

INCOME, CONSUMPTION AND SAVING IN URBAN AND RURAL INDIA*

BY UMA DATTA ROY CHOUDHURY

The main purpose of the study is to determine the savings potential of urban and rural households in India and in the process determine the possible savings and consumption functions separately for urban and rural areas.

Four different possible functions have been used for determining the savings behaviour of the households both at the aggregate level and at the per capita level. The rural households, according to the results, have an extremely low rate of saving with income elasticity of saving of less than unity. For the urban households on the other hand, the income elasticity of saving is high enough to suggest the possibilities of considerably high savings potential.

To understand the consumption behaviour of these households, the long-run and the short-run marginal propensities to consume and the marginal propensities to consume out of 'permanent' or 'normal' income and 'transitory' income have been worked out. For the urban sector none of these give encouraging enough results and the analysis has been extended to examine whether other factors like prices and household assets are of any significance. Whereas for the rural sector, Milton Friedman's theory of 'permanent' or 'normal' income is somewhat substantiated, other factors like 'transitory' income, prices and assets appear to influence urban consumption behaviour though no single one of them substantially enough. A negligible effect of 'permanent' income on urban consumption behaviour is, on the other hand, very clearly suggested by the results.

Household consumption and savings have next been projected using the above results to determine the possible levels for the next three years. The results suggest that the rate of domestic savings likely to be achieved by the end of the Third Five Year Plan (1965-66) falls short of the targets laid down.

The main purpose of the present study is to get a realistic measure of the patterns of consumption and savings behaviour of the households in India, in other words, to attempt quantitative measures of short-run and long-run marginal propensities to consume to enable estimation of the savings potential of the households. The problem, though apparently very straightforward, has not been studied in detail for India. When the actual level of national income of the country is low and the rise is not sufficiently high (of the order of 4 percent annual over the last fifteen years) it becomes extremely important to obtain reliable measures of marginal propensities to consume and to save. With a low absolute level of income, it is but normal that the rates of saving and investment would be low, average propensity to consume high and income elasticity of consumption perhaps greater than unity.

According to the estimates of savings and investment available, the rate of investment in India increased from about 6 percent at the beginning of the First Five Year Plan (1950-51) to 12 percent by the end of the Second Five Year Plan (1960-61) and the rates of domestic saving over the same period changed from 5 percent to 8.5 percent. No comprehensive estimates of the rates attained at the

*The present paper is a part of the study undertaken by the author while at the London School of Economics & Political Science on a Nuffield Foundation Fellowship. The help and guidance received from Dr. W. F. Maunders of the LSE and Miss Phyllis Deane of the University of Cambridge are gratefully acknowledged. The views are of the author alone.

end of the Third Plan period (1965-66) are as yet available. According to the present information, by 1962-63 the rates had risen to 12.5 percent for investment and 9.5 percent for domestic savings. According to planned targets, on the other hand, net investment as a proportion of income should rise to 14 to 15 percent by 1965-66 and 19 to 20 percent by the end of the Fifth Plan (1975-76). Domestic savings accordingly should rise to 11.5 percent in 1965-66 and almost to 20 percent by 1975-76. In other words, given the present low rates of investment and savings, substantially high short and long-term marginal rates of savings are being targeted. The question therefore arises, is this reasonable and is this feasible? The first step for an answer to this question is to examine how the economy in general and households in particular behaved during the past thirteen years (1950-51 to 1962-63). A satisfactory answer to this would not only help to tackle the next question but would give confidence to the targets set in the Plan documents. In other words, the first step in the study of the problem is to analyse the consumption and savings behaviour of the households over the past thirteen years.

Coming next to the formulation of the problem itself, both theory and practical observations more or less confirm that the consumption behaviour of the households depends primarily on income while other factors like prices, asset formation, occupation, educational level, age and place of residence, city size, etc., are all of secondary importance¹. In other words, the factors other than income generally have a relatively small effect on consumption/saving of households as a whole though they might be of importance for individual economic units. The consideration of income in a functional relationship with consumption/saving is therefore the first step to a study of consumption and savings behaviour of the households. This functional relationship can be either of a simple direct form where both the variables change proportionately or of a slightly more complicated nature where in case of consumption, it registers a less rapid rise than income as one moves up the ladder and in case of saving just the reverse behaviour, i.e., faster rise in saving than income as income rises. While determining the functional relation it is also important to keep in mind the availability of data and the use of the relations for reasonable short-term forecasting. From a practical point of view it might be more advisable to use simple functional relations with as few variables as possible which enables one to concentrate on variables and relationships of primary importance. For savings, a logarithmic linear relation which, to some extent, takes account of the higher rate of saving as income increases may be one of the simplest forms to experiment with. Other simple functional forms like $S/Y = f(Y)$ or $S/Y = f(\log Y)$ may be equally useful in accounting for the 'heteroscedasticity' in saving, i.e., wider fluctuations in saving as income increases. These would also be the relations which determine the simple marginal propensity to save, as also income elasticity of saving.

These functional forms basically imply a direct link of current year's saving with current year's income whatever might be the form of the relationship. An independent line of thinking, on the other hand, stresses the role of not only the

1. Modigliani, Franco and Richard Bremer, 'Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data' in *Post-Keynesian Economics*.

Richard Stone, 'Private Saving in Britain, Past, Present and Future' in *The Manchester School*, Vol. XXXII, No. 2, May 1964.

current year's income but also of expected average income in determining the levels of household saving. In other words, saving here is a function of a composite 'permanent' component in income which is independent of short-term fluctuations as also of the 'transitory' component. The problem, however, is not only of the two components of income, 'permanent' or 'normal' and 'transitory', but also of determining this 'permanent' or 'normal' level of income in a time series analysis. Several methods have been suggested from time to time to have the most satisfactory estimate of normal expected income². Broadly, these consist of some weighted average of past and current incomes, the weights and the number of years to be considered being determined by the data available. The commonest amongst these are the ones suggesting progressively declining (exponentially or arithmetically) weights. The 'transitory' income on the other hand, is measured as the difference between normal and current measured income.

The simplest way of taking into account these transitory elements and short run fluctuations is to take savings as a linear function of current income as also of average of past incomes where the weights of the lagged variables decrease geometrically. Thus in this case, the savings function takes the form:

$$S_t = a + b \sum_{i=0}^{\infty} \lambda^i Y_{t-i} + U_t, \quad 0 < \lambda < 1 \quad (1)$$

where U_t is the random disturbance. The distributed lag presented above can conveniently be reduced to the simple form:

$$S_t = \alpha + \beta Y_t + \gamma S_{t-1} + W_t \quad (2)$$

where $\alpha = a(1 - \lambda)$, $\beta = b$, $\gamma = \lambda$ and $W_t = U_t - \lambda U_{t-1}$

This equation has the added advantage of making it possible to determine short-run and long-run marginal propensities to save (MPS). Thus the short-run MPS is given by the coefficient of Y_t , i.e., β , while equating Y_{t-i} for all i and computing

from (1) this common Y_{t-i} gives the long-run MPS as $b \sum_{i=0}^{\infty} \lambda^i = \frac{b}{1 - \lambda} =$

$\frac{\beta}{1 - \lambda}$. Put differently, over the long period $(S_t - S_{t-1})$ is zero and hence from (2)

the long-run MPS is given by $\beta/(1 - \gamma)$.

Alternatively, if savings is expressed as

$$S_t = a + b Y_t' + c Y_t'' + v_t \quad (3)$$

where Y_t' is 'permanent' income, Y_t'' is 'transitory' income and Y_t is measured income. Y_t' , the 'permanent' income, is defined as the average of past two years' measured income i.e.,

2. Milton Friedman, *A Theory of the Consumption Function*. (NBER, 1957).

Jean Crockett, 'Income and Asset Effects on Consumption: Aggregate and Cross Section', in *Models of Income Determination, Studies in Income and Wealth*, Vol. 28.

Irving Fisher, 'Note on a Short Cut Method for Calculating Distribution Lags,' in *International Statistical Bulletin*, 29.

$$Y_t' = \frac{Y_t + Y_{t-1}}{2} \text{ and}$$

$$Y_t'' = Y_t - \frac{Y_t + Y_{t-1}}{2}$$

$$= \frac{Y_t - Y_{t-1}}{2}$$

Equation (3) then takes the form:

$$S_t = a + b \frac{Y_t + Y_{t-1}}{2} + c \frac{Y_t - Y_{t-1}}{2} + v_t$$

$$= a + \frac{b+c}{2} Y_t + \frac{b-c}{2} Y_{t-1} + v_t$$

$$= \alpha + \beta Y_t + \gamma Y_{t-1} \quad (4)$$

In this case again, the short-run MPS is given by β and in the long-run since $(Y_t - Y_{t-1}) = 0$, the long-run MPS out of Y is $(\beta + \gamma)$. Considering equations (3) and (4) together, 'b', the MPS out of normal income, is given by $(\beta + \gamma)$, which is the same as long-run marginal propensity to save out of Y while 'c', the MPS out of transitory income, is given by $(\beta - \gamma)$. In other words, for this particular definition of normal income, the MPS out of normal income is the same as the long-run MPS while the average of normal and transitory effects of income in terms of marginal propensities to save gives the short-run MPS out of Y .

Similar relations can be derived with different and more complicated definitions of 'normal' and 'transitory' income, the present being perhaps the simplest of them all. However, for India where limitations of data are a great handicap, it might not be advisable to work with more sophisticated definitions of 'normal' income. As a first exercise, it might be useful at this stage to explore the possibility of determining satisfactory functional forms of the simpler type which would fit the data for India. These might help in understanding the savings behaviour of the households and also help in forecasting the likely levels of household savings in the country in the near future with a reasonable degree of accuracy. Also, it might be useful to examine the extent to which 'permanent' and 'transitory' income (under the above definitions) hypotheses are relevant for an economy like India with almost a near minimum level of consumption and a very low and almost static rate of household saving. Because of this very low level of saving particularly in the rural areas the 'permanent' and 'transitory' income effects are studied with respect to consumption and not saving. The later part of the study is therefore in terms of relations between household income and consumption while an attempt at a reasonable functional definition of saving forms the first part. This however does not alter either the arguments which precede or the structural relations presented. This only helps to deal with the data which might give more meaningful results.

In India, both the savings behaviour of households and the marginal propensities to save vary substantially between urban and rural areas both at the overall level and for different sections of the population. Thus, the overall rate of

saving for the rural part of households³ has remained almost stationary at 2 percent over the period 1950-51 to 1962-63 while for the urban sector the rate has increased from around 11 percent in 1950-51 to 22 percent in 1962-63⁴. Such substantial differences between the urban and the rural sectors is one of the characteristics of every aspect of Indian economy. According to Oshima "the heterogeneity in underdeveloped countries between urban and rural areas (especially between cities and villages) is so marked that the rural areas may be thought of as separate economies".⁵ Nothing is more appropriate to describe the diversity between urban and rural areas in India. To bring out this diversity between urban and rural areas, the present analysis at every stage is undertaken separately for the two areas as well as for the economy as a whole.

One point which, however, may be mentioned at this stage is that the geographical area defined as 'urban' has increased over the period. According to 1961 Population Census, all places like municipalities, cantonments, and other areas possessing recognised local administration were to be part of the urban area, besides places which had a population of not less than 5000, a density of not less than 1000 per square mile and at least 75 percent of their working population in occupations other than agriculture. On this definition, the urban population in 1961 was 17.8 percent against 15.6 percent in 1951.⁶ This obviously means that the comparison over the period separately for urban and rural areas is neither for exactly the same groups of the population (ignoring the increase in population over the period as a change in composition) nor for the same geographical areas. The classification is rather for the sections of the population separated into distinct groups according to their area of residence at given time points irrespective of shifts over the period either of the population or in the geographical area. The classification of the area at different points of time is actually according to certain predetermined economic characteristics considered independently at each stage. Thus, as a result of greater urbanisation over the period of study a part (though small) of the population who were not urbanites at the beginning of the period became so over the period implying an improvement in their standard of living and changed consumption and savings habits. Faster urbanisation would therefore be healthy provided it is not accompanied by a widening of the gap between the two areas. This aspect is completely missed in separate independent analysis for urban and rural population as in the present case. This would become important if and when urbanisation become fast enough to change the structure of the country within a short period. This aspect would then demand simultaneous consideration along with any analysis of the present kind.

3. Household sector by definition comprises: individuals, non-corporate business (including agriculture) and private collectives like temples, educational institutions and charitable foundations.

4. Based on Reserve Bank of India estimates of household savings (*Reserve Bank of India Bulletin*, March 1965) and personal income series derived from official estimates of private income.

5. Harry T. Oshima, 'The International Comparison of Size Distribution of Family Incomes with special reference to Asia' (*The Review of Economics & Statistics*, November, 1962).

6. Obtained by reclassification of 1951 Census data according to 1961 Population Census definition of 'urban' areas. This was necessary as the 1951 definition was somewhat different and more liberal, e.g., places with population less than 5000 were included if they had definite urban characteristics.

The study is based on limited time series data over the period 1950-51 to 1962-63. The series of household savings used are those prepared by the Reserve Bank of India and are available separately for urban and rural areas.⁷ Estimates of savings are also available from the studies of the National Council of Applied Economic Research but for the present purpose the RBI series have been preferred because of their closer comparability with the official series of national income. The overall totals of personal income have been derived from the official series of private income⁸. These estimates of income have been distributed between urban and rural population on the basis of relevant indicators.⁹ As regards household consumption, the National Sample Survey (NSS) have been collecting family budget data continuously since 1952-53 and the data are now available over a period of years. Besides the problem of comparability of these data over the first few rounds, they yield aggregate consumption levels lower than those consistent with the levels of personal income¹⁰. If one gives due credence to the levels of national income in the official series, one is left with the choice of accepting either household consumption or saving and adjusting the other to obtain a consistent picture. Alternatively, the difference could be divided either equally or proportionately between the two totals of household consumption and savings. The savings estimates prepared by the RBI have a close link with the official series of national income in terms of both source material and the method of estimation. Besides, external evidence, e.g., net availability of consumer goods or total consumption estimated by the 'commodity flow' method, suggests underestimation in the NSS data on consumer expenditure. For the present analysis therefore, the NSS data on household consumption have been adjusted (e.g., imputed income from owner-occupied houses added to expenditure on rent by households) and a revised series obtained.

The use of the time series data requires adjustment for price changes over the period. The general price level in India changed substantially between 1950-51 and 1962-63 and this change has not been uniform over all the commodities. Thus the prices of certain capital and essential consumer goods have increased more than others while for some the changes have been nominal.¹¹ Similarly the price changes have been different between urban and rural areas.¹² This however is perhaps

7. Source: *Reserve Bank of India Bulletin*, March 1965.

8. Personal income = Private income—Corporation tax—Domestic Corporate Saving.

9. Estimates of income originating in urban and rural areas are available ('Economic Growth and Rural-Urban Income Distribution, 1950-51 to 1960-61', by V. K. R. V. Rao, in *The Economic Weekly*, February 20, 1965). However, personal income here refers to income available to households for spending and saving, i.e., income accruing and not income originating. The difference between the two would be the net transferred income. No estimate of this measure is available. (According to the estimates of income originating available, the urban part formed 30 percent of the total in 1950-51, increasing to 33.8 percent in 1960-61, while urban household consumption remained almost stationary at 23 percent of the total). The ratio of urban/rural household consumption (estimates based on all-India household expenditure survey undertaken separately in urban and rural areas as a part of NSS) to total consumption is assumed to approximate the corresponding ratio for personal income most closely, primarily because of the low rates of household savings in rural India.

10. 'Construction of National Accounts for the Indian Union' by the author in *The Economic Weekly*, September 4, 1965.

11. See 'Wholesale Price Indices' for individual commodities published by Economic Advisers' Office.

12. 'Study in Trends in Consumer Expenditure, 1953-54 to 1960-61' by the author, *The Indian Economic Review*, Vol. I (New Series), No. 2, October 1966,

more true for consumer goods than for capital goods. The present study is on the basis of series at 1952-53 prices, the current price series in each case having been adjusted by the relevant price indices. Thus personal income is adjusted by the relevant index of national income derived from the official series at current and constant prices. In the case of savings physical assets of households have been deflated by the 'Construction Cost Index'¹³ while the price changes in financial assets over the period are assumed to be negligible¹⁴. The deflated series of household consumption (using price indices constructed for the purpose¹²) are adjusted to maintain the consistency with the income series.

Taking the first part of the study, viz., a satisfactory functional relationship for explaining the savings behaviour of the households, the functions experimented with are:

- 1) $S_t = a + b Y_t$ where S_t and Y_t are household savings and income at time t.
- 2) $\log S_t = \alpha + \beta \log Y_t$
- 3) $S_t = \frac{Y_t}{a + b Y_t}$
- 4) $S_t/Y_t = a' + b' \log Y_t$.

All the functional relations are in linear form and have been estimated by the simple least squares regression method with time series data over the period 1950-51 to 1962-63. One of the primary considerations for the use of the method is that it yields results which estimate both the direction and the magnitude of the relationships.

To understand the savings/consumption behaviour better, the analysis needs to be made both for all households put together and for individual economic units after eliminating the effect of the increase in population, i.e., at the per capita level. An alternative way of dealing with this problem would be to consider 'population' as an additional variable at the aggregate level. To examine the extent to which this would be worthwhile linear regressions of income and population on consumption have been worked out, as follows:

HOUSEHOLD CONSUMPTION AS A FUNCTION OF PERSONAL INCOME AND POPULATION,
1950-51 TO 1962-63

	Function	r^2	d
I. Rural	$C_t = -425.7302 + 0.9291 Y_t + 0.2631 P_t$ (0.0222) (0.1052)	0.9999	1.1108
II. Urban	$C_t = 674.9379 + 0.3345 Y_t + 0.8585 P_t$ (0.2223) (1.3951)	0.7847	1.6456
III. Overall	$C_t = -513.7060 + 0.7238 Y_t + 0.7543 P_t$ (0.1937) (0.9573)	0.9945	1.0174

13. Source: *Reserve Bank of India Bulletin*, January 1963 and March 1965.

14. On the basis of data on Index Number of Security Prices (RBI).

Obviously except for the rural area, the introduction of population as an additional variable gives unsatisfactory results. Hence, population does not appear to be of any importance in determining the nature and level of household consumption and even in rural areas it is not as important a factor as one would expect. However, a more important factor standing in the way of satisfactory results may be the presence of 'multicollinearity' as a result of the introduction of population as an independent variable. The results could be adjusted to eliminate this effect¹⁵ but this has not been attempted here as it was not considered important enough for the present study. The subsequent analysis is both for total and per capita.

The results of fitting the savings functions to the time series data are presented next. The estimated standard errors of the coefficients are given in parentheses below the corresponding coefficients. Two other statistical measures, viz., r^2 , the square of the coefficient of multiple correlation and 'd' the Durbin-Watson statistic¹⁶ for serial correlation, have also been given.

At the first examination, it is very difficult to say which of the functions give satisfactory results. In all the models the standard errors are less than the regression coefficients and hence from an overall point of view perhaps all of them give

HOUSEHOLD SAVINGS AS A FUNCTION OF PERSONAL INCOME, 1950-51 TO 1962-63

	Function	r^2	d
Aggregate			
I. Rural	$S_t = 44.0220 + 0.0156 Y_t$ (0.0029)	0.7282	1.3300
	$\log S_t = -0.6142 + 0.7281 \log Y_t$ (0.1555)	0.6658	1.2835
	$S_t = \frac{Y_t}{37.2481 + 0.0013 Y_t}$ (0.0009)	0.1671	1.2515
	$S_t/Y_t = 0.0753 - 0.0139 \log Y_t$ (0.0074)	0.2431	1.2690
II. Urban	$S_t = -951.5991 + 0.5373 Y_t$ (0.0749)	0.8240	1.4455
	$\log S_t = -11.0831 + 4.0062 \log Y_t$ (0.6291)	0.7866	1.4538
	$S_t = \frac{Y_t}{34.4475 - 0.0103 Y_t}$ (0.0027)	0.5648	1.6031
	$S_t/Y_t = -2.8979 + 0.8977 \log Y_t$ (0.1788)	0.6962	1.4115

15. J. Johnston, *Econometric Methods* (McGraw-Hill Book Company, International Student Edition, p. 201-207).

16. J. Durbin and G. S. Watson, 'Testing for Serial Correlation in Least Squares Regression', I and II, *Biometrika*, Vol. 37, 1950 and Vol. 38, 1951.

HOUSEHOLD SAVINGS AS A FUNCTION OF PERSONAL INCOME, 1950-51 TO 1962-63 (concl'd)

	Function	r ²	d
Aggregate (cont.)			
III. Overall	$S_t = -780.3608 + 0.1244 Y_t$ (0.0203)	0.7731	1.0450
	$\log S_t = -7.6052 + 2.5610 \log Y_t$ (0.4510)	0.7456	0.9894
	$S_t = \frac{Y_t}{53.1363 - 0.0029 Y_t}$ (0.0009)	0.4804	1.0017
	$S_t/Y_t = -0.6377 + 0.1708 \log Y_t$ (0.0505)	0.5703	0.9947
Per Capita			
I. Rural	$S_t = 2.9175 + 0.0096 Y_t$ (0.0071)	0.1432	1.3547
	$\log S_t = -0.3944 + 0.4671 \log Y_t$ (0.3625)	0.1312	1.3360
	$S_t = \frac{Y_t}{25.7494 + 0.0863 Y_t}$ (0.0668)	0.1316	1.3196
	$S_t/Y_t = 0.0805 - 0.0247 \log Y_t$ (0.0177)	0.1508	1.2946
II. Urban	$S_t = -260.8223 + 0.8840 Y_t$ (0.1605)	0.7339	1.7734
	$\log S_t = -15.6000 + 6.7693 \log Y_t$ (1.2761)	0.7190	1.8113
	$S_t = \frac{Y_t}{59.6744 - 0.1425 Y_t}$ (0.0376)	0.5663	1.9830
	$S_t/Y_t = -4.2186 + 1.7119 \log Y_t$ (0.3684)	0.6625	1.7790
III. Overall	$S_t = -48.3311 + 0.2259 Y_t$ (0.0472)	0.6755	1.0091
	$\log S_t = -10.3316 + 4.6933 \log Y_t$ (0.9970)	0.6683	0.9948
	$S_t = \frac{Y_t}{100.4772 - 0.2849 Y_t}$ (0.0809)	0.5301	1.0432
	$S_t/Y_t = -0.9388 + 0.4053 \log Y_t$ (0.1113)	0.5465	0.9982

reasonably satisfactory fittings. However, in terms of the statistical measures the picture is much less satisfactory. Considering the values of r^2 , at the per capita level, savings of rural households hardly appear to fit any of the functions experimented with while at the aggregate level, the results are somewhat more encouraging. One of the factors leading to such results might be an almost static absolute

level of household saving per capita in rural areas. Thus at the per capita level against a rise of income from Rs. 242 in 1950-51 to Rs. 288 in 1962-63 the savings remained stationary around Rs. 6 per person over the period. Not only is this level unbelievably low but it is of hardly any importance to give encouraging results. It is however interesting that in spite of such a stationary level of rural per capita saving, the function $S_t/Y_t = f(\log Y_t)$ gives a reasonably close fit to the data and does encourage one to use it for short-term forecasting. Whether this would be justified in the light of the other statistical measures is an important point for consideration. At the aggregate level the linear relations give the best fit (amongst the few considered). This is justified by the fact that at the aggregate level, though the rural savings do increase, the increase is not sufficient to increase the rate of saving which remains almost stationary around 2.35 percent over the whole period. Examined from the point of view of fitting the data the partial logarithmic function gives the closest fit not only for the rural areas but also for the urban areas and the overall economy. The results are further somewhat more satisfactory for urban areas and the economy than for the rural areas while eliminating the effect of population hardly affects the results. From the point of view of the satisfactory form of the savings function, $S_t/Y_t = f(\log Y_t)$ appears to be the nearest while $S_t/Y_t = f(Y_t)$ gives the most unsatisfactory results.

The Durbin-Watson 'd' statistics in no case give a value of 2.0 or higher which obviously means that there exists a certain positive serial correlation. This to some extent is implied in the nature of the estimates and cannot perhaps be overcome with the present quality of statistical material in India.

It might be worthwhile next to present the propensities to save in a summary form to bring forward the wide diversity in the savings behaviour of the households in rural and urban areas.

MARGINAL AND AVERAGE PROPENSITIES TO SAVE

	Marginal Propensity to Save	Average Propensity to Save	Income Elasticity of Savings
A. Aggregate			
I. Rural	0.0156	0.0206	0.7281
II. Urban	0.5373	0.1752	4.0062
III. Overall	0.1244	0.0561	2.5610
B. Per capita			
I. Rural	0.0096	0.0206	0.4671
II. Urban	0.8840	0.1752	6.7693
III. Overall	0.2259	0.0561	4.6933

Thus the propensities to save differ widely between rural and urban areas and much more than what one would normally expect. The overall results to a great extent conceal this substantial diversity in savings behaviour and present a more general picture. The rural sector appears to be an extreme case of unusually low savings

rate and, contrary to general expectation, even the income elasticity of saving is less than unity. This implies that there is hardly any possibility of increasing rural saving in the near future unless income registers a much more rapid growth than in the past and reaches a certain minimum level essential for savings to increase. Here it might be mentioned that the share of the rural sector in net domestic product has gone down from 69.7 percent in 1950-51 to 66 percent in 1960-61¹⁷, the share of household consumption remaining more or less unchanged¹⁸. In other words, the growth in net domestic product in the urban sector has been faster (7.2 percent) than in the rural sector (3.0 percent) and the rural population obviously still needs to reach the standard where it could add to the rate of saving of the country. As regards the urban sector, both the MPS and the income elasticity of saving give a sufficiently encouraging picture and one can reasonably expect a gradual improvement in the rate and level of household saving. However, the size of the urban sector as yet is too small to influence the overall picture of the economy. Greater and faster urbanisation combined with a rise in the economic level of the rural sector itself would be the first essential step for any rise in the rate of saving.

Coming next to the examination of the 'Permanent and Transitory Income Hypothesis', the analysis has been in terms of household income and consumption rather than saving. Two forms which correspond to relations (2) and (4) presented earlier in the paper have been fitted to the data. Here again the simple least squares regression method has been used for the purpose. However the use of the least squares regression method for the distributed lag consumption function may be questioned. Study in this regard with cross-section data shows that least squares is a better alternative than either the Koyck Transformation or the use of instrumental variables¹⁹. The following give the results of the present exercise.

TWO FORMS OF LAGGED CONSUMPTION FUNCTION

	Function	r ²	d
A. <i>Aggregate</i>			
	(a) $C_t = a + \beta Y_t + \gamma C_{t-1}$		
I. Rural	$C_t = -31.6107 + 0.9594 Y_t + 0.0251 C_{t-1}$ (0.0166) (0.0175)	0.9999	1.4264
II. Urban	$C_t = 1138.1905 + 0.4328 Y_t - 0.0531 C_{t-1}$ (0.1401) (0.2698)	0.7111	1.2714
III. Overall	$C_t = 745.8192 + 0.7712 Y_t + 0.1181 C_{t-1}$ (0.1359) (0.1597)	0.9933	0.8595

17. V. K. R. V. Rao, *op. cit.*

18. As revealed by NSS data.

19. 'Permanent and Transitory Income Effects' by Paul Taubman (*The Review of Economics & Statistics*, February, 1965).

'Estimates of Distributed Lag Consumption Functions from Cross Section Data' by Nissan Liviatan (*The Review of Economics & Statistics*, February, 1965).

TWO FORMS OF LAGGED CONSUMPTION FUNCTION (concluded)

	Function	r^2	d
<i>A. Aggregate (cont.)</i>			
<i>(b) $C_t = a + \beta Y_t + \gamma Y_{t-1}$</i>			
I. Rural	$C_t = -32.5971 + 0.9616 Y_t + 0.0225 Y_{t-1}$ (0.0165) (0.0170)	0.9999	1.3620
II. Urban	$C_t = 1115.5607 + 0.6105 Y_t - 0.2135 Y_{t-1}$ (0.1770) (0.1729)	0.7519	1.2180
III. Overall	$C_t = 847.8534 + 0.8654 Y_t + 0.0050 Y_{t-1}$ (0.1366) (0.1397)	0.9929	0.8640
<i>B. Per capita</i>			
<i>(a) $C_t = a + \beta Y_t + \gamma C_{t-1}$</i>			
I. Rural	$C_t = -2.0911 + 0.9599 Y_t + 0.0285 C_{t-1}$ (0.0181) (0.0181)	0.9995	1.4412
II. Urban	$C_t = 314.6555 + 0.0238 Y_t - 0.0619 C_{t-1}$ (0.1935) (0.3097)	0.0061	1.8237
III. Overall	$C_t = 51.7220 + 0.7149 Y_t + 0.0514 C_{t-1}$ (0.1400) (0.1722)	0.9503	0.8742
<i>(b) $C_t = a + \beta Y_t + \gamma Y_{t-1}$</i>			
I. Rural	$C_t = -2.1740 + 0.9628 Y_t + 0.0253 Y_{t-1}$ (0.0180) (0.0179)	0.9995	1.3628
II. Urban	$C_t = 360.2000 + 0.3454 Y_t - 0.5027 Y_{t-1}$ (0.1488) (0.1345)	0.6088	1.9109
III. Overall	$C_t = 55.0953 + 0.8176 Y_t - 0.0676 Y_{t-1}$ (0.1422) (0.1364)	0.9511	0.9062

The results are not very encouraging for urban areas or for the economy. This is more true from the point of view of significance of the coefficients rather than from that of goodness of fit. Considering first the distributed lag consumption function where the current consumption is the function of current year's income and a series of past incomes with geometrically decreasing weights, one is tempted to conclude that factors other than current year's income have hardly any influence in determining the current level of consumption. The low coefficient of lagged consumption implies that the combined effects of all past incomes on current consumption is extremely small compared with the effect of current income (significant only in the case of the rural sector). Alternatively, this means that 'permanent' income is determined almost entirely by the current income Y . At the per capita level, the results for the urban sector are extremely confusing and apparently suggest that current year's consumption is hardly influenced even by the current year's income. This on the face of it is very hard to accept and would perhaps require further investigation. The introduction of additional variables like household assets, prices, etc., which might have as much or more influence than income might explain the situation better. All these conclusions are just opposite of what the new Friedman-type theory attempts to establish.

The alternative relation in terms of 'permanent' and 'transitory' income

appears to improve the results with respect to goodness of fit and significance of the coefficients. This might imply that a simple or weighted average of just two years' incomes may be a better theory to apply to urban India than a whole series of past incomes with geometrically decreasing weights. However, even in this case, the results for the whole economy suggest that current consumption is related primarily and wholly to current year's income. The coefficient of lagged income still continues to be very low and even negative for urban India and for the country at the per capita level. Obviously, whatever might be the definition one might adopt, household consumption in India is apparently influenced primarily by current income and hardly by any of the past patterns of income.

The short-run and long-run marginal propensities to consume and the marginal propensities to consume out of 'permanent' or 'normal' income and 'transitory' income are presented next. To make the picture complete, the average propensity to consume, i.e., the ratio of mean consumption to mean income, as well as the simple marginal propensity to consume, i.e., regression of consumption (C_t) on income (Y_t) only, have been presented.

MARGINAL PROPENSITIES TO CONSUME

	Average MPC	Simple MPC	Short- run MPC	Long- run MPC	MPC out of		Income Elasticity of Con- sumption
					Perma- nent income	Transi- tory income	
<i>Aggregate</i>							
I. Rural	0.9794	0.9844	0.9594	0.9841	0.9841	0.9391	1.0062
II. Urban	0.8248	0.4627	0.4382	0.4161	0.3970	0.8240	0.5424
III. Overall	0.9439	0.8756	0.7712	0.8745	0.8704	0.8604	0.9219
<i>Per capita</i>							
I. Rural	0.9794	0.9904	0.9599	0.9881	0.9881	0.9375	1.0110
II. Urban	0.8279	0.1160	0.0235	0.0221	—	0.8481	0.1275
III. Overall	0.9445	0.7740	0.7149	0.7536	0.7500	0.8852	0.8148

The simple MPC turns out to be nearer long-run MPC than short-run, with this simple MPC slightly higher than the long-run. As between the long-run and the short-run, the latter is almost always lower than the former, the only exception being for the urban sector where the picture reverses. Compared with the average propensity to consume, the long-run MPC is again higher for rural areas whereas it is considerably lower for the urban sector and for the economy, implying thereby rural elasticity of consumption greater than unity in the long-run. In other words, MPC out of permanent or normal income is higher for the rural sector only which means that here 'permanent' income influences the consumption level of the households whereas for the urban sector the influence of transitory income is of substantial importance. It is interesting that for the economy as a whole the role of 'transitory' income changes according to whether the data is considered at the aggregate or at the per capita level. Thus at the per capita level, the MPC out of

transitory income is higher than the simple MPC showing greater influence of transitory income than current income. This obviously shows that the influence of 'transitory' income is hardly significant for the overall economy while it is of importance for individual economic units in determining their levels of consumption. Turning next to the income elasticity of consumption—as expected from the values of MPC's—elasticity of income is substantially lower than unity for urban India, closer to unity for the economy and greater than unity for rural India.

One interesting point which emerges from the above analysis may be mentioned in passing. The definition adopted for 'normal' or 'permanent' income in deriving the consumption function (4) is one of simple average of two years' current income only. The MPC out of permanent income derived from this relation is equivalent to long-run MPC by definition. According to the results, the long-term MPC thus derived is the same as one obtained from the alternative definition of 'normal' income adopted in (2), i.e., a weighted average of a series of past incomes with geometrically decreasing weights (for the rural sector they are identical whereas for the urban sector and for the country they are very close). From this it follows that different definitions of 'normal' income would approximately give the same parameters so long as the definitions are sufficiently reasonable. Putting it differently, for a study of this nature, one has the choice of adopting a reasonably realistic definition of 'normal' income based on the availability of data, the statistical properties and the estimational possibilities of the coefficients and then interpreting the results which follow.

The analysis so far gives sufficiently encouraging results regarding the savings and consumption behaviour of households except for urban India. In the case of the urban sector one would normally expect a much closer link of household consumer expenditures with income than what the results show. Obviously in this case factors like prices or household assets play an important part in determining the levels of household expenditure. One method of taking the price factor into consideration would be to use the series at current prices so that the effect of prices are implicitly taken account of. This has been attempted for the consumption function for the urban sector and following are the results.

LAGGED CONSUMPTION FUNCTION, URBAN AREAS (at current prices)

Function	r ²	d
<i>Aggregate</i>		
$C_t = 306.0858 + 0.4120 Y_t + 0.3673 C_{t-1}$ (0.1424) (0.2546)	0.8130	1.2539
$C_t = 675.7480 + 0.5754 Y_t - 0.0096 Y_{t-1}$ (0.3001) (0.3306)	0.7698	0.7709
<i>Per capita</i>		
$C_t = 41.4890 + 0.3418 Y_t + 0.4513 C_{t-1}$ (0.1885) (0.2761)	0.4328	1.3504
$C_t = 176.1541 + 0.4734 Y_t - 0.1239 Y_{t-1}$ (0.3441) (0.3798)	0.2734	0.7081

The results do improve somewhat and the current year's consumption here depends on the combined effect of all past incomes as much as the current year's income. This would mean that with a rise in prices urban consumers generally would not allow a fall in the money value of their consumption even if this entails a certain amount of sacrifice in their levels of savings. And this level of consumption is determined more by the trend in past incomes rather than just the previous year's income. This functional relation of lagged consumption with the current year's as well as all past years' incomes at current prices does not imply maintenance of the absolute standard of living of the households (particularly if this rise in prices has been more than the rise in income) but only of the money value of consumption. This obviously is a more important criterion of the level for the urban households irrespective of the absolute standard. In the rural sector, on the other hand, the consumption expenditure is maintained almost at the bare minimum level and is therefore affected by hardly any factor other than the current year's income.

Another factor which perhaps can explain more about urban household consumption is the level of household assets and their current use in maintaining consumption level if required. Introduction of asset holdings as an additional variable would require a comparable series of urban household assets. The household assets would primarily consist of 'house property' in urban and rural areas, together with Government securities, stocks and shares, etc., which are under individual ownership, and the assets of the non-corporate sector and non-profit making institutions. No series of household assets are readily available which could be used to examine this aspect of the problem. The only estimates relating to assets available are those of reproducible tangible wealth as well as total wealth in India for the years 1949-50 and 1960-61²⁰. These estimates are obtained as a measure of physical assets and would not give complete estimates for households. To obtain a series of household assets for the present analysis therefore, the base year (1949-50) estimates of 'residential house property' in urban and rural area have been assumed to give a rough measure of total household assets. For the subsequent period household assets have been defined as accumulated household savings and have been arrived at using the series of urban and rural household savings along with the base year figures of physical assets. According to the savings estimates, the financial savings of households became sufficiently important only around 1953-54. Previous to this, the financial savings formed only around about 4 percent of the total. Arguing along the same lines it could be assumed that financial assets in 1949-50 were not a sufficiently large amount and their omission from the total would not upset the measure of household assets in that year to any significant extent.

In view of the earlier results, consumption has next been defined as a linear function of current and past year's income (i.e., permanent income defined as average of present and previous year's income) and past year's assets. The results are in the table on page 52.

The results do definitely improve at the aggregate level both for the urban population and for the total, i.e., assets do influence the level of consumption and it is likely that to maintain the level of current consumption assets are drawn upon

20. *Reserve Bank of India Bulletin*, January 1963 (Estimates of Tangible Wealth in India).

CONSUMPTION AS A FUNCTION OF INCOME AND ASSETS OF HOUSEHOLDS

	Function	r ²	d
<i>Aggregate</i>			
Urban	$C_t = 1785.4962 + 0.4281 Y_t - 0.4356 Y_{t-1} + 0.0777 W_{t-1}$ (0.1570) (0.1619) (0.0306)	0.8628	1.9159
Overall	$C_t = 3215.0227 + 0.7087 Y_t - 0.1949 Y_{t-1} + 0.2133 W_{t-1}$ (0.1339) (0.1471) (0.0958)	0.9956	1.2998
<i>Per capita</i>			
Urban	$C_t = 350.8130 + 0.3592 Y_t - 0.4793 Y_{t-1} - 0.0060 W_{t-1}$ (0.1637) (0.1621) (0.0203)	0.6131	1.9127
Overall	$C_t = 124.8010 + 0.6717 Y_t - 0.2452 Y_{t-1} + 0.1112 W_{t-1}$ (0.1590) (0.1688) (0.0688)	0.9632	1.2582

if necessary. At the per capita level, however, the introduction of assets hardly improves the situation for the urban sector. The consumption behaviour of urban households still remains unexplained to a substantial extent and needs further investigation.

As a last attempt at defining urban household consumption behaviour, the combined effects of income, assets and prices on current consumption are studied:

URBAN CONSUMPTION AS A FUNCTION OF INCOME AND ASSETS
(at current prices)

	Function	r ²	d
<i>Aggregate</i>			
	$C_t = -117.9194 + 0.6372 Y_t + 0.4133 C_{t-1} - 0.0578 W_{t-1}$ (0.4896) (0.2827) (0.1197)	0.8183	1.1118
<i>Per capita</i>			
	$C_t = -113.6911 + 0.8914 Y_t + 0.4910 C_{t-1} - 0.0919 W_{t-1}$ (0.5025) (0.2725) (0.0781)	0.5164	1.0267

The introduction of the past year's assets in the function at current prices hardly adds to the information and the new variable is not significant for the total urban population. Even when the effect of population is eliminated, a large part of consumer behaviour remains unexplained. Obviously, the transitory component in income influences urban consumption to a very great extent and this cannot be explained by any of the other variables which otherwise appear relevant.

An examination of the data with a view to understanding the transitory component in income, which though of indefinite nature is apparently important, suggests that in the urban sector household savings could be an important factor of indeterminateness of consumer behaviour. By definition, the household sector includes non-corporate business and unorganised trade besides individuals and private collectives. Thus savings here includes besides the physical assets of households (in the form of house property only) the financial and liquid assets of individuals and non-corporate industry. The latter is subject to very wide fluctuations

due to the unsteady nature of agriculture and unorganised trade. Thus the series of urban household savings records wide year to year fluctuations and has two periods of sudden sharp decline around 1952-53 and 1957-58. According to the Reserve Bank of India this is mainly due to the series of inventories in agriculture and unorganised trade which form a part of household savings. As regards the behaviour of the marginal saving-income ratio (as estimated by the Reserve Bank of India) it is stated that "the wide swings in the marginal saving-income ratio are partly due to the fluctuations in the inventories particularly in agriculture and non-corporate business and partly statistical. The base (1950-51 to 1952-53) with reference to which the marginal saving-income ratio in period II (1953-54 to 1955-56) is calculated is unduly influenced by the saving in one year viz., 1952-53 when it reached the lowest level in the last thirteen years. This tended to make the marginal saving-income ratio in period II look unduly high."²¹ All this only points to the almost complete absence of any recognisable pattern in the series and this perhaps partly explains the unsatisfactory nature of the results for the urban sector. One way of taking account of these wide fluctuations would be to work with series of moving averages rather than the present annual data. This would no doubt help to work with a more stable series but would introduce a considerable measure of serial correlation in the results because of the overlapping years. In this case, therefore, even if the regression coefficients are unbiased, it would not have the minimum variance since the variance matrix of the errors would not be scalar. This would require a subsequent correction of the results. All this may not be worth the trouble and has not therefore been attempted.

In view of all these basic limitations, one would be justified in questioning the practical utility of any such study and in raising doubts regarding their applicability for short-term forecasting. Obviously, household consumption particularly of the urban sector has a large unexplained portion and this limits the use of these results for projection purposes. However, Indian household consumption, inhibited as it is by the low absolute level for the greater part of the population and restricted by the very limited choice of consumer spending, can perhaps emerge with a pattern only some time in the future when conditions improve and the effects of planning are more widely felt. The present study has at least, if nothing else, brought out very clearly the absolutely distinct patterns of savings and consumption behaviour of households in urban and rural areas. Thus the rural picture emerges as one of absolute minimum levels of consumption with nominal savings, and here current year's income is all that determines this level. The urban households, on the other hand, present the distinct characteristics of a more developed and complex economy with a high rate of saving both at the marginal and average level.

It might be worthwhile next to use these results for measuring the patterns of savings, etc., for the next two or three years separately for urban and rural areas. Any such exercise would, however, require that the particular models to be used for the purpose—of the many presented—are picked up and the values of the independent variables are determined. According to the results, rural household savings/consumption depends only on current income while for the urban sector consumption is best determined as a function of income for the current and the

21. *Reserve Bank of India Bulletin*, March 1965, p. 328.

past year as well as the past year's assets. Thus if the levels of income in successive years are determined these would help to estimate household savings in both urban and rural areas and household consumption in the rural sector. These series of savings in turn would measure the levels of assets, defined as accumulated savings, at the beginning of each year. Having obtained these estimates the levels of urban consumption can next be determined. Another point for consideration would of course be the rate of urbanisation and the rates of growth in urban and rural sectors independent of the overall rate of growth of the economy. These can be assessed on the basis of other relevant economic and social factors. Following these details short-term forecasting over the next three years (beyond the period for which the data are available) has been attempted. For the purpose the overall rates of growth of income for the years 1963-64, 1964-65 and 1965-66 have been taken from the official sources and it has been assumed that there has been no faster rate of growth either in the urban or the rural sector (except in 1964-65 when the rural sector is assumed to have an 8 percent growth in income against 7.7 percent overall in view of the 9.6 percent rise in agriculture). The models are used next to determine the urban and rural patterns of consumption and savings during 1963-64, 1964-65 and 1965-66. Independent functions are used for savings and consumption in urban and rural areas while income is determined exogenously. The results which follow are:

PERSONAL INCOME, CONSUMPTION AND HOUSEHOLD SAVINGS,
1963-64 to 1965-66 (at 1952-53 prices)

Year	Total (Rs. crores)				Per Capita Consumption	
	Consumption	Saving	Statistical Error*	Personal Income	Amount (Rs)	Percent Rise over 1960-61
Rural						
1963-64	11057.3	220.0	5.3	11282.6	289.9	3.3
1964-65	11936.4	234.1	14.7	12185.2	305.9	8.9
1965-66	11495.2	226.6	-19.5	11702.4	287.8	2.5
Urban						
1963-64	2507.0	819.9	-29.9	3297.0	303.6	2.6
1964-65	2596.5	938.1	-17.6	3517.0	307.3	3.8
1965-66	2531.4	885.4	2.1	3418.9	292.7	-1.1
Overall						
1963-64	13564.3	1039.9	-24.5	14579.6	292.5	3.1
1964-65	14532.9	1172.2	-2.8	15702.3	306.4	7.9
1965-66	14026.6	1112.0	-17.3	15121.3	288.3	1.8

*Statistical error measures the difference between income as exogenously determined and as the sum of consumption and saving (determined from the models).

Note: The estimates need to be expressed at 1960-61 prices for comparison with the figures in the Third Plan Report. This has not been attempted as the present study is more in terms of rates.

The results give a reasonable picture of urban and rural consumption and savings though no structural shifts are suggested. Neither the details on achievements over the Third Five Year Plan nor the estimates of national income suggest any drastic structural shift within this period and this is borne out by the present results. The only exception in the series is the rate of growth in consumption in rural households which has been higher than in urban areas according to the results. This is not very unlikely in view of the existing disparity in the levels between the two sectors. Interpreted differently, the results show that the high marginal rate of saving in the urban households continues to be the only factor influencing the overall rate of household savings while the increase in rural income is almost entirely absorbed by the bigger marginal propensity to consume. The rural household rate of saving thus continued to be at the low level of a little over 2 percent while urban savings increased to 25 percent giving an overall household rate of saving of 7.35 percent by 1965-66 against 6.7 percent during the second plan period and 6.4 percent in 1962-63. One point which might be mentioned in this connection is that the present series cover primarily the monetary part of saving while income is comprehensive in the sense of including the income in kind as well. This is likely to reduce the rural rate of saving because of the non-monetary part, if any. The rural rate of saving in actual fact may thus be higher than what the results show and this would continue to be so till the effects of planned economic development gradually reduce the non-monetary part or in other words results in greater urbanisation which has not happened till the end of the third five year plan.

According to the estimates available, household savings form about two-thirds of total domestic saving, the proportion decreasing over the period because of the gradual expansion of the public sector. Assuming the same rate to continue, the above results suggest that till the end of the Third Plan period the overall rate of saving of the country remained almost stationary at 9.7 percent, reached in 1962-63. The estimated saving thus falls substantially short of the targeted figure of 12 percent planned to be achieved by the end of the Third Plan period.

Lastly as an hypothetical exercise, these models are used to examine whether the rate of domestic saving planned to be achieved by the end of the Third Plan was feasible given the pattern of consumption and savings behaviour of households since 1950-51 and also given the rate of growth of the economy as envisaged. The results show that it is unlikely that the rate of saving (domestic) would have been more than 10.6 percent by 1965-66 (against the actual achievement of 9.8 percent) with a 5 percent annual average rate of growth of the economy²². Obviously then, much greater effort on the part of consumers as well as the public sector would have been necessary for the target of 12 percent of domestic saving to be reached. It may however be mentioned that with the low rate of savings in the rural areas such an effort would have had to be more from the public and the corporate sectors rather than from the households.

One could carry on with these exercises to cover comparatively longer periods and examine how the economy would behave say at the end of the Fourth Five Year plan given the targets of achievements. However any such exercise would require introduction of additional variables like the rate of economic growth, the

22. Target for Third Plan period.

rate of population increase, the rate of urbanisation etc., into the model besides ascertaining their values exogenously. Simplest in this regard would be the introduction of the likely rate of growth of income, say 'r' in the functional relations in the form $(Y_t - Y_{t-1})/Y_t = r$. This would reduce the savings and consumption functions to the forms:

$$S_t/Y_{t-1} = \frac{a}{1-r} + \frac{b}{1-r} \log Y_{t-1} - \frac{b}{1-r} \log(1-r)$$

$$C_t = \alpha + \frac{\beta}{1-r} Y_{t-1} + \gamma C_{t-1}$$

$$C_t = \alpha + \frac{\beta}{1-r} Y_{t-1} + \frac{\gamma}{1-r} Y_{t-2}$$

and so on. In other words, in their simplest form this would mean a reduction of the coefficients by $(1 - r)$ in most cases. The problem in this case as also for other similar cases would be more of their actual possible values rather than their introduction into the models. This however would lead one to an entirely different problem and perhaps best be the subject of a separate independent study.

Cette étude se propose avant tout de déterminer l'épargne potentielle des ménages urbains et ruraux en Inde, et ainsi, d'établir pour les deux aires des fonctions de consommation et d'épargne différentes.

L'auteur a eu recours à quatre fonctions pour cerner le comportement en matière d'épargne des ménages à la fois au niveau global et per capita. Il ressort des résultats que les ménages ruraux ont un taux d'épargne extrêmement bas avec une élasticité-revenu de l'épargne inférieure à l'unité. Par ailleurs, l'élasticité-revenu de l'épargne des ménages urbains est suffisamment élevée que pour suggérer la possibilité d'une épargne potentielle considérable.

Pour comprendre le comportement de ces ménages en matière de consommation l'auteur a dégagé les propensions marginales à consommer dans le court et le long terme, de même que les propensions marginales à consommer le revenu "permanent" d'une part et le revenu "transitoire" de l'autre. Pour le secteur urbain, aucun de ces concepts ne donne de résultats encourageants. Aussi l'analyse a-t-elle été étendue afin de voir si d'autres facteurs tels que les prix et les avoirs des ménages ne jouent pas un rôle. Alors que, pour le secteur rural, la théorie du revenu "permanent" de Friedman semble mieux s'appliquer, d'autres facteurs comme le revenu transitoire, les prix et les avoirs paraissent influencer le comportement du consommateur urbain, bien qu'aucun de ces facteurs, à lui seul, n'ait une influence déterminante. Par contre, les résultats indiquent clairement l'effet négligeable du revenu permanent sur le comportement du consommateur urbain.

Ensuite, utilisant les résultats antérieurs, l'auteur a effectué une sorte de projection afin de déterminer les niveaux possibles pour les trois prochaines années. Les résultats suggèrent que le taux d'épargne domestique, qui devait être atteint à la fin du troisième plan quinquennal (1965-1966), sera inférieur à l'objectif fixé.