

CONSUMER FINANCES SURVEY DATA ON INCOME DISTRIBUTION
IN SRI LANKA, 1963 AND 1973:
SOME MIS-INTERPRETATIONS**

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In 1977, two articles written by an economist attached to the ILO appeared on the subject of poverty and income distribution in Sri Lanka during the period from the early 1960's to the early 1970's (Lee, 1977a and 1977b). Contesting the views held almost unanimously on the subject until then, the author of these two articles argued that the level of poverty and income distribution in Sri Lanka deteriorated during the above period. The opposite view expressed earlier by many writers (Rasaputram, 1972; Karunatilake, 1974; Jayawardena, 1974; Marga Institute, 1974; Lakshman, 1975) received its statistical support mainly from the Consumer Finances Surveys (CFS) of 1963 and 1973 conducted by the Central Bank (Central Bank, 1964 and 1974). The point of departure for Lee in his refutation of this view also was a re-examination of the same CFS data. He summarises his conclusions derived from this re-examination of the CFS data and his interpretation of other pertinent evidence as follows:

"The results reported ... are grossly misleading for Sri Lanka. Indeed ... the distribution of real income probably deteriorated rather than improved by the substantial margins reported. Independent data all point to a deterioration in the distribution

** Dr.S.A.Meegama's helpful comments on an earlier draft of the paper are gratefully acknowledged.

of real income.... data on total consumption expenditure and even on food consumption showed increasing inequality (Lee, 1977b, p.284)"¹

These views do not seem to have had much impact on subsequent writings dealing with the Sri Lankan experience in the area of distributive justice (World Bank, 1980). Yet it is necessary to examine critically the views expressed by Lee. This requires, however, an article of a much wider scope than the present one which is intended merely to be a commentary on Lee's interpretation of the statistical evidence in the CFSs of 1963 and 1973 pertaining to income distribution in Sri Lanka.²

It is useful to begin by recalling the analytical procedure adopted by Lee to arrive at the conclusions cited above. Lee starts off by analysing the income data in the CFSs of 1963 and 1973. Instead of making a Lorenze curve analysis of current income data as previous writers on the subject used to do, he computes average real incomes of quintiles of income receivers in 1963 and 1973. For this computation, he used the current incomes recorded in the CFSs deflated by the Colombo Consumers' Price Index which is popularly known as the Cost of Living Index. Serious objections has to be made to his method of deflating current incomes on the grounds that (a) the price index used is grossly inadequate for the

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1. Lee talks about trends in real wages too in this passage. The relevant sentence is omitted here. Having commented on his views on this subject elsewhere (Lakshman, 1980, pp.8-9), I excluded it from the scope of this article. See also Rodrigo's article in this issue of Modern Ceylon Studies.
 2. See (Lakshman, 1980) for an analysis of a wider range of pertinent evidence.

purpose and (b) the use of the same index to deflate incomes of different income classes is analytically incorrect.³ Given the nature of the statistical data base available in the country for use in quantitative economic analysis, the procedure adopted by Lee here is probably the best one could adopt. Lee used his data on trends in absolute mean real income levels of quintiles of income receivers also to derive the trends in relative real income positions of these groups. This had been done by comparing the time trends in absolute income levels of different income groups. The computations made by Lee showed that except for the estate sector, the absolute mean real income had increased at a higher rate for low and middle income quintiles than for the top quintiles. The data showed an actual decline in the real income position of the highest 40% in the urban sector and of the highest 20% in the rural sector. Thus the analysis of the trends in real income of different income classes, albeit the weak foundations on which that analysis rests, showed, as in the case of a Lorenze curve analysis of current incomes, that there was a movement towards more equitable distribution of income during the period under consideration.

This reduction in income inequality, Lee noted, occurred in the contexts of a growing economy. Since "...such a conjunction of growth and changes in income distribution is

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3. The so-called Cost of Living Index (a) is computed using 1952 as the base year; (b) its weights are determined according to 1951 consumption pattern of working class families in Colombo; (c) its basket of commodities is inadequate to measure trends in the cost of living in the country; and (d) for essential commodities under price control, its computation relies on control prices rather than on free market prices. The use of an out-of-date price index based on consumption patterns of one class of people living in one small area of the country to deflate incomes of different classes of people living all over the country is clearly an objectionable analytical procedure.

extremely rare in a developing country", Lee stresses the need "to ascertain from other data the plausibility of the changes suggested by the Central Bank Survey data on incomes" (Levy 1977a, p.164). Thus partly "as a cross-check on income data" and partly on grounds that "consumption data might be a more reliable indicator of changes in economic welfare than income data" (*ibid.*, p.164), he sets out to examine changes in the distribution of economic welfare in Sri Lanka over the period, 1963-73, by analysing the CFS data on consumption expenditures. Whereas mean real income for the whole country, according to CFS income data deflated by the Cost of Living Index, increased relatively more rapidly for low income groups, consumption expenditure from the same sources, deflated by the same index, showed a decline for the bottom quintile and the most rapid increase for the top quintile (*ibid.*, p.165).

It is on this basis that Lee talks of serious contradictions in the distributional trends shown by the income data of the CFSs, on the one hand, and those shown by their consumption data, on the other. His tabulations leave no doubt that there are contradictions in the data. His interpretation of the non-CFS evidence that is available makes Lee treat the distributional trends shown in the consumption data on the CFSs as more reliable. Hence his conclusions cited earlier in the paper.

The question whether the 1963-73 trends in Sri Lanka were towards greater distributional equality or otherwise cannot, in these circumstances, be settled purely on the basis of the CFS data. What is attempted here is merely to show that, whatever one expects on a priori grounds, consumption data in this particular instance, are not "a more reliable indicator of changes in economic welfare than income data".

The use of consumption data from the two surveys to indicate trends in welfare levels between 1963 and 1973 can be justified only on the assumption that the data show

the normal consumption patterns of the two years.⁴ Lee, in fact, works on the assumption that "there were no abnormalities in consumption patterns" during the two Survey periods (Lee, 1977a, fn. to Table 61, p.166). He comes to this conclusion apparently because both surveys were conducted during the first quarter of the two years concerned. Though in the same quarter, the Survey of 1963 was conducted in March and April (Central Bank, 1964, p.15) and that of 1973 in January and February (Central Bank, 1974, p.11).

Although there are festivities in January and February of the year, by far the most important national, and to some extent, religious festival of the year, celebrated by easily more than 80 per cent of the population falls in April. The so-called Sinhalese and Tamil New Year in mid-April calls for expenditures far in excess of the normal levels. These additional expenditures are on food as well as on non-food items and are generally distributed between both March and April. In this respect, one must also note that Lee assumed, by oversight, that the reference period in the case of these Surveys was seven days for all commodities. The seven day reference period, however, applied only for good expenditure. For non-food expenditures, on the other hand, the reference period was two months. (Central Bank, 1964, pp.18-19; Central Bank 1974, pp. 8-9). The data on consumption

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4. The question whether a comparison between 1963 and 1973 is able to provide a true picture of welfare trends between early 1960's and early 1970's is yet another matter. The year 1963 was a "normal" year and is able to reflect fairly accurately the conditions in the first half of the 1960's but the year 1973 was hardly a representative year of the first half of the 1970's. It witnessed the beginnings of the oil crisis whose adverse impact on the welfare of the Sri Lankan Society was aggravated by the contemporary world-wide scarcities in the supply of grains and other food items. The worst impact of these world events was not felt by Sri Lanka at the time of the CFS of 1973; yet they were beginning to exert their influence by that time.

expenditure for 1963 and 1973 from the CFSs, under these circumstances, are likely to be non-comparable. The data for 1963 are unlikely to indicate normal monthly behaviour of that year. Consumer expenditure reported in the CFS of 1963 overstates normal monthly consumer expenditure by the additional amounts spent in connection with the celebration of the New Year festival.⁵

Lee seeks additional statistical support for his contention that income distribution in Sri Lanka probably became more unequal between 1963 and 1973 from the CFS data on physical volumes of rice consumed by spending units of different income classes. These data on rice consumption show that (a) per capita consumption of rice dropped in physical terms as between 1963 and 1973 and (b) this drop was greater for low-income households (Lee, 1977 pp.166-7). The drop in the physical consumption of rice in 1973 was no doubt real, as there is other evidence as well for its

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5. The Survey Report itself warns the reader, in no uncertain terms, about this bias in the expenditure data:

"The survey was conducted during the month of March and during the first ten days of April. Data on food were collected for seven consecutive days -- Non-food expenditure data were collected for the two months preceding the survey. This period included the Ramazan festival. All Muslim households that entered the survey reported heavy expenditures on clothing, fuel and light, transport and on other non-food expenditures. The Sinhalese and Hindu New Year fell on 14th April. Though the day of the New Year was out of the survey period, it is likely that most purchases as New Year gifts would have been made at the end of March when wage payments are generally received. There would have been an increase in food expenditure as well because most of the short eats and sweet meats would have been prepared in the early week of April. Considering these facts, it is likely that the expenditure during this period is overestimated to a certain degree" (Central Bank, 1964, p.107)

corroboration.⁶ The extent of over-estimation of monthly consumer expenditure in the 1963 Survey is likely to have been very significant in the case of reported volumes of rice purchased. It is doubtful, therefore, whether much significance can be attached to the drop in rice consumption as reported in the CFSs of 1963 and 1973.

However, there are very good reasons to suspect the reliability of the data of the CFS of 1973 regarding rice consumption. Rice, as is well-known, was subject to an extensive subsidy scheme within a system of rationing during the decade under consideration. In 1963, consumers received 2 measures (i.e. 4 lbs.) of rice on ration per week at cents 25 per measure (Mahalingasivam, 1978, p.76). In 1973, the rationing scheme was quite different. Considered in relation to the rationing scheme which prevailed in 1973, data on rice consumption in the CFS for that year appear to be of dubious reliability.

- (a) In 1973, non-income-tax-payers received a free measure of rice per week. (Central Bank, 1973, p.186). This works out at least to 8 measures per person for a two months period. But surprisingly per head consumption of free rice in 1973 by the lowest income class is indicated in the CFS₇ of 1973 as 2 measures for a period of two months.⁷ Also shown in the CFS is a 2 measure consumption of free rice by those earning more than Rs.3000 for a two months period who can be expected to have belonged to the income-tax-paying group. (Table 1).

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6. Issues of rice from the Food Controllers' Department on ration are known to have dropped by a significant margin in 1973 (Central Bank, 1973, p.160), in comparison to 1972 of course.
7. It is quite possible that, as it so often happened at the time, the low income households sold part of their free ration entitlement. Whether the money income they would have so earned is taken into account in the CFS income data is not known. Since the sale of one's ration entitlement was, strictly speaking, irregular, those who engaged in the practice were unlikely to have declared it to interviewers from an official institution like the Central Bank.

(b) In addition to the measure of rice given free of charge, one measure was issued per person per week to non-income-tax-payers on ration at a price of Rs.1.00 per measure at the time of the 1973 Survey (Central Bank, 1973, p.160). Income tax-payers received a total ration of 2 measures per week at that price. This "paid ration" would have amounted to about 8 measures per head for a period of two months for non-income-tax-payers and 16 measures for income-tax-payers. But the CFS of 1973 shows that no income group purchased more than 5.05 measures of rice per head per period of two months on "paid ration", the consumption of 5.05 measures being that of the Rs.800-1600 income group (Table 1).

(c) The CFS of 1973 also shows purchases of unrationed rice by all income groups (Table 1). Unrationed rice was sold at higher prices than rationed rice. It is difficult to see any logic in people, who have not exhausted their ration entitlement, buying unrationed rice at higher prices. It is doubtful whether quality differences in the rice sold within the rationing scheme and outside it can explain such consumer behaviour, particularly that of very low income groups.

(d) The highest income group shown in the CFS, namely those with two-monthly incomes exceeding Rs.3000 are recorded to have increased their consumption of rice per head per two months' period from 13.2 measures in 1963 to 18.2 measures in 1973. This is quite surprising, since this group, being the highest income class shown, must have been in a position to purchase their maximum rice requirements even in 1963. An increase in their rice consumption by about 40 per cent sounds irrational since rice is, by no means, a rich man's food. Either a significant change had taken place in consumption patterns of these people or the rice consumption figures in the CFSs are suspect.

Table I - Per Head Consumption of Rice:
Rationed and Unrationed, 1963 and 1973
 Measures per Two Months

Income Group of Spending Units (Rs. per Two Months)	1 9 6 3		1 9 7 3		
	Rationed	Unrationed	Rationed Free Paid	Unrationed	
0 - 50	13.87	4.30	2.09	3.85	2.73
51 - 100	14.30	4.00	6.20	2.28	2.53
101 - 200	14.75	3.90	6.65	3.58	2.45
201 - 400	14.55	4.75	7.32	4.96	2.90
401 - 800	12.86	5.69	7.49	4.77	3.60
801 - 1600	11.67	6.35	6.96	5.05	4.92
1601 - 2000	11.00	8.00	4.77	4.52	4.62
2001 - 3000	11.49	7.44	3.16	4.95	9.49
Over 3000	7.02	6.17	2.29	3.77	12.18

Sources: Central Bank, 1964. p.110

Central Bank, 1974. p.112

In the above circumstances, the use of CFS-reported volumes of rice consumed per head by different income groups to examine the trends in their welfare as between 1963 and 1973 requires a very cautious handling of data. The sharp drop in per capita rice consumption of the Rs. 0 - 50 income group from 18 measures in 1963 to 8 measures in 1973, on the face of it, should appear very significant in a discussion of trends in relative welfare levels of different income groups. Even if the reported data were of a high degree of reliability, the sharp drop in rice consumption shown for this income group is, however, of very little analytical and statistical significance because the "less than Rs.50" income group included a very small sample of 6 spending units in 1973 as against 193 in 1963.

Considering all the above facts, it is difficult to believe that per head consumption of rice in physical terms dropped between 1963 and 1973 by the large margins indicated in the unadjusted CFS data. Inaccuracies in data, however, do not entirely rule out the possibility of some drop in per head rice consumption, particularly in the case of the low income groups. The scarcities and relatively high prices of rice in 1973 must have produced the natural consumer response of substituting other foodstuffs for rice. Within such a substitution process, the drop in rice consumption, by itself, would not have produced an unequivocal welfare loss. The true welfare implications of a drop in rice consumption would depend on (a) the extent of that drop, (b) the extent of increase in the consumption of rice substitutes and (c) the relative food value of rice and its substitutes. No data basis is available to examine all these aspects of the question at issue. A process of substitution of wheat flour for rice was in evidence during periods of increasing rice prices. Wheat flour enters into consumption expenditures in the form of wheat flour proper and bread. CFSs of 1963 and 1973 provide data on per head consumption of wheat flour exclusive of bread by income groups (Table 2). Wheat flour consumption also dropped in the case of the Rs. 0 - 50 group, which was found to have suffered a very sharp drop in rice consumption. All other income groups (excluding the one next to the highest income group) increased their consumption of wheat flour, with the second income group (Rs.51 - 100) recording the highest per cent increase.

Data on per head consumption of bread are separately available for 1973 but not for 1963. This is so even in the case of the consumption of other rice-substitutes. It is known that there was, in 1973-4, a vigorous drive to promote cultivation of such rice substitutes like yams. Some believe that this yielded positive results and that consumption of yams increased relatively rapidly (Karunatilake, 1978, p.84) but no firm evidence is available to establish that this was so. Opinions vary also regarding the food value of such rice substitutes as yams.

To conclude this discussion of the trends in physical consumption of various food items, the available data on sugar also may be presented (Table 2). Sugar consumption per head dropped for all income classes. In 1963, sugar was freely

available at a very low controlled price but in 1973, it was in a partial scheme of rationing. In that year, sugar was issued on ration at the rate of 1 lb. per head per month at cents 72 per lb. and outside the ration, any amount could be purchased at Rs.1.50 per lb. The 1973 price of rationed sugar was about three times that of the controlled price of sugar in 1963. Outside the rationing scheme, sugar was sold at a still higher price. This also produced a process of replacement of sugar with "sugar-substitutes". The resulting drop in sugar consumption, however, does not appear all that large when considered in relation to the aforesaid overstatement of consumer purchases in 1963. The drop is, moreover, more or less equally distributed among different income groups and, if anything, was slightly more pronounced in the case of high income groups. The welfare implications of the drop in sugar consumption also depend on factors similar to those which would influence the welfare implications of a drop in rice consumption.

Neither the extent of increase in the consumption of sugar substitutes nor their relationship to sugar in terms of food value is known. A side effect of the expansion in the consumption of these sugar substitutes is, however, worth noting. The rise in sugar prices introduced strongly upward pressures on the prices of sugar substitutes. Since the bulk of their production was undertaken at cottage industry level, the rise in their prices and the expansion in their consumption had a favourable impact on relative income positions of the poor strata of society.

A careful study of the detailed tabulations of the CFS consumption data⁸, particularly those of the 1973 Survey, further strengthens the doubts already expressed about their reliability. The case of the lowest income class (Rs. 0 - 50) which, was nevertheless of very small size in 1973, has already been referred to in several connections. Per head consumption in 1973 of rice and wheat flour was the lowest in the case of this income class but their consumption of protein foods like

8. These are published in separate volumes, constituting the second part of each CFS report.

meat, fish and (tinned) milk per head in that year is reported to have been, surprisingly, much higher than relevant national averages.

Table 2 - Per Capita Consumption of
Wheat Flour and Sugar per Two Months
Period, 1963 and 1973

Income Group - Rs. per Two Months	Wheat Flour (lbs.)		Sugar (lbs.)	
	1963	1973	1963	1973
0- 50	2.6	1.8	4.7	3.4
51- 100	2.2	3.4	4.3	3.3
101- 200	3.6	5.0	4.6	3.3
201- 400	5.2	6.9	5.2	3.5
401- 800	6.1	7.0	6.3	4.0
801-1600	4.0	5.2	7.6	4.7
1601-2000	4.9	5.8	8.8	5.5
2001-3000	4.1	3.6	8.3	5.4
Over 3000	2.8	3.9	10.4	6.0
Average	4.7	6.4	5.6	4.1

Source: Central Bank, 1964 & 1974.

Meat consumption of this class (per head) at 35 ounces for a two months period, the highest per head consumption level for all income classes with two monthly incomes of less than Rs.1600, may be compared with the relevant national average of 10 ounces. Fish consumption per head at 66 ounces per two months was also higher than the relevant figure for all income classes drawing incomes of less than Rs.1600 per two months. The national average for per capita fish consumption was 48 ounces. Per capita consumption of tinned milk products by the Rs.0 - 50 income class, at 20 ounces per two months, was the highest for all income classes and the relevant national average was 4 ounces. In the case of

the bulk of consumer items listed in the CFS of 1973, per head consumption of this income class agrees with its low income position but the presence of dubious data like the above, casts serious doubt on the reliability of the physical consumption data of that Survey in their entirety.

The above arguments are not intended to imply that income data of the CFSs are more reliable than their consumption data. In order to arrive at a reasonably firm opinion about income distribution trends in Sri Lanka over the period concerned, other pertinent evidence as is available has to be carefully examined and interpreted. The foregoing analysis merely was intended to show the dangers in relying on CFS consumption data as welfare indicators for 1963 and 1973. More important, it should serve as a warning to those who would be conducting CFS-type surveys in future. Errors left undetected in such survey reports can mislead not only writers using their data as the basis of analysis but also the country's policy-makers who would be using such information as the basis of planning and policy formulation.

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