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CONSUMPTION AND INCOME IN CALCUTTA METROPOLITAN AREA

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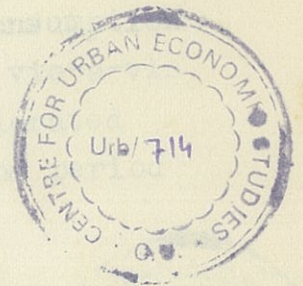
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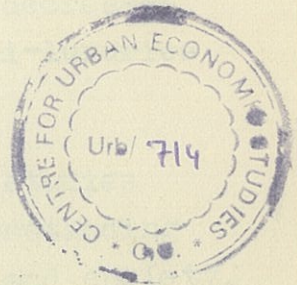


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ABSTRACT

The paper analyses the income and consumption pattern of the population living in the Calcutta Metropolitan Area. The study is based on data available from the various family budget studies conducted by the Bureau of Applied Economics and Statistics, Government of West Bengal covering the period 1951-1977 (1). If we subdivide the entire period into two sub-periods, we find that in 1951-71, the poor have become even poorer and the richer have become even richer (in real terms). But, during 1971-77 the poor fared better compared to rich. Further, this study has brought out very clearly that the relative position (in respect of income and consumption expenditure) of an average person of Calcutta vis-a-vis some other urban centres of West Bengal deteriorated during 1961-71 but improved somewhat during the period 1971-77.

- (1) Data for more recent years were not available when the study was done.



This is a revised version of the paper the author has prepared when she worked as a resource-person in the Task Force of Calcutta Metropolitan Development Authority in 1986.

CONSUMPTION AND INCOME IN CALCUTTA METROPOLITAN AREA

Indrani Chakraborty

I. Introduction

Family budget studies analyse household consumption behaviour on the basis of incomes and expenditures of a cross-section of individual households at a given period of time. Studies in this field have a long history dating back to 1857, when Engel, on the basis of his pioneering analysis of family budget data relating to 153 Belgian families, proposed the following law: 'The poorer the family is, the greater is the proportion of total outgo (total expenditure) which must be used for food'. In generalised version, the law states that, as the level of household income increases, the proportion of total consumer expenditure devoted to the more urgent needs (such as food) decreases, while the proportion devoted to luxuries and semi-luxuries increases.¹

For a number of reasons family budget studies are highly useful. These help to enrich our understanding of an important aspect of human life, behaviour and society. These are also useful in devising more efficient use of resources and more effective solutions to marketing management problems.² Family budget analysis also enables one to have some ideas regarding the demand side of the market structure besides helping to construct cost of living indices for different years which, in turn, also helps to give some idea regarding changes in standard of living. Lastly, family budget analysis also helps to visualize the conditions of the poor, to identify groups which should be given priority attention, and also to help in formulating policies which might help their upliftment.

Before the launching of the Five-Year plans, hardly any attempt was made to analyse consumer behaviour in India. Since the early fifties, a number of studies on consumer behaviour have been conducted in connection with the formulation of these plans. Almost all of these were based on the National Sample Surveys' (N.S.S.) countrywide cross-section data on household consumption. Some recent regional studies have also brought out some important issues relating to inter-regional differences in consumer behaviour.³

This paper seeks to analyse consumer behaviour in the context of urban West Bengal, particularly its metropolitan city - Calcutta.

This paper is divided into the following sections. Section II deals with the coverage and limitations of the data source, Section III reviews incomes and expenditures of different economic groups of Calcutta during 1951-1977. Section IV presents profiles of some urban centres of West Bengal, and tries to establish the relationship between population size and per capita income. This section also seeks to rank the centres on the basis of income and expenditure and compare the relative position of Calcutta vis-a-vis other urban centres of West Bengal. Section V summarises the main conclusions of this paper.

Let us point out at the outset that, given the fragmentary nature of the facts and figures available at the sub-regional level, the conclusions drawn here may be taken as tentative ones. Moreover, data for years beyond 1976-77 are not available which makes this study somewhat out of date. It is hoped that this study would help to understand the changes in consumption pattern during the first three decades since independence; and would also point to

broad patterns and trends which would also permit a better understanding of the present situation.

II. Data source, coverage and limitations

The Bureau of Applied Economics and Statistics (B.A.E.S.), Government of West Bengal, conducts family budget surveys at an interval of five years. These surveys are the main source of data used in this study. In addition, occasionally, census figures have also been consulted.

The B.A.E.S. began to undertake large scale sample surveys of household budgets and other aspects of levels of living in 1950-51 with a view to study the impact of the development programmes on consumption pattern and changes in levels of living. Reports of the last two surveys (i.e. for the years 1981-82 and 1986-87) are, however, not yet available for public use and, hence, this study has to restrict itself to the period 1951-1977.

These surveys are based on stratified random sampling, and are more or less exhaustive and representative in nature and cover various aspects of a family, viz. average size, income and expenditure of family, among others.

Some of the important concepts and definitions followed in these surveys are discussed below.

(i) Family and resident members : A family consists of a group of persons having relation through blood, marriage or by adoption and usually living together and taking principal meals from the same kitchen during the major part of the reference year (i.e., a period of twelve months preceding the date of survey). Persons who are not regular members of the family, namely, tutors,

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paying guests, servants, etc., but normally take meals from the same kitchen are also considered as resident members of the family. (However, they were not included as family members in the surveys since 1950-51). But servants employed, mainly for nondomestic work, have been excluded from the purview of the survey even though they take meals from the same kitchen. Children less than six months old, temporary visitors and persons who died more than six months ago are also excluded, whereas members who were temporarily absent are included.

(ii) Family size : The number of resident members excluding servants, tutors, paying guests etc. in a family constitutes its size.⁴

(iii) In presenting statistical tables families have been classified into different monthly income groups. Starting from 1951, upto 1966, five such groups were considered - viz. (a) Rs. 1-100, (b) Rs. 101-200, (c) Rs. 201-350, (d) Rs. 351-700, (e) Rs. 701- and above. From 1971 onwards, however, the groups have been (a) Rs. 1-200, (b) Rs. 201-500, (c) Rs. 501-1000, (d) Rs. 1001 and above. The annual total disposable income of the family accruing from gainful activities as well as other income from transfer payments divided by twelve has been taken to be the average monthly income of the family. The average monthly income divided by the size of the family gives the average per capita monthly income.

(iv) Expenditure groups : In order to discriminate between different economic groups, the surveyed families have been classified in terms of some monthly expenditure levels. The groups are the same as the income groups. The expenditure levels of the families have been determined on the basis of total expenditure excluding life insurance,

other insurances and provident fund, purchase of land and buildings, livestock, ornaments, share or securities, other assets and cash savings.

(v) Consumer expenditure : Consumer expenditure covers all expenditures incurred by the family solely on domestic account, including consumption out of homegrown produce or transfer receipts like gifts, loans, etc. But transfer payments like gifts, charities, etc. made by the household are excluded. Consumption out of gifts, loans, etc., consumption of homegrown articles as well as of articles acquired through barter exchanges are evaluated at the average annual retail prices. Although expenses towards repair and maintenance of residential buildings are included, expenditures on purchase and construction of residential houses, being capital expenditures, are excluded from the coverage of consumption expenditure.

Limitations of the data source

The estimates are based on sample surveys in which the households are asked about their consumption during a past period and what is recorded in the schedule is what the respondents have told. In the process, apart from recall lapses, there could be biases in the information supplied. Respondents may have a tendency to overestimate some items of consumption and underestimate some others. There is no way to get over this response bias completely and we do not know definitely whether there is any systematic overestimation or underestimation in the aggregate. It is not improbable that the biases change in unusual situations. For example, when prices increase very sharply, the expenditure as reported may be more than what is warranted by price rise, due to biases. However, such limitations are not peculiar to family budget surveys; these are inherent in most types of surveys.

The most important limitation, peculiar to the family budget surveys conducted by the B.A.E.S., is the problem of comparability. Concepts and definitions followed were not uniform over the years. For example, in the definition of 'family size', all the members including tutors, paying guests, servants etc. were included in 1950-51, but they were excluded in the years 1960-61, 1971-72, 1976-77. This difference in definition affects mostly the higher income groups (who can afford to keep servants etc.) and in turn affects per capita income (which is equal to family income divided by family size) for these groups. Hence, conclusions regarding the changes in average per capita income for the relatively higher income groups during the period 1951-77 get qualified to some extent by this limitation. Again, while bustees have been excluded in the 1950-51 survey, these have been included in the subsequent ones. Thus, a comparison with other time periods might show 1950-51 in a more favourable light than it deserves.

The problem of comparability crops up again when one seeks to carry on a comparative analysis of different economic groups between two time periods, say, 1950-51 and 1971-72 or 1950-51 and 1976-77, because the groups were not strictly comparable, and corresponded to somewhat different sets of income levels. While this allows for increase in average money income, such reclassification has been done without taking into account the price effect and hence the question as to whether the lowest income group of 1951 is comparable with that of 1971 or 1977 remains unanswered.

Adjustments

In order to overcome this problem of comparability, some adjustments have been made in this study so as to make the economic groups of 1951 some what comparable with

those of 1971 or 1977. The adjustment procedure adopted here is given below :

Money income of 1971-72 has been deflated by the general consumer price index number for that year (which is equal to 200.32 with 1950 = 100). Since Rs. 200 of 1971 corresponds more or less to Rs. 100 of 1951 in real terms, the group Rs. 1-100 of 1950-51 is taken as more or less comparable to the group Rs. 1-200 of 1971-72. On this basis, the groups Rs. 200-500, Rs. 500-1000 and Rs. 1000 and above of 1971-72 become more or less comparable to the groups Rs. 100-250, Rs. 250-500, Rs. 500 and above of 1950-51, respectively. But the problem is that, data on average income, expenditure, etc. are not given accordingly (e.g., we have data for the group Rs. 100-250). However, this problem can be tackled, at least to some extent, if we assume that families are evenly distributed throughout an income range (i.e., 1/3 of total families belonging to the income range Rs. 200-350 belongs to the range Rs. 200-250) and adjust all the observations accordingly (by using the proportion of total families belonging to a particular income/expenditure range as the relevant weight). Though this assumption is crude and simplistic in nature, we have no other way out. Similarly, deflating money income of 1976-77 by the general consumer price index number (which is equal to 309.34 with 1950 = 100), we find that Rs. 300 of 1976-77 corresponds more or less to Rs. 100 of 1951. Therefore, the groups Rs. 1-100, Rs. 100-250, Rs. 250-500 and Rs. 500-1000 of 1951 become comparable to the groups Rs. 1-300, Rs. 300-750, Rs. 750 and above, respectively, of 1976-77. The reported data of 1976-77 have been adjusted accordingly. By this method we lose information for the highest income group for 1976-77; but that does not matter much because we can analyse the changes in the levels of living of the relatively poor groups (which are the main target groups of economic planning).

Basing on these adjustments, we have categorized all the surveyed families into four (three in case of 1976-77) economic groups viz. (i) the lowest income group corresponding to Rs. 1-100 of 1950-51, Rs. 1-200 of 1971-72 and Rs. 1-300 of 1976-77, (ii) the lower middle income group corresponding to Rs. 100-250 of 1951, Rs. 200-500 of 1971, and Rs. 300-750 of 1976-77, (iii) the upper middle income group (or the relatively richer group for 1976-77) corresponding to Rs. 250-500 of 1951, Rs. 500-1000 of 1971 and Rs. 750 and above of 1976-77, (iv) the highest income group corresponding to Rs. 500 and above of 1951, and Rs. 1000 and above of 1971-72.

On that same basis, the lowest income group, lower middle income group, upper middle income group and the highest income group of 1960-61 correspond to Rs. 1-110, Rs. 110-275, Rs. 275-550, Rs. 550 and above, respectively.

III. Income and expenditure in Calcutta city during 1951-1976

The aim of this section is to analyse the changes in income and consumption expenditure levels and spending pattern etc. of an average family of Calcutta (Tollygunge was excluded during 1951-1961 but included thereafter) during the period 1951-1977.

Let us first see how average income per month (both on per family and per capita basis) has undergone changes during the period under study (see Table 1).

Overall change

The table reveals the fact that, over the entire period 1951-1977, the average monthly income per family has increased by 119.64 per cent in money terms.⁵ (Income

here includes both earned income and unearned income e.g., asset income like rent, interest and transfer receipts, etc.). The entire period can be divided into three sub-periods, viz., 1951-61, 1961-71, 1971-77. It is observed that during the period 1951-61, average family income decreased by 27.37 per cent in nominal value; perhaps due to the reason that the increased concentration of the families in the lower income range during this period. While the percentage of families belonging to the lowest income group was 42.34 per cent in 1950-51, it was as high as 68.62 per cent in 1960-61. On the other hand, concentration in the highest income range was less in 1960-61 than in 1950-51 (4.23 per cent in 1960-61 as against 9.97 per cent in 1950-51).⁶ Another partial explanation for a decline in average income during 1960-61 from that of 1950-51 might be that while the bustees were excluded from the survey in 1950-51, these were included in 1960-61. If we assume that average income of bustee dwellers is relatively lower compared to that of the general residents, (which is generally the case, as confirmed by the Family Budget Report of the B.A.E.S. for the year 1955-56), this may explain, at least partly, the decline.

The sub-periods 1961-1971 and 1971-1977 were however marked by improvements in nominal money income by 86.39 per cent and 63.36 per cent, respectively. However, a comparative analysis of family income does not tell much about the changes in living standard; since the size of families may differ, per capita income is a better indicator in this respect. Table-1 depicts the fact that per capita income increased by 201.35 per cent (in money terms) over the entire period 1951-1977. It can be mentioned that the rate of increase was much higher in case of per capita income than in case of family income. It is due to the

fact that average family size was much lower in 1976-77 compared to that of 1950-51 (it was 4.73 in 1977 and 6.49 in 1951).⁷

However, a more important question from the point of view of planning is whether there has been any improvement in the real standard of living during the period under study, and here the answer is a depressing one as both family income and per capita income declined in real terms (i.e., in terms of 1950-51 prices). Family income, which registered an increase of 119.64 per cent in money terms, declined by 29 per cent in real terms. While per capita income increased by 201.35 per cent in money terms, it declined by 2.59 per cent in real terms during the period 1951-1977. The rate of price increase was evidently much faster than the rate of increase in money income.

If we concentrate solely on earned income (excluding income from other sources, e.g., transfer payments etc.) we find from Table 2 that, during the period 1951-1971, per capita earned income declined in real terms while, over the entire period viz., 1951-1977, there had been some improvement in this respect. But we have found that total per capita income (earned + unearned) recorded a marginal decline in real terms over 1971-77. It in turn implies that the rate of decline in real unearned income was much greater than the rate of increase in real earned income. However, one point is quite obvious : that total income as well as earned income (on per capita basis) registered a net decline in real terms during the period 1951-1971.

It may, however, be mentioned in this context that, since bustees were excluded in 1950-51 but included afterwards, income figures for 1950-51 and subsequent years are not strictly comparable. Inclusion of bustees in

1950-51 may lead to a lowering of per capita income in 1950-51 (because usually relatively poorer people live in bustees) and in that case change in real standard of living during 1951-1971 might have been somewhat different. To check this, some crude adjustments have been undertaken. In 1955-56, general holdings, bustees and refugee colonies were surveyed separately. Taking the proportions of total family members belonging to general holdings, bustees, refugee colonies as the respective weights, we can combine the three income categories to arrive at the combined average per capita income. It has been found that the combined per capita earned income was 11.28 per cent lower than the per capita earned income of general holdings in 1955-56. If we assume that the respective weights and the degree of difference in per capita income were the same in 1950-51 as in 1955-56, we can recalculate per capita earned income for 1950-51 by including bustees and refugee colonies, and thus can make it somewhat comparable to that of 1971-72. On this basis per capita earned income for 1950-51 has been found to be Rs. 38.68 (in place of Rs. 43.60) compared to per capita real earned income of Rs. 39.15 in 1971-72. Thus, after adjustment, we find a slight increase in earned income during 1951-1971. Not only that, the extent of improvement in the real standard of living (reflected in terms of earned income) during 1951-1977 goes up due to this adjustment. However, this adjustment can not be made on total income since, in the 1955-56 report, only earned income has been considered. Thus, our previous conclusion regarding the change in total income during the period 1951-1977 may not be very exact. One possible way out may be to concentrate on the period 1961-1977, when bustees were covered from 1960-61; we find that both per capita total income and per capita

earned income registered some decline in real terms during 1961-71 but showed signs of improvements during 1971-77.

In other words, we can say that real standard of living deteriorated during the period 1961-1971 but scored a marginal improvement thereafter. One explanatory factor for such a change may be a change in average family-size. Average family size was higher in 1971 compared to 1961 (it was 5.29 in 1971 against 4.78 in 1961; which may be due to the influx of refugees caused by the Bangladesh war) and, consequently, per capita income was lower in 1971 compared to 1961. An opposite trend was visible during the period 1971-1977.

Consumption expenditure

Now, let us see whether there has been any change in the level and pattern of consumption expenditure (which is another important indicator of standard of living) during the period under study.

Table 3 shows that nominal monthly consumption expenditure per family increased by 84.46 per cent and nominal per capita consumption expenditure increased by 153.10 per cent during period 1951-1977.⁶

However, in real terms the picture is discouraging: family consumption expenditure declined by 40.37 per cent, while per capita consumption expenditure declined by 18.18 per cent in real terms during the same period.

If we concentrate upon the period 1961-1977, we find that both family consumption expenditure and per capita consumption expenditure increased in real terms during the period 1961-1977 though very slightly. One perplexing feature that requires clarification is that while real income

declined during the period 1961-1971, real consumption expenditure actually increased during the same period. As an explanation, one may perhaps argue that real consumption expenditure is not only a function of real income but also of some other factors like age-sex composition, communal composition, spending habits, etc. However, the change in the real consumption expenditure during the whole period 1961-1977 corroborates the change in real income during the same period.

Now, examining more closely the composition of consumption expenditure, we find that⁹ the percentage of food expenditure to total consumption expenditure has increased from 47.74 per cent in 1950-51 to 52.05 per cent in 1976-77, while the percentage of non-food expenditure to total consumption expenditure has correspondingly declined from 52.26 per cent to 47.95 per cent. This change in the consumption pattern is not in line with the historical experience of the developed countries where economic development was associated with increased share of non-food expenditure in total consumption expenditure and a correspondingly decreased share of food expenditure.¹⁰ This, in fact, indicates a process of underdevelopment in Calcutta during the period under consideration.

However, the performance during the subperiod 1971-77 was relatively satisfactory in this regard. During this period, the share of food expenditure declined from 54.19 per cent to 52.05 per cent and the share of non-food expenditure correspondingly increased from 45.81 per cent in 1971-72 to 47.95 per cent in 1976-77. Further, considering the entire period, we find that, though the share of food expenditure in total consumption expenditure increased, food expenditure in real terms recorded a decline of 34.99 per cent (Table 4). The rate of decline in non-food expenditure (in real terms) was even greater.

Table 5 shows that while per capita consumption of wheat, potato etc. increased, those of nutritive food items like milk, fish, meat, egg, etc. recorded a marked decline (in physical terms) during the period 1951-71, indicating a decline in the nutritional quality of overall food consumption. While the increase in the consumption of wheat and potato is a positive feature, this was more than outweighed by a significant decline in the consumption of rice and quality foods. In other words, there was a marked substitution of rice by wheat and of nutritive items by the less nutritive ones, along with a general deterioration in the standard of living.

Considering the subperiod 1971-77, we find that the consumption of rice, wheat and potato increased along with that of nutritive items like milk, fish, egg, meat, etc. (all in physical terms). This is a positive finding which confirms the healthy change in the standard of living.

One may ask why, despite a decline in the real income, there has been an increase in the consumption of relatively expensive nutritive items like milk, fish, etc. In order to answer this question one might mention that real income alone can not explain the change in consumption pattern. Factors like age-sex composition, spending habit, price of individual item etc. all combine together along with real income to produce a change in real consumption.

As far as non-food items are concerned, it has been observed that the share of the miscellaneous group¹¹ (which is a residual category that includes expenditure on education, health, entertainment, domestic services etc.) in the total consumption expenditure declined from

31.78 per cent in 1951 to 25.64 per cent in 1977, the shares of clothing, fuel-light recorded some improvements, while that of housing registered a marginal decline (Table 6). This is consistent with our earlier findings. In a situation of declining living standard, one would expect relatively more to be spent on necessities like clothing, fuel etc., while economising on miscellaneous items.

Change according to family income levels

So long our discussion has been carried on in terms of an average family without taking into account the effect of income distribution among families at different income levels. We will now classify the surveyed families into different income categories and examine the pattern of change in income and consumption expenditure for these categories.

As has been mentioned earlier¹², families can be classified under four income/expenditure groups, i.e., (i) the lowest income/expenditure group, (ii) the lower middle income/expenditure group, (iii) the upper middle income/expenditure group, (iv) the highest income/expenditure group.

Let us examine how the distribution of families among different income groups has undergone changes during the period under study.

Table 7 reveals the fact that the maximum concentration of families was in the lower middle income group in all the years. It is also clear that, over the entire period 1951-77, while the percentage belonging to the relatively lower income groups has increased, the percentage of families belonging to relatively higher income

groups has decreased. This again confirms a decline in the level of living in the city during the period. But the sub-period 1971-77 indicates just the opposite trend, which again confirms the earlier finding relating to this sub-period, that there was an improvement in the living standard.

Analysing the changes in the relative economic positions of different economic groups, it has been found that per capita income has increased - both in nominal and real terms - for all the groups. (Table 8 (a) and 8 (b)). From Table 8 (a) we find that family income has increased both in money terms and in real terms for the lowest and lower middle income groups. But if we merge the two upper income groups, we find that there has been a decline in family income in real terms for this merged group over the period 1951-1977. However, per capita income for that group has registered an improvement in real terms, it is because of the fact that family size was higher for that group in 1951 compared to that of 1977 (8.47 in 1951 as against 5.99 in 1977).¹³ The same story was also true regarding the period 1961-1977.

Another important point to note is that, during 1951-77, while per capita real income had increased by about 14 per cent, for the lowest income group, per capita real income for the relatively higher income group (the merged group) had increased by only about 10 per cent.¹⁴ This indicates that income distribution become less skewed during this period. But despite this, the average real per capita income recorded a marginal decline during this period (as has been found in the previous section). This is due to the fact that the number of poor increased

over the same period (i.e., thus, the weight structure changed in such a way that, though, individually, all the groups recorded increases in real income, the average income went down in real terms).

Considering the sub-period 1951-1971, we find from Table 8 (b) that while the real per capita income for the lowest and lower middle income group decreased, that for the upper middle and highest income groups increased.¹⁵ In other words, relatively poorer families became even poorer while relatively rich families became richer over twenty years. The period 1961-1971 too depicted the same picture. The sub-period 1971-1977 shows just the opposite trend. While real economic position of the relatively poorer families had undergone some improvements, that of the relatively richer families showed signs of a marginal decline (on family income basis).

Now, let us see, how the distribution of consumption expenditure among different economic groups changed during the period 1951-1977.

Table 9 makes it clear that rates of increase in nominal per capita consumption expenditure for the lowest income group, lower middle income group and relatively higher income group (two upper income groups being merged together) were 226.51 per cent, 199.06 per cent and 177.66 per cent, respectively, during the period 1951-77. Both growth and distribution were healthy. In real terms however, only the lowest income group experienced some improvements while the lower middle income group and the relatively higher income group recorded some decline. It is not very easy to explain why despite a rise in real per capita income for these two groups, their real per

capita consumption expenditure declined during the same period. Factors such as changes in age-sex composition, taste pattern, race-caste-religious composition etc. may have some bearing in this context. (Economic groupwise figures on consumption expenditure are not available for the year 1960-61; so 1961-1971 figures are missing in this table).

If we study the pattern of change in the composition of consumption expenditure among different economic groups, we find that for all the groups, the share of food expenditure in total consumption expenditure increased while the share of non-food expenditure declined during the period under study (Table 10).

So long we have analysed changes in income and consumption expenditure over time. Now, let us see how consumption expenditure varies among different economic groups at a particular point of time.

A careful study of the family budget data confirms Engel's law of consumption in the context of Calcutta; as expenditure or income level increases, percentage of expenditure spent on food decreases; percentage of expenditure spent on clothing, housing etc. remains more or less the same at all expenditure levels and that on the miscellaneous group increases with an increase in the expenditure level (Table 11). That this was not a peculiar feature of a particular time period chosen, but a regular phenomenon - true for all these years - is seen from Table 12.

When income or expenditure level increases, along with a decline in the share of food expenditure, composition of food expenditure itself changes; with

increase in income, the proportion of food expenditure on cereals like rice, wheat, etc. declines or at least remains the same and that on quality food items like fish, meat, egg, milk etc. increases. This qualitative change in consumption is an important aspect of consumer behaviour which can be confirmed from Table 13. This is again a consistent phenomenon, true for all the years studied.¹⁶

V. A profile of some urban centres of West Bengal

This section seeks to present a profile of some urban centres of West Bengal which have been covered by family budget surveys and tries to make some comparative analysis between Calcutta and other centres on the basis of their income and consumption expenditure patterns.

From Table 14, we can find out the relationship between per capita income and population size. It has been found that the correlation coefficients between per capita income and population size were $r = 0.65$, $r = 0.73$ in 1961, 1971 and 1977, respectively.¹⁷ They were all statistically significant at 5 per cent level of significance. These imply that the relationship between population size and per capita income is a positive one, i.e., the larger a town, the larger is the per capita income; perhaps because of the fact that in a large town, there are diversified sources of economic activities and the scope of high income generation is higher compared to a small town. Of course, it depends on the very nature of their economic activities - income is generally higher in an industrially developed town compared to an agricultural town.

From Table 15, we observe that, in 1961, in terms of per capita monthly income, Calcutta was in the

first position while Contai held the last position. In 1971, Jalpaiguri headed the list (which occupied the fourth position in 1961), while Calcutta came to occupy the second position and Basirhat was in the lowest position. In 1977, Calcutta recovered her lost status and occupied the first position while Contai again stood last.

Beside individual ranks, changes in the ranks over time are also important. Table 14 makes it clear that for most of the centres (excepting a few), the income gap between Calcutta and other urban centres narrowed during the period 1961-1971. On the one hand, there was a general deterioration in the real standard of living in Calcutta City and on the other hand, economic activities and infrastructural facilities were diffused to smaller urban centres (at least to some extent) through state intervention. Consequently the income differential between Calcutta and other urban centres tended to narrow.

In 1977, however, again, there was a divergence. The income differential between Calcutta and most of the other urban centres widened again. How Calcutta's income managed to grow at a faster rate during 1971-1977 - a period of stagnation - is a mystery. As an explanation it may perhaps be argued that Calcutta is not basically an industrial town; so industrial stagnation did not affect Calcutta as much as it did other industrial towns like Howrah or Serampore. Thus, while Serampore that registered an income growth of 141.02 per cent during 1961-71, recorded only a 21.75 per cent growth during 1971-77; Calcutta city, which recorded a growth rate of 68.38 per cent in 1961-71, registered 82.76 per cent growth during 1971-77 (see Table 15).

During 1960-61, a distinct trend was visible in the close neighbourhood of Calcutta, i.e., the farther a town was from Calcutta, the lower was its per capita income. This can be confirmed from Table 16 where we have considered only seven urban centres belonging to Calcutta Metropolitan Districts that have been covered by family budget surveys. This table shows that, generally speaking, the greater the distance from Calcutta, the lower was the per capita income in 1961; Chinsurah being a district headquarter and an administrative town with an independent economic base, was the only exception. The correlation co-efficient (r) between per capita income and distance from Calcutta has been found to be equal to -0.77 in 1961 and the negative relationship has been proved to be statistically significant at 5 per cent level of significance. However, for 1971, the correlation coefficient, though still negative, has been found to be low, at -0.34 , and statistically insignificant. This, in turn implies that the observed tendency in 1961 was not distinctly visible in 1971; per capita income was relatively higher in a town distant from Calcutta (e.g., Naihati). This divergence from the pattern observed earlier can again be explained by the fact that income differences between Calcutta and other urban centres narrowed during 1961-1971. Though this exercise is very restrictive in nature, since only seven centres have been studied, it indicates an important deviation.

In 1977, this deviation got strengthened; ' r ' was found to be -0.05 and statistically insignificant. All these imply that distance is no longer a constraining factor for high income generation because transport facilities have improved.

R, 865

In respect of per capita consumption expenditure, while Calcutta held the first position in 1961, it came to occupy the fourth position in 1971. In 1977 again, Calcutta headed the list (Table 17).

Table 17 also makes it clear that, excepting for a few cases, the differences in per capita consumption expenditure between Calcutta and most of the other urban centres narrowed during 1961-1971. But during the next sub-period, 1971-77, again, we find a diverging tendency, thus, the changes in income and expenditure moved in the same direction.

VI. Summary and conclusion

Our examination of family budget data for Calcutta shows that, though monthly income and consumption expenditure of an average family (as well as an average person) of Calcutta registered some progress in money terms, these actually declined in real terms during the period 1951-1977. The sub-period 1951-1971 was marked by a deterioration in the real standard of living, while the next sub-period 1971-1977 was marked by a marginal improvement, both family income and per capita income slightly increased in real terms during this period. One surprising feature is that though family income in real terms increased, family consumption expenditure (in real terms) declined during the same period, perhaps due to a change in family composition, spending habit etc. Per capita real consumption expenditure, however, recorded some marginal progress.

We noted, since bustees were excluded from the survey of 1950-51 but included afterwards, conclusions relating to the period 1951-1977 are to be studied with caution. In this respect, comparative analysis of the years 1960-61 and 1976-77 may reflect better picture. It has been observed that per capita real income declined during the period 1961-1971 but increased during the next sub-period 1971-1977; the net result is that it increased over the entire period 1961-1977. Per capita real consumption expenditure too recorded progress over the whole period 1961-1977. But, as stated before the rate of progress was far below the national average, and was almost imperceptible.

It may not be out of place to mention in this context how average family size has undergone changes during the period 1951-1977, indicating a process of nucleation. Average family size declined from 6.49 in 1950-51, to 4.78 in 1960-61, 5.29 in 1971-72 and 4.73 in 1976-77. Increase in the average family size during 1971-72 may perhaps be explained (at least partly) by the influx of refugee from East Pakistan due to Bangladesh war.

Not only real income and real consumption expenditure declined over the period 1951-1977, the number of poor families increased too. It has been found that while the concentration of families in the relatively lower income range has increased, that in the relatively higher income range has decreased during the period 1951-1977.

All these have their bearings on the pattern of consumption expenditure. Changes in the composition of consumption expenditure were not at all in ~~line~~ with what one would expect in a progressive economy - the share of

food expenditure in total consumption expenditure increased and that of non-food expenditure decreased during the period 1951-1977.

Classifying the families into different income categories, it has been found that the average income of all the groups increased over the entire period 1951-1977 in real terms (remarkably enough, income of poorer families increased at a much higher rate compared to that of richer families). It may sound surprising that though individual groups have shown signs of progress (in terms of real income), the combined average income has shown - a decline during the same period. Changes in the weight-structure may be held responsible for this apparently paradoxical result. However, the increase was almost insignificant.

If we subdivide the entire period 1951-1977 into two sub-periods; we find that in 1951-1971, the poor have become even poorer and the richer have become even richer (in real terms). But, during 1971-77 the poor fared better compared to rich.

Engel's law of consumption has been found to hold good in Calcutta. At a point of time, as expenditure or income level increases, the percentage of expenditure spent on food decreases; the percentage of expenditure spent on clothing, housing, etc. remains more or less the same while that on the miscellaneous group (which includes education, entertainment, etc.) increases. Not only that, as income or expenditure level increases, along with a decline in the share of food expenditure, the composition of food expenditure itself changes; the proportion of food expenditure on cereals like rice, wheat etc. declines or at least remains the same and that on quality food items like fish, meat, egg, etc. increases.

The last section of this paper has presented profiles of some urban centres of West Bengal. It has been found that the relationship between population size and per capita income of a town is consistently a positive one, i.e., the larger a town, the larger is the per capita income.

Calculation of correlation coefficient between the distance of a town (from Calcutta) and per capita income has revealed that the relationship was a significantly negative one during 1961. In the subsequent years, though the relationship was still negative, it lost statistical significance. All these in turn imply that, due to some improvement in transport and infrastructural facilities, it has been possible to generate relatively higher income even in a town located at some distance from Calcutta, e.g., Naihati.

This study has brought it out very clearly that the relative position (in respect of income and consumption expenditure) of an average person of Calcutta vis-a-vis some other urban centres of West Bengal deteriorated during 1961-1971 but improved somewhat during the period 1971-1977. In other words, most of the other urban centres grew at a relatively higher rate compared to Calcutta during 1961-1971, but Calcutta grew at a relatively higher rate compared to other centres during the next period. One may ask how Calcutta managed to grow at a higher rate (than that of the previous period) in a period of industrial stagnation, i.e. 1971-1977. As an answer, it may perhaps be said that industrial stagnation did not affect Calcutta (which is not an industrial town) in the same manner as it affected towns like Howrah, Serampore, etc. (which are basically industrial in nature).

To say somewhat differently, one may thus conclude that there was a decline in inequality in the distribution of income and expenditure between Calcutta and some other urban centres of West Bengal, in relative terms, during 1961-1971 (though there was still a substantial level of absolute inequality in the distribution of income and expenditure). During the period 1971-1977, however, there was a reversal of this trend.

Notes and References

1. See B.M. Mahajan, Consumer Behaviour in India, An Econometric Study (New Delhi, 1980), pp. 150-151.
2. See James F. Engel, David T. Kallat, Roger D. Blackwell, Consumer Behaviour, (New York 1973), p. 9.
3. See B.M. Mahajan, (1980), Op. cit., p. 5.
4. However, in 1950-51, servants, paying guests, tutors, etc. were also included in the definition of 'family'.
5. In 1950-51, 'income' included the proceeds from sale of assets, loans taken and other money receipts. These have been excluded so as to make the definition of income of 1950-51 comparable to those of 1971-72 and 1976-77.
6. See Family Budget Survey Reports, 1950-51 and 1960-61 (B.A.E.S., Government of West Bengal).
7. See Family Budget Survey Reports - 1950-51, 1976-77 (B.A.E.S., Government of West Bengal).
8. In 1950-51, 'Consumption expenditure' included purchase of assets, insurance, provident fund etc. These have been excluded to make the definition of 'consumption expenditure' identical in 1950-51, 1971-72 and 1976-77.
9. See Family Budget Survey Reports, 1950-51 and 1976-77.
In the 1950-51 report, however, the share of food expenditure to total expenditure is given; the share of food expenditure to total consumption expenditure has been calculated by us.
10. In the United States of America, there had been a twelve-fold increase in national income and expenditure between 1869 and 1928, but national expenditure on food rose only nine-fold. The percentage of expenditure on food declined from 35 per cent to 28 per cent of the total expenditure. During the same period, in Sweden, national income increased by five-fold but the national expenditure on food

rose by only four-fold and the percentage of food expenditure declined to a little over 29 per cent. Colin Clark and other well-known authorities have stated that the index of economic development and a rising standard of living in a country is the decline in expenditure on agricultural and primary goods and a rise in the expenditure on tertiary goods. (See H. Bhattacharyya, An Introduction to Economics (Calcutta, 1977, pp. 283-4).

11. One point must be mentioned in this context that the coverage of 'miscellaneous' group was not the same in the two periods. While in 1950-51, this group covered expenses such as purchase of assets, loans repaid, loans advanced, insurance, provident fund etc., in 1971-72 and 1976-77, these expenses were not included in the miscellaneous group. However, some adjustments have been done in this paper so as to make the coverage of the miscellaneous group more or less identical i.e. expenditure on purchase of assets etc. have been excluded to derive miscellaneous expenditure for the year 1950-51.
12. See section II of the paper.
13. The figures have been calculated on the basis of data supplied by the Family Budget Survey Reports 1950-51, 1976-77 (B.A.E.S., Government of West Bengal).
14. One point should be mentioned in this context that real incomes of different groups have been derived by deflating respective money incomes by the general consumer price index number (with 1950 = 100). Instead if we deflate money incomes of different groups by corresponding consumer price index numbers then the magnitude of difference will be

somewhat different because normally consumer price index number is relatively higher for a low income group than for a high income group, e.g., in 1971-72, consumer price index number was 188.4 for the group Rs. 0-100 (with 1960=100), while it was only 176.5 for the group Rs. 350-700 (vide, Statistical Abstract, 1975, B.A.E.S., Government of West Bengal).

15. Dividing family income by family size, per capita income has been derived. Family size, particularly for the higher income group was higher in 1950-51 compared to that of 1971-72, perhaps because of the fact, that the definition of 'family size' included servants, tutors etc. in 1950-51 but not in 1971-72 and higher income groups can afford to maintain servants, etc. Consequently, per capita income for the highest income group was lower in 1950-51. Hence, the rate of increase in real per capita income for that group might have been somewhat lower (than observed) during the period 1951-1971, if the definition of 'family size' was the same in both the years.
16. See Family Budget Survey Reports, 1950-51 and 1971-72 (B.A.E.S., Govt. of West Bengal).
17. It has been assumed that population growth follows compound growth rate. On the basis of this assumption, using 1971 and 1981 Census figures, population for the year 1977 has been estimated.

TABLE - 1

Nominal and real income per month in Calcutta
during 1951-1977

Year	Monthly average income per family (Rs.)		Monthly average income per person (Rs.)	
	Nominal	Real (at 1950-51 prices)	Nominal	Real (at 1950-51 prices)
1950-51	327.85	327.85	50.52	50.52
1960-61	236.49	214.41	49.47	44.85
1971-72	440.80	220.05	83.33	41.60
1976-77	720.09	232.78	152.24	49.21

Source : Government of West Bengal, Bureau of Applied
Economics and Statistics (B.A.E.S.), Family Budget
Survey Reports, 1950-51, 1960-61, 1971-72, 1976-77.

TABLE - 2

Nominal and real earned income per person in
Calcutta during 1951-1977

Year	Average per capita earned income per month (Rs)	
	Nominal	Real (at 1950-51 prices)
1950-51	43.60	43.60
1960-61	45.66	41.40
1971-72	78.42	39.10
1976-77	143.23	46.30

Source : Government of West Bengal, (B.A.E.S.),
Family Budget Survey Reports.

TABLE - 3

Nominal and real consumption expenditure per months in
Calcutta during 1951-1977

Year	Average consumption expenditure per month per family (Rs.)		Average per capita monthly consumption expenditure (Rs.)	
	Nominal	Real (at 1950-51 prices)	Nominal	Real (at 1950-51 prices)
1950-51	317.44	317.44	48.91	48.91
1960-61	189.42	171.73	39.63	35.40
1971-72	417.54	208.44	78.93	39.40
1976-77	585.54	189.29	123.79	40.02

Source : Government of West Bengal, (B.A.E.S.),
Family Budget Survey Reports.

TABLE - 4

Food and non-food expenditure per family (in Rs.)
in Calcutta during 1951-1977

Year	Food expenditure		Non-food expenditure	
	Nominal	Real (at 1950-51 prices)	Nominal	Real (at 1950-51 prices)
1950-51	151.54	151.54	167.68	167.68
1971-72	226.26	112.95	191.28	95.49
1976-77	304.77	98.52	280.77	90.76

Source : Based on Government of West Bengal, (B.A.E.S.),
Family Budget Survey Reports 1950-51, 1971-72,
1976-77.

TABLE - 5

Per capita annual consumption of selected food items
(in quantity) in Calcutta during 1951-1977

Food items	Units	1950-51	1971-72	1976-77
Rice	Kg.	88.16	62.50	64.73
Wheat and wheat products	Kg.	32.93	58.59	66.11
Other cereals	Kg.	1.86	0.39	0.48
Pulses	Kg.	14.45	9.42	9.35
Butter-ghee	Kg.	2.09	0.51	0.33
Potato	Kg.	20.22	29.41	31.76
Milk	Kg.	32.88	27.91	36.57
Fish	Kg.	9.88	8.97	10.24
Meat	Kg.	3.21	1.82	1.87
Eggs	No.	21.32	10.69	14.88

Source : Government of West Bengal, (B.A.E.S.),

Family Budget Survey Reports 1950-51,
1971-72, 1976-77.

TABLE - 6

Percentage shares of different non-food items in total monthly family consumption expenditure in Calcutta city during 1951-1977

Items	1950-51	1971-72	1976-77
Clothing	6.23	6.32	7.27
Fuel-light	4.73	5.10	6.18
Housing	9.79	8.48	8.86
Miscellaneous	31.78	25.91	25.64

Source : Government of West Bengal, (B.A.E.S.),
Family Budget Survey Reports 1950-51, 1971-72,
 1976-77.

TABLE - 7

Percentage distribution of families by different income groups in Calcutta during the period 1951-1977

Income groups	1950-51	1960-61	1971-72	1976-77
Lowest income group (LIG)	13.54	37.48	25.18	24.10
Lower middle income group (LMIG)	37.70	37.72	47.39	40.32
Upper middle income group (UMIG)	26.69	14.66	20.77	} 35.58
Highest income group (HIG)	22.07	10.14	6.66	

Note : See text for the definition of income groups.

Source : Based on Family Budget Survey Reports - 1950-51,
 1960-61, 1971-72, 1976-77, (B.A.E.S., Govt. of
 West Bengal).

TABLE - 8(a)

Average per family monthly income of different economic groups in Calcutta during 1951-1977

Economic Groups	1950-51		1960-61		1971-72		1976-77	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
LIG	67.92	67.92	83.67	75.86	135.06	67.42	264.29	85.44
LMIG	160.23	160.03	170.03	154.15	328.85	164.16	498.70	161.21
UMIG	298.21	298.21	359.12	325.58	701.22	350.05		
HIG	809.44	809.44	855.59	775.69	1580.27	788.87		
UMIG and HIG merged	529.61	529.61	542.94	492.24	914.65	456.59	1279.87	413.74

Rupees

Note : Real income at 1950-51 prices

Source : Based on Family Budget Survey Reports, 1950-51, 1960-61, 1971-72, 1976-77, (B.A.E.S., Govt of West Bengal).

TABLE - 8(b)

Average per capita monthly income (Rs.) of different economic groups in Calcutta during 1951-1977

Economic Groups	1950-51		1960-61		1971-72		1976-77	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
LIG	23.42	23.42	28.36	25.70	37.21	18.58	82.59	26.70
LMIG	30.76	30.76	35.80	32.45	61.35	30.63	110.09	35.59
UMIG	41.88	41.88	53.60	48.58	108.55	54.19		
HIG	80.22	80.22	98.57	89.33	212.40	106.03		
UMIG and HIG merged	62.56	62.56	73.04	66.20	136.59	68.19	213.67	69.07

Note : Real income at 1950-51 prices

Source : Based on Family Budget Survey Reports - 1950-51, 1960-61, 1971-72, 1976-77

(B.A.E.S., Government of West Bengal).

TABLE - 9

Average per capita consumption expenditure (Rs.) per month for different economic groups in Calcutta during 1951-1977

Economic Group	1950-51		1971-72		1976-77	
	Nominal	Real	Nominal	Real	Nominal	Real
LIG	23.51	23.51	51.79	25.85	76.74	24.81
LMIG	31.91	31.91	60.52	30.21	95.43	30.85
UMIG	43.34	43.34	97.91	48.88		
HIG	73.28	73.28	171.36	85.54		
UMIG and HIG merged	59.50	59.50	117.72	58.77	165.21	53.41

Note : Real figures at 1950-51 prices .

Source : Based on Family Budget Survey Reports - 1950-51, 1971-72, 1976-77 (B.A.E.S., Govt. of West Bengal).

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TABLE - 10

Percentage share of food and non-food expenditure in total consumption expenditure for different income groups in Calcutta City during 1951-1977

Income groups	Food expenditure		Non-food expenditure	
	1950-51	1976-77	1950-51	1976-77
LIG	61.04	62.58	38.96	37.42
LMIG	56.46	57.18	43.54	42.82
UMIG and HRG merged	45.00	46.39	55.00	53.61

Source : Based on Family Budget Survey Reports - 1950-51, 1976-77 (B.A.E.S., Govt. of West Bengal).

TABLE - 11

Percentage of consumption expenditure on different items of consumption by various income or expenditure groups in Calcutta during 1976-77

Groups of items	Monthly expenditure levels (Rs.)			
	1-200	200-500	500-1000	1000-above
1(a) Food, drinks, refreshments	65.15	61.35	53.64	43.74
1(b) Pan, tobacco, intoxicants	2.58	3.22	2.72	2.82
2(a) Clothing	5.07	6.59	7.72	7.36
2(b) Footwear, bedding, etc.	1.87	2.03	2.21	2.09
3 Fuel-light	8.80	7.17	6.06	5.52
4(a) Housing	7.28	7.25	8.56	10.28
4(b) Household appliances	0.22	0.42	0.43	0.62
5 Miscellaneous	9.03	11.97	18.66	27.57

Source : Government of West Bengal, B.A.E.S., Family Budget Survey Reports, 1976-77.

TABLE - 12

Percentage of expenditure on different groups of items by different expenditure groups in Calcutta during 1971-72

Groups of items	Monthly expenditure groups (Rs.)			
	Upto 200	200-500	500-1000	1000-above
1(a) Foods, drinks , refreshments	66.64	59.71	52.75	41.48
1(b) Pan, tobacco and intoxicants	3.06	2.69	2.33	1.75
2(a) Clothing	5.42	6.41	6.40	6.38
2(b) Footwear, bedding	1.51	1.97	2.40	1.76
3 Fuel-light	6.48	5.59	4.91	3.99
4(a) Housing	8.82	8.05	8.97	8.39
4(b) Household appliances	0.28	0.46	0.68	0.57
5 Miscellaneous	7.79	15.12	21.56	35.68

Source : Government of West Bengal, B.A.E.S.,

Family Budget Survey Reports, 1971-72.

TABLE - 13

Percentage distribution of expenditure on different items of food by different expenditure groups in Calcutta during 1976-1977

Items of food	Monthly expenditure groups (Rs.)			
	1-200	200-500	500-1000	1000-above
Rice	19.42	21.75	18.16	13.83
Wheat	14.20	12.81	11.49	7.49
Other cereals	0.74	0.13	0.07	0.11
Mung	1.16	1.02	1.02	0.85
Masur	1.60	1.48	1.13	1.09
Other pulses	1.47	1.12	0.83	0.71
Milk	3.84	5.87	11.57	14.10
Butter-ghee	0.21	0.34	1.20	2.39
Fish	10.38	7.27	10.62	11.77
Meat	1.47	1.53	2.60	3.30
Eggs	0.65	0.63	0.98	1.25

Source : Government of West Bengal, B.A.E.S.,
Family Budget Survey Reports, 1976-77.

TABLE - 14

Index of per capita income, and population size of some urban centres of West Bengal during 1961, 1971 and 1977

(1) Urban centres	Index of per capita income with Calcutta's income as base		Population size (unit : 100 000)			
	1961	1971	1961	1971		
	(2)	(3)	(4)	(5)		
Calcutta	100.00	100.00	100.00	29.27	31.48	32.31
Coochbehar	61.03	66.00	57.79	0.42	0.54	0.59
Jalpaiguri	75.92	106.22	69.94	0.49	0.55	0.59
Darjeeling	88.64	80.85	71.50	0.41	0.43	0.51
Balurghat	53.08	84.81	59.17	0.27	0.67	0.88
English Bazar	55.31	73.53	60.47	0.46	0.61	0.71
Contai	46.07	59.40	46.95	0.22	0.27	0.32
Kharagpur	68.95	66.19	53.17	0.62	1.61	1.54
Midnapore	60.70	68.96	54.12	0.60	0.71	0.80
Bankura	55.49	81.82	55.69	0.63	0.79	0.88
Purulia	57.87	64.47	48.94	0.48	0.58	0.67
Ranigunj	71.30	70.49	69.75	0.30	0.40	0.45
Suri	51.93	71.57	57.51	0.23	0.30	0.36
Burdwan	58.72	68.34	57.27	1.08	1.43	1.57

TABLE - 14 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Berhampore	51.51	68.31	62.87	0.62	0.73	0.84
Krishnagar	63.05	62.57	49.59	0.70	0.86	0.93
Naihati	54.72	78.27	62.70	0.58	0.82	1.00
Chinsurah	69.56	99.40	76.64	0.83	1.05	1.17
Barrackpore	58.94	67.90	61.02	0.64	0.97	1.07
Basirhat	49.52	54.48	47.62	0.54	0.64	0.74
Asensol	70.43	87.33	68.24	1.03	1.56	1.72
Howrah	81.85	91.03	62.68	5.13	7.38	7.42
Serampore	62.24	89.09	59.35	0.92	1.02	1.16
Budge Budge	54.86	74.28	54.09	0.40	0.51	0.60

Source : Based on (i) Family Budget Survey Reports, 1961-71, 1976 (B.A.E.S., Govt. of West Bengal)

(ii) Census of India, 1961, 1971, 1981.

TABLE - 15 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Berhampore	25.48	56.90	95.72	22	17	7
Krishnagar	31.19	52.12	75.50	9	22	21
Waihati	27.07	65.20	95.45	19	10	8
Chinsurah	34.41	82.80	116.68	7	3	2
Barrackpore	29.16	56.56	92.90	13	18	10
Basirhat	24.50	45.38	72.49	23	24	25
Asansol	34.84	72.75	103.89	6	6	6
Howrah	40.49	75.83	95.41	3	4	9
Serampore	30.79	74.21	90.35	10	5	12
Budge Budge	27.14	61.83	82.34	18	11	19

Source : Based on Family Budget Survey Reports - 1961, 1971, 1977 (B.A.E.S., Government of West Bengal);



TABLE - 16

Towns according to road distance from Calcutta and
monthly per capita income

Urban centres	Road distance from Calcutta (km.)	Monthly per capita income (Rs.)		
		1961	1971	1977
Calcutta	0	49.47	83.30	152.24
Howrah	0	40.49	75.83	95.41
Serampore	20	30.79	74.21	90.35
Barrackpore	24	29.16	56.56	92.90
Budge Budge	31	27.14	61.83	82.34
Chinsurah	43	34.41	82.80	116.68
Naihati	46	27.07	65.20	95.45

Sources : (i) Census of India 1971, District Census Hand-
books for Calcutta, Howrah, Hooghly,
24-Parganas.

(ii) Government of West Bengal, B.A.E.S.,
Family Budget Survey Reports
1961, 1971, 1977.