanent income affect consumption systematically.

These assumptions give the explanation of the cross-section result (short-run) that $MPC < APC$. The cross-sectional results of Friedman's theory give a linear and proportional consumption function because if persons are classified in terms of their measured (or current) income, they also tend to be classified on the basis of their short-run income experience. Thus persons with the highest incomes will also tend to be those who have temporary increases in their incomes. Conversely, those with the lowest incomes will also tend to be the ones with temporary decreases in their incomes. Therefore, the ratio of consumption to measured income will tend to be higher for those at the bottom of the income range than those at the top on a short-run consumption function. Thus, according to this hypothesis, persons whose measured income is higher than their permanent income will be consuming smaller fractions of measured income than those persons whose measured income is less than their permanent income. We, therefore, get a measured short-run consumption function in the form $C = a + bY$ where bY measures the difference in consumption associated with differences in income. The value of bY in the hypothesis is taken as $bY = k \cdot PY$, where PY is the proportion of difference in measured income attributable to a difference in permanent income; and k is the ratio of permanent consumption to permanent income which is a constant, $APC = MPC$. This gives us the proportional long-run consumption function, $bY = k \cdot PY$.

Figure 9.4 explains the permanent income hypothesis where C_L is the long-run consumption function which represents the long-run proportional relationship between consumption and income of an

individual. Over the long-run, transitory components of both variables/cancel out and there is proportional relation between the permanent components. C_s is the non-proportional short-run consumption function where measured income includes both permanent and transitory components. At OY_0 income level where the C_s and C_L lines coincide at E_0 , changes in permanent income and measured income are identical, and so are permanent and measured consumption as shown by OC_0 . Here transitory factors are non-existent and $PY=1$. If we move to the left of point E_0 on the C_s curve at E_3 , the measured income declines to OY_3 due in part to the negative transitory income component (i.e. windfall losses). Since the permanent income OY_4 is higher than measured income OY_3 , permanent consumption will remain at OC_3 ($=Y_4E_4$) and equal measured consumption ($Y_3E_3=Y_4E_4$). Thus when $OY < 1$, it is possible for measured consumption (Y_3E_3) to be higher than measured income (OY_3) because of the relative stability of the permanent income factor which does not allow measured consumption to decline in the same proportion and keeps it generally stable due to unchanging wealth position of the family. On the other hand, a movement to the right of point E_0 on the C_s curve at E_1 shows measured income to be OY_1 and measured consumption as OC_2 ($=Y_1E_1$). But OC_2 ($=E_2Y_2$) level of consumption can be maintained permanently at the permanent income level of OY_2 . Thus Y_1Y_2 is the positive transitory income component (i.e. windfall gains) in measured income OY_1 which is higher than the permanent income OY_2 .

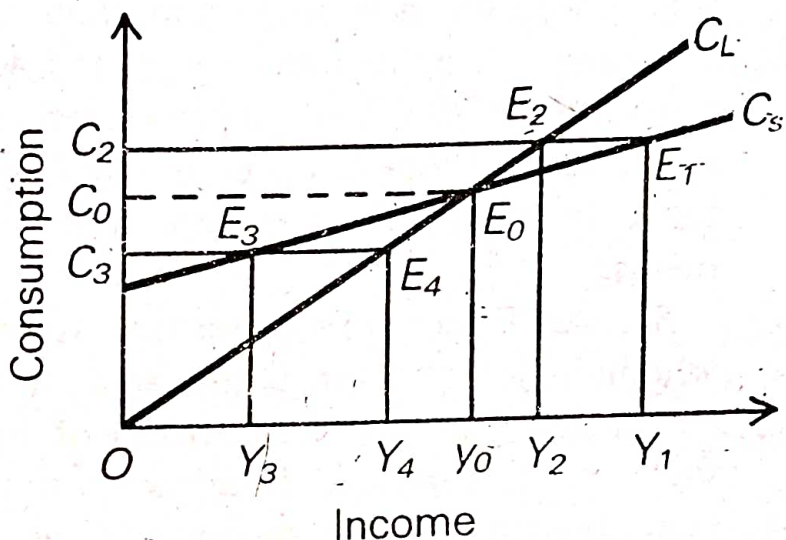


FIG. 9.4

The permanent income hypothesis of Friedman is consistent with cross-section budget data. The long-run data trace out a proportional relation between income and consumption. But studies relating to short-run oscillations of income around a long-run equilibrium path generally reveal a non-proportional relationship between measured income and measured consumption.

Its Criticism. Still, this hypothesis is not free from certain weaknesses.

First, Friedman's assumption that there is a distinction between transitory components of consumption and income is unrealistic. This assumption implies that with the increase or decrease in the measured income of the household, there is neither any increase or decrease in his consumption, because he either saves or dissaves accordingly. But this is contrary to actual consumer behaviour. A person who has a windfall gain does not deposit the entire amount in his bank account but enjoys the whole or part of it on his current consumption. Similarly, a person who has lost his purse would definitely cut or postpone his present consumption rather than rush to the bank to withdraw the same amount of money to meet his requirements.

Second, Friedman's hypothesis states that the *APC* of all families, whether rich or poor, is the same in the long-run. But this is against the ordinary observed behaviour of households. It is an established fact that low-income families do not have the capacities to save the same fraction of their incomes as the high income families. This is not only due to their meagre incomes but their tendency to prefer present consumption to future consumption in order to meet their unfulfilled wants. Therefore, the consumption of low-income families is higher relative to their incomes while the saving of high-income families is higher relative to their incomes. Even in the case of persons at the same level of permanent income, the level of saving differs and so does consumption.

Third, Friedman's use of the terms "permanent", "transitory", and "measured" have tended to confuse the theory. The concept of measured income improperly mixes together permanent and transitory income on the one hand, and permanent and transitory consumption on the other.

Lastly, another weakness of the permanent income hypothesis is that Friedman does not make any distinction between human and non-human wealth and includes income from both in a single term in the empirical analysis of his theory. Despite these weaknesses, "it can be fairly said", according to Micheal Evans, "that the evidence supports this theory and that Friedman's formulation has reshaped and redirected much of the research on the consumption function."¹³

The Life Cycle Hypothesis

Ando and Modigliani¹⁴ have formulated a consumption function

which is known as the Life Cycle Hypothesis. According to this theory, consumption is a function of lifetime expected income of the consumer. The consumption of the individual consumer depends on the resources available to him, the rate of return on capital, the spending plan, and the age at which the plan is made. The present value of his income (or resources) includes income from assets or property and from *current and expected* labour income.

Before discussing the life cycle hypothesis, its *assumptions* should be noted: (1) There is no change in the price level during the life of the consumer. (2) The rate of interest remains stable. (3) The consumer does not inherit any assets and his net assets are the result of his own savings.

The aim of the consumer is to maximise his utility over his lifetime which will, in turn, depend on the total resources available to him during his lifetime. Given the life-span of an individual, his consumption is proportional to these resources. But the proportion of resources that the consumer plans to spend will depend on whether the spending plan is formulated during the early or later years of his life. As a rule, an individual's average income is relatively low at the beginning of his life and also at the end of his life. This is because in the years of his life he has little assets, and during the late years his labour income is low. It is, however, in the middle of his life that his income, both from assets and labour, is high. As a result, the consumption level of the individual throughout his life is somewhat constant or slightly increasing, shown as the CC_1 curve in Figure 9.5. Y_0Y_1 curve shows the individual consumer's income stream during his

lifetime T . During the early period of his life represented by T_1 in the figure, he borrows CY_0B amount of money to keep his consumption level CB which is almost constant. In the middle years of his life represented by T_1T_2 , he saves BSY amount to repay his debt and for the future. In the last years of his life represented by T_2T , he dissaves SC_1Y_1 amount.

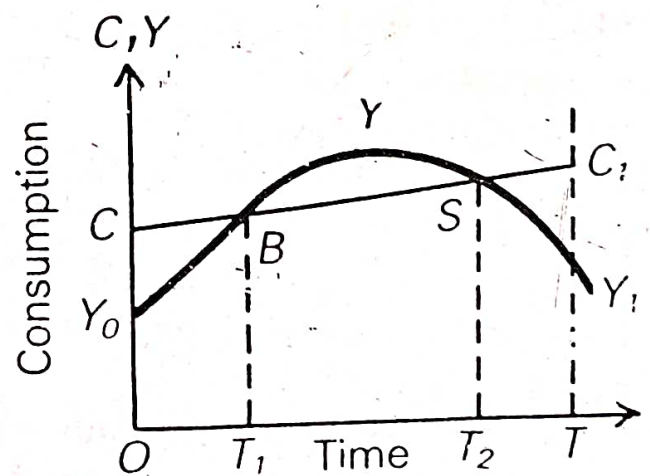


FIG. 9.5

On the basis of the life cycle hypothesis, Ando and Modigliani made a number of studies in order to formulate the short-run and long-run consumption functions. A cross-section study revealed that

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more persons in the low-income groups were at low income level because they were at the end period of their lives. Thus their APC was high. On the other hand, more than average persons belonging to the high-income groups were at high income levels because they were in the middle years of their lives. Thus their APC was relatively low. On the whole, the APC was falling as income rose thereby showing $MPC < APC$. The observed data for the U.S. revealed the APC to be constant at 0.7 over the long-run.

The Ando-Modigliani short-run consumption function is shown by the C_s curve in Figure 9.6. At any given point of time, the C_s curve can be considered as a constant and during short-run income fluctuation, when assets remain fairly constant, it looks like the Keynesian consumption function. But its intercept will change as a result of accumulation of assets through savings, and this will cause the C_s curve to drift upward to C_s' over time. The long-run consumption function is C_L , showing a constant APC as income grows along the trend. It is a straight line passing through the origin. The APC is constant over time because the share of labour income in total income and the ratio of assets to total income are constant as the economy grows along the trend.

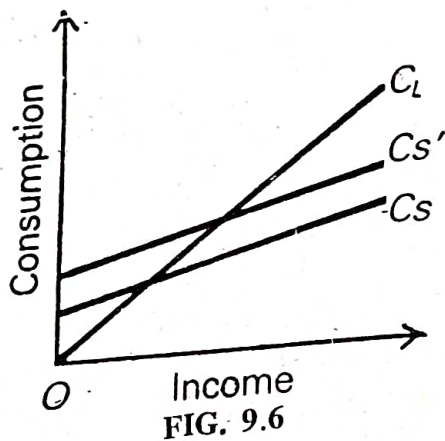


FIG. 9.6

Its Criticism. The life cycle hypothesis is not free from certain limitations.

First, the contention of Ando and Modigliani that a consumer plans his consumption over his lifetime is unrealistic because a consumer concentrates more on the present rather than on the future which is uncertain.

Second, the life cycle hypothesis pre-supposes that consumption is directly related to the assets of an individual. As assets increase his consumption increases and vice versa. This is also unwarranted because an individual may reduce his consumption to have larger assets.

Third, consumption depends upon one's attitude towards life. Given the same income and assets, one person may consume more than the other.

Despite these, the life cycle hypothesis is superior to the other hypotheses discussed above because it includes not only assets as a variable in the consumption function but also explains why $MPC < APC$ in the short-run and the APC is constant in the long-run