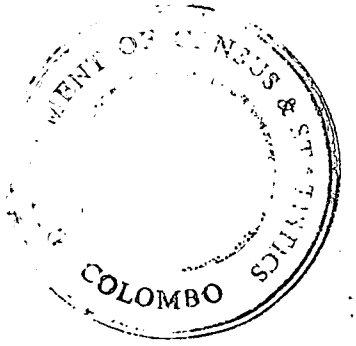
Sectoral and Provincial Poverty Lines

for

Sri Lanka

Suranjana Vidyaratne
K.G.Tilakaratne

Department of Census and Statistics
Sri Lanka



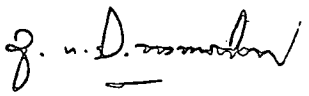
Forward

Poverty alleviation is a long-term process. Continuous monitoring and evaluation is required for the implementation of deferent programmes targeted for reduction of poverty. For this purpose poverty line at national and sub-national level as well as other statistics and indicators on poverty are required. There is no technically derived official poverty line for the country. Therefore, an attempt has been made here to derive an official poverty line at national and sub-national levels.

This paper discuses the issues underlying in the measurement of poverty and derives a poverty line for Sri Lanka based on the Household Income and Expenditure Survey – 1995/96 conducted by the Department of Census and Statistics. An attempt has also been made to derive poverty lines at sub- national levels, and update these for every year using price indices.

Suranjana Vidyaratne (Director) and K.G.Tilakaratne (Senior Statistician) of the Department of Census and Statistics prepared this paper, using the knowledge acquired by getting involved in conducting several Household Income and Expenditure Surveys, and poverty studies.

I hope this can be used as an initial step to derive an official poverty line for Sri Lanka and as an attempt to derive poverty lines for provinces and sectors.



A.G.W.Nanayakkara
Director General
Department of Census and Statistics

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Colombo 7.

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Summary

S.1 - Calorie norm

Household Income and Expenditure Survey 1995/96 was the data source used in deriving poverty lines. Since household income is generally under reported, consumption expenditure of the household was selected as the indicator of well being of the household members. Minimum required calorie per person per day was calculated using both survey population and its age and sex distribution and daily recommended nutrition requirement for Sri Lanka, estimated by Medical Research Institute of Sri Lanka. This calorie norm has been estimated to be 2030 kilo calories per person per day.

S.2 - Fixing of a food basket and calorie cost

Food basket used by the people around the poverty line was identified from the Household Income and Expenditure Survey – 1995/96. For this purpose food items (fixed food basket) used by the people fall into 2 to 4 per capita food expenditure deciles were identified. These food items and their quantities together with the food composition vector were used to derive the total calories obtained from the fixed food basket. Using the value of this basket and the calories obtained from this basket, calorie cost per 1000 kilo calories was derived as Rs. 9.70 as at 1995/96.

S.3 - Food poverty line

Thereafter, cost of obtaining the calorie norm (2030 kilo calories per person per day) was estimated. This estimate is **Rs 591 per person per month and is known as the food poverty line for Sri Lanka in 1995/96.**

S.4 - Total poverty line

Non-food poverty line was estimated using the food ratio of households within 2 to 4 per capita food expenditure deciles and this was estimated to be Rs.362 per person per month. Therefore **total poverty line (expenditure per person per month) for Sri Lanka in 1995/96 period was estimated to be Rs. 953.**

S.5 - Sectoral and provincial poverty lines

Provincial poverty lines were then calculated using the price indices in order to account only for the price differences in the provinces. Thus same basket was used for all sectors and provinces; food preferences and quality of the food consumed were not taken into account. Non-food price index by sector could not be computed due to non-availability of price data at sector (urban, rural, estate) level during the survey period. As such non-food poverty lines by sector could not be computed. These poverty lines for period 1995/96 are given in Table A .

Table A – Food, non-food and total poverty line by sector and province – 1995/96

Sector	Total poverty line (Rs)	Food poverty line (Rs)	Non-food poverty line (Rs)
Sri Lanka	953	591	362
Urban	–	625	–
Rural	–	587	–
Estate	–	602	–
Western	1002	627	375
Central	973	599	374
Southern	946	586	360
North-Western	929	581	348
North-Central	931	577	354
Uva	928	579	349
Sabaragamuwa	959	599	360

S.6 - Projected poverty lines

Finally national poverty line was projected using the Colombo Consumer Price Indices (CCPI) up to the year 2002. National poverty line projected for the year 1997 to 2002 are given in Table B.

Table B - Estimated poverty lines for Sri Lanka based on 1995/96 survey and projected for proceeding years using CCPI

Year	Colombo Consumer Price Index for		Poverty line (at current prices) (Rs.)	
	All items	Food items	Total	Food
1995/96	1775.7	1937.9	953	591
1997	2089.1	2336.9	1122	712
1998	2284.9	2592.1	1227	790
1999	2392.1	2695.4	1284	822
2000	2539.8	2815.8	1364	858
2001	2899.4	3244.7	1557	989
2002	3176.4	3589.9	1705	1094

Chapter 1
Introduction

Measuring level of living standards and the extent of poverty need to have a national poverty line. Poverty line is defined as a limit under which persons are categorized as not having minimum standards of living. It is therefore important to obtain a general agreement, before a poverty line is derived to be used as **an official poverty line** of the country. In Sri Lanka though several poverty measures are available, officially accepted poverty line is not in existence. It is therefore a prime necessity to have **an official poverty line** for the country. An attempt is made in this study to develop a poverty line and to explore the possibility of establishing **an official poverty line**, acceptable to all parties concerned one established. The Department of Census and Statistics, which is the official agency responsible for collection, compilation and dissemination of official statistics, could maintain and update this, annually.

1.1 Data sources

Poverty studies in Sri Lanka have been undertaken based on the two consumption expenditure type household surveys conducted by the Department of Census and Statistics (DCS) and Central Bank (CB) of Sri Lanka. The discussion in this paper will mainly focus on surveys undertaken by DCS. During the past, five this type of surveys have been carried out by DCS and they are,

Socio – Economic Survey (SES) – 1969/ 70
Labour Force and Socio – Economic Survey (LFSE) – 1980/ 81
Labour Force and Socio – Economic Survey (LFSE) – 1985/ 86
Household Income and Expenditure Survey (HIES) – 1990/ 91
Household Income and Expenditure Survey (HIES) – 1995/ 96

These surveys provide statistically representative data up to urban, rural, estate levels and provincial, district levels. Sample sizes in most of these surveys are within the range of 20,000 – 25,000 housing units and generated information on household composition, household income by source of income and detailed household expenditure on all food and non-food items. These micro data sets have been extensively used by researchers and by international organizations in measuring and analyzing poverty.

1.2 Choice of an Indicator of economic well being

A number of indicators are available to measure well being of the population. Van Praag, Hagenaars and Van Weeren (1980) define poverty in terms of welfare. Sen (1997) views poverty in a broader sense. He has seen this as deprivation of one's capability. He says it is not only material deprivation but also other aspects such as unemployment, ill health, lack of access

to education, powerlessness etc. Widely used approach is based on either household income or household consumption expenditure. Both have their limitations. Household income is generally under reported by the income earners. Richer households are reluctant to disclose their incomes due to the fear that these will be used for various taxing purposes while poorer households tend to underreport due to the fear that they will loose some social welfare and safety nets benefits such as Samurdhi, Janasaviya etc. Income received from illegal activities are generally grossly under reported or not reported at all. It is relatively easier to capture some components of income such as wages and salaries, accurately. Cash income from other sources such as interest, dividends and profits and income from some type of self-employment, though not fully accurate, can be obtained with some limited accuracy. But income from agricultural activities, value of consumption from own produce, net rental value of owner occupied dwelling etc. are under reported to a larger extent. In developing countries where informal sector comprises a considerable proportion of the economy, household income from these sources can be expected to be fairly large.

This was stated, in Poverty measurement and Diagnostics report (2002) by the World Bank and reads as "Research based on the 1969/70 Socio-Economic Survey in Sri Lanka estimated that wages were understated by 30 percent, business income by 39 percent and rent, interest and dividends by 78 percent". This gives an idea of the potential magnitude of the understatement problem prevailed at that time.

Other alternative is therefore to use household consumption expenditure as an indicator of the standard of living, which is currently used by many countries for the purpose of establishing a poverty line. Consumption includes both food and non-food items consumed or purchased by the households. This will cover goods and services that are purchased and consumed by the households as well as those that are consumed from own production or received from relatives, friends etc. Monthly averages of per capita income by expenditure deciles are given in Table 1.1.

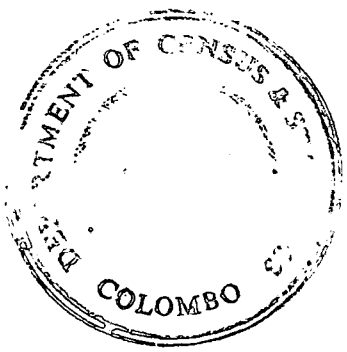
Another strong reason for using consumption rather than income is that households may be more able or willing to recall and report what they consumed or purchased rather than what they earned. It is generally true that consumption itself has its limitations. Households tend to under state what they spent on luxury items, alcohol , tobacco and certain food items, specially consumed from own produce (e.g. jack, fruits, coconuts, vegetables obtained from home garden). For example, in United States, according to Household Budget Survey – 1972/73, alcohol consumption estimated from household data was just half the amount sold by the companies.

After taking the above issues into consideration, household consumption expenditure is used to derive a poverty line in this study.

Table 1.1 – Mean per capita income by per capita expenditure deciles –1995/ 96

Monthly per capita expenditure decile			Mean per capita income per month (Rs)
	Decile points		
Decile	From (Rs)	To (Rs)	
All decile	–	–	**1565**
1	0	638.59	568
2	638.60	778.54	749
3	778.55	904.55	824
4	904.56	1032.72	945
5	1032.73	1186.42	1141
6	1186.43	1379.11	1227
7	1379.12	1646.67	1439
8	1646.68	2040.65	1796
9	2040.66	2823.89	2398
10	2823.90	& Over	4559

Source :- Income and Expenditure Survey – 1995/96
Department of Census and Statistics



Chapter 2
Establishing a poverty line

2.1 Defining a poverty line

Once a measure of household well being is decided (either income or consumption expenditure; and expenditure in this case), the next step is to choose a poverty line. Households whose consumption expenditure falls below this line is considered to be poor households. According to the World Bank "the poor are defined as those who lack command over basic consumption needs, including food and non-food components".

2.2 Relative poverty

Term 'relative' means, it makes comparisons with another segment of the population. The focus is on the poorest segment, may be lowest 30 percent or lowest 50 percent of the population. Atkinson (1974) defines relative poverty in relation to the average standard of living in a particular society at a particular time. In practice rich countries use this type of poverty lines. As countries become better off, they raise the poverty line. For example the European Union defines poor as those whose per capita income fall below 50 percent of the median income. Therefore, poverty line rises with the rise of median income.

2.3 Absolute poverty

An absolute poverty line is also essential for a country to see the effectiveness of the anti-poverty policies and programmes over time. As a developing country our concern is to give the minimum required basic needs to all the families. Therefore, in this study focus is made on absolute poverty. Rowentree (1901) was the first to measure the cost of maintaining a minimum standard of living. He first estimated the minimum cost for food, which satisfy the average nutritional needs of families and added certain minimum amount for rent, clothing, fuel etc. to arrive at a poverty line of a given family size. Two main methods used in defining poverty lines are

- Food Energy Intake (FEI) method and
- Cost of Basic Needs (CBN) method.

Food Energy Intake method is based on the level of consumption expenditure (or income) which enables household to obtain enough food to meet its energy requirement. Consumption here will include some components of other needs such as clothing, shelter etc. because even the poorest households have to consume some portion of non-food as well. As expenditure rises, calories per day also rises but at a lower rate. If the just adequate calorie

intake is decided (let say K_{min}), we can use this curve to find out the poverty line. This approach does not need any information on prices of the commodities consumed. This method with some modification is used by some countries. However some problems associated with this method is stated by Ravallion and Bidani (1994) as follows, "Since the provinces can have

- their different standards of living,
- their food preferences and
- their tastes also can be different.

People of richer provinces will buy more expensive items. Therefore, food poverty line for richer provinces will be higher than that of poorer provinces. This may lead to a situation that the poverty line worked out using this method will have a higher incidence of poverty in richer areas than the poorer areas".

At the regional workshop on poverty analysis and monitoring held in Islamabad from March 18–23, 2002, these issues were discussed and opinions expressed by the participants are reported in Table 2.1 in page 6. In this study therefore above decisions were also taken into consideration.

Cost of Basic Needs (CBN) method specifies a consumption bundle including both food and non-food items, which is just adequate and the cost of that bundle could be estimated. This can be adjusted for price differences in various sub populations such as urban or rural, provinces or districts etc. In this study an attempt has been made to workout an absolute poverty line using Cost of Basic Needs (CBN) method.

Main steps of this method are,

(1) setting the minimum required calories per person per day.

(2) selecting an expenditure pattern which reflects the expenditure habits of near poor households and calculate the calorie cost.

(3) calculating the cost of the minimum required calorie per person per day using (1) and (2) above. This is the food poverty line, and is denoted by Z^F.

(4) estimating a certain component for expenditure on basic non-food needs (Z^{NF}).

then the basic needs poverty line is given by (3) + (4).

$$Z^{BN} = Z^{F} + Z^{NF}$$

Table 2.1 – Opinions expressed by the participants

Question number	Questions	Agree Percentage	Disagree Percentage	No Opinion
01.	Poverty line should be based on the basis of calorie intake and the non-food consumption of the poor people derived from the household surveys.	100	0	0
02.	Poverty line should be updated over time by means of price indices rather than by comparing the poverty line from the calorie intake in every year.	87	10	3
03.	Food poverty line should be updated by food price index and non-food poverty by the non-food price index.	100	0	0
04.	The basket should be changed once in 10 years.	50	50	0
05.	We should use the market prices instead of using unit prices collected from the household surveys.	93	7	0
06.	We should use all the three indices, viz., headcount, income gap, and FGT indices, to measure poverty incidence.	90	7	3
07.	Consumption – and not the income – be the basis for estimating poverty incidence.	80	20	0
08.	In the Household Income and Expenditure Survey (HIES), we should include the servant/ lodgers as part of household.	63	33	3
09.	We should use a separate poverty line for rural and urban areas and the difference between the two poverty line should only be due to the difference in the cost of living.	70	23	7
10.	We should use a separate poverty line for difference provinces and the difference between the two poverty lines should only be due to the difference in the cost of living.	60	37	3

Source :- Report of the regional workshop on poverty analysis and monitoring March 18-23, 2002

2.4 Minimum required calories per person per day

Nutritional requirements vary from person to person depending on the age, sex and also activity status of the person. These vary from country to country depending on factors such as race, climatic condition etc. These norms for Sri Lanka are available for different groups of population at the Medical Research Institute (MRI) of Sri Lanka. These individual calorie requirements per person per day are given by age and sex.

Table 2.2 – Daily recommended nutrient allowances by age and sex

Age group	kilocalorie	
	Male	Female
< 1 Year	818	818
1 – 3 Years	1212	1212
4 – 6 Years	1656	1656
7 – 9 Years	1841	1841
10 – 12 Years	2414	2238
13 – 15 Years	2337	2300
16 – 19 Years	2500	2200
20 – 39 Years	2530	1900
40 – 49 Years	2404	1805
50 – 59 Years	2277	1710
60 – 69 Years	2024	1520
70 Years +	1771	1330

Source :– Medical Research Institute of Sri Lanka

Table 2.3 – Population by age and sex – 1994 (excluding Northern and Eastern Provinces)

Age group	Male	Female	Total
Total	7410178	7611073	15021251
< 1 Year	122618	121271	243889
1 – 3 Years	401929	395241	797170
4 – 6 Years	437317	422318	859635
7 – 9 Years	454145	438399	892544
10 – 12 Years	489383	478311	967694
13 – 15 Years	491188	494296	985484
16 – 19 Years	584021	581160	1165181
20 – 39 Years	2369014	2540492	4909506
40 – 49 Years	897857	922737	1820594
50 – 59 Years	542993	574975	1117968
60 – 69 Years	370697	388148	758845
70 Years +	249016	253725	502741

Source :– Demographic Survey – 1994, Department of Census and Statistics

Country's population by age and sex is available from a recent large-scale survey, namely Demographic Survey 1994 conducted by Department of Census and Statistics. Since the Demographic Survey which enumerated a sample of 92,000 housing units (which is very large compared even with HIES 1995/ 96, sample size of which was 21,000 housing units) was conducted in 1994 which is closer to HIES 1995/ 96 survey year. This survey data was used to compile Table 2.3.

Using Table 2.2 and Table 2.3, average calorie requirement per person per day was calculated. Each individual in the sample was weighted by the sampling weighting factor assigned to that person to aggregate per person calorie requirement and to obtain the weighted average for the nation. Estimated average calorie requirement per person per day (here after this refers as calorie norm) for Sri Lanka, is given below. Comparisons of this with other survey populations are also shown below.

National Calorie requirement (Per Capita per day)	Survey and year			
	LFSE 1980/ 81	LFSE 1985/ 86	INEX 1990/ 91	Demographic Survey 1994
calorie norm	2022	2018	2043	2030

It was decided to use the **calorie norm as 2030 for Sri Lanka in 1995/96**, which was derived using Demographic Survey 1994. Any how we could see that calorie requirement does not vary much, from survey to survey because the reference population is more or less the same.

The comparison of calorie norms used by some selected countries is given in Table 2.4. It could be seen from this table, that among the selected countries Thailand reports the lowest calorie norm as 1978 kilocalories per person per day and China, Pakistan report the highest calorie norm as 2150 kilocalories.

Table 2.4 – Calorie norms used for selected countries

Country	Average Per capita calorie requirement estimated as the recommendation		
	National (kilocalories)	Urban (kilocalories)	Rural (kilocalories)
Vietnam	2100	–	–
Indonesia	2100	–	–
Philippines	2000	2000	2000
Thailand	1978	–	–
China	2150	–	–
India	–	2100	2400
Bangladesh	2112	2112	2112
Pakistan	2150	1950	2250

Source :– Issues in measuring poverty in Pakistan – 2002 (- not available)

2.5 Selection of the food basket and estimating calorie cost for Sri Lanka

Calorie cost varies from urban to rural as well as from province to province. To calculate the calorie cost, food basket of poor people has to be identified. In selecting the food basket; it has been argued by Ravillia and Bidani, 1994 that separate basic needs baskets have to be worked out for various sub groups such as urban, rural and provinces. But according to Kakwani (2002); this will violate the consistency of poverty line in terms of maintaining a constant standard of living for all the sub groups of the country. Therefore, food basket of lowest 2nd to 4th deciles (according to per capita food expenditure) was taken using HIES 1995/ 96 survey data. It is assumed that this food expenditure pattern reflects the food habits of the poor people of the country who are around the poverty line. Following Table – 2.5 gives their food consumption for major items (values of the minor items were aggregated to the value of the item called 'Other').

Table 2.5 – Food basket of poor people (per person per month)

Food item	Unit	Quantity	Value (Rs)
Rice	gram	8366.38	157.75
Coconuts	number	6.51	46.25
Sugar	gram	1053.14	34.29
Bread	gram	2324.21	28.54
Milk power	gram	125.71	23.69
Dhal	gram	405.19	18.50
Coconut oil	ml	256.09	14.68
Dried chilies	gram	101.62	13.45
Sprats	gram	114.96	12.56
Tea dust	gram	108.14	12.36
Hurulla, salaya	gram	203.90	10.90
Wheat flour	gram	706.97	9.12
Beans	gram	335.30	8.53
Red onions	gram	189.36	8.30
Brinjal	gram	388.02	6.73
Beef	gram	69.97	6.10
Balaya, Kelavalla	gram	51.72	5.49
Bombay onions	gram	171.94	5.36
Green chilies	gram	111.75	5.16
Egg Hen	number	1.55	4.97
Other		_	132.20
Cost of basket			564.91

Source :- Household Income and Expenditure Survey 1995/ 96
Department of Census and statistics

This information, together with the food composition vector published by Department of Nutrition, Medical Research Institute – Sri Lanka, were used to estimate the calorie cost. Formula used to calculate total calories available for households is

$$TotalCalories = \sum_{i=1}^{N} \frac{q_i * g_i * p_i * f_i}{700}$$

Where

q_i = Quantity of food item i consumed in seven days.

g_i = Gram equivalent of the food item i.
(units of item were in milliliters, number etc. to convert into gram is used for gram equivalent).

pi = Percentage of edible portion for food item i.

fi = Conversion factor for the calories of food item i per hundred grams.

N = Total number of food items.

Summing up for all food items, for the household and then for all households will give the total calories available. Value of all the food items consumed are available from the survey data.

Then calorie cost (per 1000 kilocalories) = Value of all the food items in the basket * 1000 / Total calories available from all the food items

= Rs 564.91 * 1000/ 58238.14

= **Rs 9.70**

Table 2.6 – Calorie cost (cost per 1000 kilocalories) of the selected basket for Sri Lanka (based on 2nd to 4th per capita food expenditure deciles)

Calorie cost Rs/ 1000 kilocalories	95 % Confidence limits		Number of households in the sample for 2nd , 3rd , 4th deciles
	Lower limit Rs/ 1000 kilocalories	Upper limit Rs/ 1000 kilocalories	
9.70	9.60	9.80	6158

2.6 Food poverty line

Food poverty line is measured in terms of amount of money, spent monthly on food expenditure required per person per month to achieve basic nutritional requirement for good health, and it is calculated as follows.

Food poverty line = calorie cost * calorie norm * time period

According to the above calculation; estimated

Food Poverty line of Sri Lanka for the year 1995/96 = Cost of 1000 kilocalories * 2.030 * 30

= Rs 9.70 * 2.030 * 30

= Rs 591

Food poverty line for Sri Lanka for the year 1995/96 was estimated to be Rs. 591 per person per month.

2.7 Establishing the non-food poverty line

Having decided upon the food poverty line, the next step is to make an adjustment for non-food expenditure. There is no satisfactory method to measure the non-food poverty line. Countries have used different methodologies for this purpose. For example

- Slightly adjusted level of non-food spending by households in the middle quintile (5^{th} and 6^{th} deciles) is the method used in Vietnam.
- The poverty line developed for United States by Molhi (1963, 64), multiplied food poverty line by 3 to get the total poverty line. This is because the food ratio (expenditure on food as a percentage to total expenditure) at that time in United States was one third.
- South Korea measures the cost of food plus the cost of housing that meets the official minimum apartment size plus the cost of non-food items as measured by average spending by household in the poorest 40 percent of the income distribution.
- Famous Engel's law states that households that spend the same proportion of total expenditure on food enjoy the same level of living.

It is therefore, decided to use the average food ratio of the households in the 2^{nd} , 3^{rd} and 4^{th} deciles at National level. Food poverty line, multiplying by inverse of the food ratio will give the total poverty line. These poverty lines are shown in Table 2.7 below.

Table 2.7 – Food, non-food and total poverty line for Sri Lanka - 1995/ 96

Total poverty line (Rs)	Food poverty line (Rs)	Non-food poverty line (Rs)	Food ratio of the 2nd ,3rd and 4th deciles %
953	591	362	61.9

2.8 Poverty lines for Provinces and Urban, Rural, Estate sectors

To construct the poverty lines for provinces and sectors, national poverty line should be adjusted only for price differences in these provinces and sectors for the fixed national basket. As stated earlier it should not take into account the food preferences or tastes and quality of food. Therefore price indices have to be worked out for these provinces and sectors which are shown in Table 2.8 below.

Table 2.8 – Price indices for sectors and provinces – 1995/96

Sector	Food price index	Non-food price index
Sri Lanka	**100.00**	**100.00**
Urban	105.78	–
Rural	99.43	–
Estate	101.98	–
Western	106.07	103.60
Central	101.43	103.07
Southern	99.20	99.39
North-Western	98.36	96.04
North-Central	97.73	97.61
Uva	97.99	96.29
Sabaragamuwa	101.42	99.32

- information is inadequate for a reliable estimate

Source :- All island food prices – 1995/ 96
Department of Census and Statistics

National poverty lines (Rs. 591 for food and Rs. 362 for non-food) adjusted using these indices are shown in Table 2.9. Non-food price index by sector could not be computed due to non-availability of price data at sector level (urban, rural, estate) during the survey period. As such non-food poverty lines by sector could not be computed

2.9 Poverty measures

The HIES – 95/ 96 data and poverty lines given in Table 2.9 were used to calculate the incidence of poverty in Sri Lanka. Head count index or percentage of persons below this poverty line and other poverty measures are given below.

Table 2.9 – Food, non-food and total poverty line by sector and province

Sector	Total poverty line (Rs)	Food poverty line (Rs)	Non-food poverty line (Rs)
Sri Lanka	953	591	362
Urban	–	625	–
Rural	–	587	–
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North-Central	931	577	354
Uva	928	579	349
Sabaragamuwa	959	599	360

- information is inadequate for a reliable estimate

Table 2.10 – Poverty measures by sector and province – 1995/96

Sector/ Province	Food poverty		Total poverty		Poverty gap index	
	Percentage of Households %	Percentage of Population (Head count index) %	Percentage of Households %	Percentage of population (Head count index) %	Food Poverty %	Total Poverty %
Sri Lanka	28.3	32.7	34.1	39.1	22.1	21.8
Sector						
Urban	18.0	22.3	_	_	21.0	_
Rural	29.8	34.5	_	_	22.3	_
Estate	32.8	38.0	_	_	19.6	_
Province						
Western	18.2	22.2	19.2	23.2	42.6	22.5
Central	35.9	40.8	43.9	49.3	23.9	27.2
Southern	29.8	35.3	38.4	44.6	22.1	26.7
N-Western	29.7	36.2	35.9	40.2	19.0	22.5
N-Central	29.4	33.1	32.5	37.9	20.3	21.6
Uva	42.8	48.2	51.4	58.0	25.7	29.8
Sabaragamuwa	38.6	43.5	46.3	52.3	23.9	28.6

Table 2.10 shows that according to **food poverty line**, 28.3 percent of households or 32.7 percent of the population were below **the food poverty line** in 1995/96. Further it shows that 34.1 percent of households or 39.1 percent of the population was below **the total poverty line** (food and non-food poverty line). Among the sectors (urban, rural and estate) estate sector reports the highest food poverty i.e. 32.8 percent of households or 38.0 percent of population. Among the provinces, Uva province reports the highest food poverty (i.e. 42.8 percent of households or 48.2 percent of population) and total poverty (i.e. 51.4 percent of households or 58.0 percent of population).

Chapter 3

Key survey issues and Conclusion

3.1 Unit of enumeration

Household is the unit of observation in this survey. Household is defined as " a single person or a group of persons who normally live together and have common cooking arrangements. It is not necessary that they have be related to each other. Domestic servants, boarders, lodgers who live and have their meals with the family are also members of the households. Persons who usually live here but are temporarily away on holiday or vacation, visiting relations, out of business or receiving treatment in a hospital should be included. Those who have a usual residence elsewhere but were present at the time of interview should be excluded. "Boarders and lodgers who usually live in the households and share food and other essentials for living are considered to be the members of the household. Since they are members their individual income as well as expenditure were recorded. In computing per capita consumption on food, maximum number participated in any main meals for each day is used

3.2 Intra household consumption

Since the consumption expenditure is not measured individually but measures for the entire household, individual expenditure cannot be worked out. Instead per capita expenditure is calculated by dividing the total consumption expenditure of the household by total number of members participated in meals. Assumption here is that all the members are getting equal food and non-food share, which is not true in most cases in reality. Generally female members and younger children get a lower shares than adult male members.

3.3 Number of observations over time

Food items consumed by the household member were recorded daily for 7 consecutive days under the direction of enumerators. Within 7 days enumerators visited the household at least twice and checked the quality of the data and made corrections if necessary. Non-food items had different reference periods ranging from 30 days for personal goods, fuel and light etc. to one year for durable groups. When the recall period is too long the respondent finds it difficult to recall these expenditure and report correctly. On the other hand two short reference periods for certain items like durables will not have any expenditure incurred. Therefore considering the buying cycle of the average household, reference periods for these items have been carefully chosen in this survey.

3.4 Coverage of goods and valuation procedure

254 food items and 183 non-food items were listed in the questionnaire in order to use as a check list for the enumerators to ask from the respondents. This will avoid to some extent the items, which are not reported otherwise. Still certain items particularly food items obtained from the home garden, received from relation or others as well as non-food items obtained free of charge can be understated. Valuation of food items consumed from own produce was done according to the prevailing market prices. Market value of owner occupied house rent can be under valued.

3.5 Seasonal variability

Consumption of both food and non-food items are subject to seasonal variations. It is expected that more food items are consumed during festival seasons of the year. Expenditure on school text-books, uniforms are higher at the beginning of the year. Variation within month also can be expected because households may spend more, just after getting the wages and salaries. Therefore this survey was done during all 12 months of the year with equal number of sub-sample. An attempt was also made to visit the equal number of households within the 4 weeks of each month to capture the valuation with in month.

3.6 Conclusion

Poverty line of a country specifies the level of income (or consumption expenditure) that is just sufficient to maintain an acceptable minimum level of standard of living. Persons consuming a level below this minimum level are classified as poor. Although percentage of poor or head count index for Sri Lanka has been worked out in some research studies, there is no official poverty line for Sri Lanka.

Two approaches can be used to measure poverty. These are "relative poverty approach" and "absolute poverty approach". Relative poverty approach is more suitable for developed countries, which have already passed the line of absolute poverty. For developing countries more appropriate approach is "absolute poverty" and hence this approach was used in this study. There are two well known methods to construct poverty line, namely Food Energy Intake (FEI) method and the Cost of Basic Needs (CBN) method. In this study using CBN method it was attempted to construct a food poverty line and a non-food poverty line for the country. This national poverty line is then adjusted for price differences in the provinces and sectors (urban, rural and estate) using the price indices, to arrive at poverty lines for provinces and sectors.

Table A1– Average monthly expenditure per person in 2nd to 4th per capita food expenditure deciles 1995/ 96 for Sri Lanka

Food item	Unit	Quantity	Value Rupees	Urban Value Rupees	Rural Value Rupees	Estate Value Rupees
Rice	Gram	8366.38	157.75	171.12	156.63	160.14
Coconuts	Number	6.51	46.25	52.40	45.37	55.18
Sugar	Gram	1053.14	34.29	33.96	34.31	34.63
Bread	Gram	2324.21	28.54	28.33	28.60	26.96
Milk power	Gram	125.71	23.69	23.52	23.66	24.61
Dhal	Gram	405.19	18.50	19.63	18.47	17.59
Coconut oil	Ml	256.09	14.68	14.38	14.69	15.15
Dried chilies	Gram	101.62	13.45	13.43	13.45	13.49
Sprats	Gram	114.96	12.56	12.98	12.50	13.49
Tea dust	Gram	108.14	12.36	13.11	12.62	9.15
Hurulla, salaya	Gram	203.90	10.90	10.75	10.92	11.30
Wheat flour	Gram	706.97	9.12	8.95	9.16	9.07
Beans	Gram	335.30	8.53	9.00	8.53	7.68
Red onions	Gram	189.36	8.30	7.98	8.31	8.80
Brinjal	Gram	388.02	6.73	7.63	6.62	7.23
Beef	Gram	69.97	6.10	6.33	6.03	6.24
Balaya, Kelavalla	Gram	51.72	5.49	5.67	5.46	5.81
Bombay onions	Gram	171.94	5.36	5.38	5.34	5.72
Green chilies	Gram	111.75	5.16	6.19	5.05	5.88
Egg Hen	Number	1.55	4.97	4.78	4.96	5.52
Other		_	132.20	142.05	131.01	132.43
Total Cost of the basket			564.91	597.56	561.71	576.09

Source :- Household Income and Expenditure Survey 1995/96
Department of Census and Statistics

Calorie cost of different food baskets of individual choice is used by sector and province.

Table A2 – Calorie cost by sector and province 1995/96
(Based on 2nd, 3rd and 4th per capita food expenditure decile)

Category	Calorie cost Rs/1000kc	95% Confidence Interval Lower Calorie cost Rs/1000kc	95% Confidence Interval Upper Calorie Cost Rs/1000kc	Number of Observations (Households)	Basic Calorie Requirement kilocalorie per person
Sri Lanka	9.70	9.60	9.80	6158	2030
Sector					
Urban	11.35	11.06	11.63	709	2039
Rural	9.64	9.53	9.75	4781	2028
Estate	8.35	8.08	8.62	668	2033
Province					
Western	11.00	10.77	11.24	964	2037
Central	9.25	9.03	9.47	1321	2027
Southern	10.02	9.78	10.25	998	2008
North-Western	9.66	9.44	9.88	798	2036
North Central	9.03	8.76	9.30	507	2043
Uva	8.57	8.34	8.79	757	2028
Sabaragamuwa	9.44	9.18	9.69	813	2027

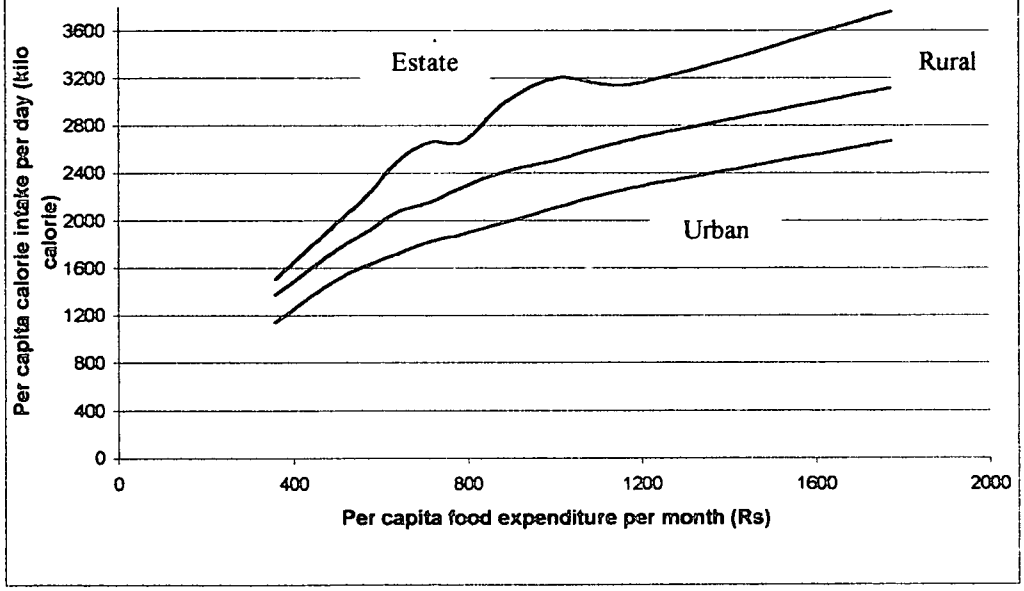
Source :- Household Income and Expenditure Survey 1995/96
Department of Census ands Statistics

Note:- Calorie consumption depends on other factors as well, other than household income. Other influences include the tastes of household (e.g. urban tastes in food may differ than rural tastes), the level of activity of household members, relative prices of different food and non- food items etc. The above table shows how much they should pay to obtain 1000 kilocalories based on the existing food habits of the poor people around the poverty line in those areas. These values by sector and province were not used in computation of poverty lines, as food preferences are also included here. This table is produced here for comparison purpose.

Calorie expenditure function by sectors

Calorie expenditure functions for urban, rural and estate are shown in Figure - 1 for comparison purposes. It is evident from the above graph that estate household can obtain food more cheaply, because food is relatively less expensive and also they are ready to consume food items those are cheaper per calorie.

Figure 1 - Per capita calorie intake by per capita food expenditure and sector



For an Example, Suppose a person obtain 2400 kilocalories he should spend
Rs. 1300 if he lives in urban sector,
Rs. 875 if he lives in rural sector and
Rs. 600 if he lives in estate sector.

This was stated by Kakwani (1986) as "rural household can obtain food more cheaply, both because food is typically less expensive in rural areas and also because the rural households are more willing to consume food items that are cheaper per calorie. Urban households are more likely to buy higher quality food and therefore they have to pay a higher calorie cost."

Definitions

Head Count Index

Head Count Index is the proportion of the population below the property line. Headcount index is one of a widely used measure in poverty. That is simple to construct and easy to understand. However headcount index also have some weaknesses. The headcount index does not take the intensity of poverty into account.

- The headcount index does not indicate how poor the poor are
- The headcount index is the percentage of individuals who are poor and not the percentage of households. To be able to do so, we make a critical assumption that all household members enjoy the same level of well being. But this is not true in the practical situation and collecting individual consumption information also difficult.

$$\text{Head count Index} = \frac{\text{Number of poor people in the population}}{\text{Total population}}$$

Poverty Gap Index (PGI)

Poverty Gap Index is a better measure to study the depth of poverty. This measure is the mean proportionate poverty gap in the population. It shows how much would have to be transferred to the poor to bring their incomes up to the poverty line. It also gives the ratio of the cost of eliminating poverty using perfectly targeted transfers compared with using completely untargeted transfers. Poverty gap index may not convincingly capture differences in the severity of poverty amongst the poor.

$$PGI = \frac{1}{n}\sum_{i=1}^{q}\frac{(z - y_1)}{z}$$

Where

Z = Poverty line

Y_1 = Expenditure of the poorest

Y_q = Expenditure of the least poor

n = Total number of persons below the poverty line

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