

**USE OF CENSUS DATA IN POVERTY MAPPING  
IN SRI LANKA**

by

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## 1. INTRODUCTION

Reducing poverty is a difficult and complex challenge to many of the developing countries like Sri Lanka. A number of Poverty Alleviation and Social Welfare Programmes have been implemented by successive governments aiming to reduce poverty in this country. Some of the main poverty alleviation programmes implemented so far are Rice Ration Scheme, 'Food Stamp Scheme', 'Janasaviya programme' (introduced in 1989) and 'Samurdhi programme' (introduced in 1994). In addition to these a number of other welfare schemes have been implemented from time to time, specially for the benefit of the school children aimed at reducing malnutrition among schools children.

Most of the Health and Educational Indicators such as Infant Mortality Rate, Maternal Mortality Rate, Fertility Rate; Birth Rate, Death Rate, Expectation of Life at Birth, Literacy Rate, Enrolment Rate etc., shows that the people of Sri Lanka have benefited immensely from free education to all, including University education and free medical care, efficient immunisation programmes, etc.

However, with all the governmental interventions to reduce poverty, analysis of surveys conducted by the Department of Census and Statistics (DCS) shows that substantial poverty and under nutrition in young children still remains, though there is gradual reduction. With all the welfare programmes that have been implemented during the last few decades by the successive governments, Sri Lanka could have done better, in terms of growth and poverty reduction.

Properly targeting the destitute poor should be the number one priority in any welfare programme. Proper identification of the poor is one of most difficult parts in the Poverty Alleviation Programme. The surveys conducted by the DCS shows that some of the most deserving households which are in poverty, are not receiving the welfare benefits, while those who are in higher income levels are receiving such benefits. As such, it is extremely important to ensure that the most deserving cases are identified properly for any assistance in the form of income transfers and the amounts to be transferred should depends on their depth of poverty. The poor who are far below the poverty line should receive adequate amounts for them to get out of poverty, while those who are closer to the poverty line may need only a marginal assistance to get out of poverty.

It would be far better to create job opportunities to provide jobs to atleast one number of such families, rather than providing them with financial assistance. However, destitute poor need to be assisted to get them out of poverty as soon as possible and develop strategies to assist them in such a way that they will be able stand on their own without depending on state interventions. To target the poor effectively it is not sufficient to measure the poverty only at District level. It is absolutely important to go down to smaller administrative areas. However, the Income and Expenditure Surveys conducted by the DCS could provide Statistically sound Poverty Index only down to District level, because the sample is not large enough to go down to smaller geographical area units. To solve this problem, it is possible to use Census data to predict consumption levels down to smaller administrative levels. For this purpose it is necessary to identify the common variables that exist between the Household Income and Expenditure Survey (HIES) and the Population Census. These variables

will form the “bridge” that allow us to predict consumption levels into the populations census. For the poverty mapping exercise to be valid it is crucial that these linking variables are identically defined in the two datasets.

This paper explains the methodology that is being used by the DCS to measure poverty down to District Level (Sri Lanka is divided into 25 Administrative Districts). The methodology developed could provide ‘Poverty Maps’ down to only District level. The paper also makes an attempt to describe the methodology being tested on poverty mapping using the Income and Expenditure Surveys and Census data.

### **What is Poverty and whom to include in the category of the poor.**

A basic problem confronting all those who are involved in measuring and monitoring poverty is to define what is meant by **poverty** and whom to include in the category of the **poor**. As such before attempting to measure poverty in any country or a region it is necessary to understand what is meant by **Poverty**.

Some would argue that it is the lack of access to basic needs. Some would say that it is an inability to satisfy minimum needs. Still others would point out that it is a failure to meet Human Entitlement.

A relatively easy definition of poverty could be given as a condition in a society where some of the members of the society are unable to attain level of material well-being considered as an acceptable minimum by the standard of the society. As such minimum standard acceptable to a particular country or a region may not be acceptable to another country or a region.

There are two broad classes of methodologies for estimating poverty: **Absolute Poverty and Relative Poverty**.

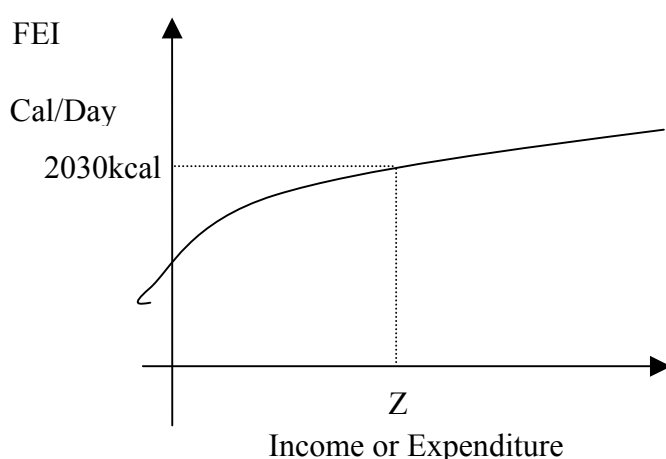
**Absolute Poverty** is a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income, but also on access to social services (United Nationals 1995).

**Relative Poverty** defines poverty in terms of it’s relation to standard which exist elsewhere in the society. In other words, Relative Poverty could be defined in terms of the position of the person or the household deemed poor, in relation to other individuals or households in the community in which it lives.

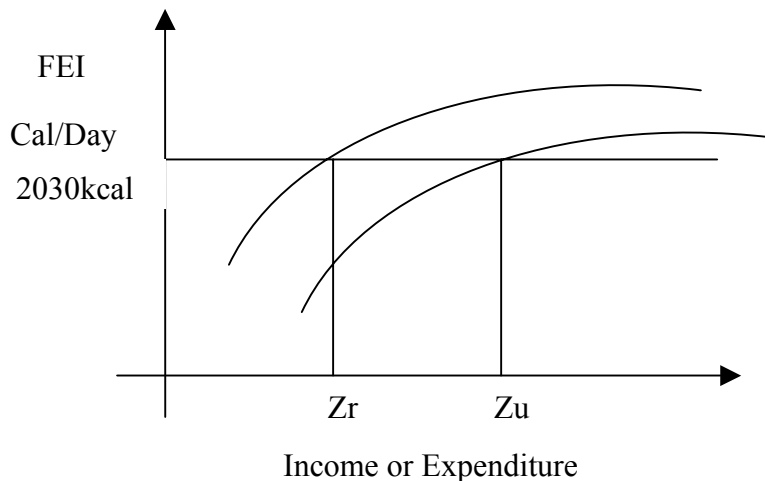
A distinction is sometimes made between on **Absolute Poverty Line** and **Relative Poverty Line**, whereby the former has fixed ‘**Real Value**’ over time and space, while a relative poverty line rises with average expenditure. Sometimes the term **Relative Poverty Line** is used to refer to a poverty line which is proportional to the mean or median income. Ravallion (1994 a) argues that for the purposes of forming anti-poverty policies a Poverty Line should always be ‘Absolute’ in the space of welfare. He argues that such a poverty line guarantees that the poverty comparisons made are consistent in the sense that two individuals with the same levels of welfare are treated the same way.

## The 'Food-Energy Intake' method

A popular practical method that had been used until recently for setting poverty lines is the '**Food –Energy Intake (FEI) Method**'. In this method the poverty lines are set by finding the consumption expenditure or income level at which Food Energy Intake (FEI) is just sufficient to meet pre-determined food energy requirements. The FEI method is still aiming at measuring the **Consumption Poverty** rather than under nutrition. If under nutrition need to be measured, one could look at nutrient intakes, relative to the requirements and not the incomes or consumption expenditures. What the FEI method is aiming to do is to find a monetary value of the poverty line at which the '**Basic Needs**' are met. Once the food-energy requirements



are set, the FEI method is easy to compute. A common method is simply to calculate the **mean income or expenditure** of a sub population of households, whose estimated calorie intakes are approximately equal to the stipulated requirements. It should be noted that this method automatically includes an allowance for both food and non-food consumption as long as one locates the total consumption expenditure at which a person typically attains the calorie requirement. It also avoids the need for price data. As such FEI method has a number of practical advantages. The FEI method could be used in constructing a poverty profile consistent with the attainment of basic food needs, with relatively modest data requirements. Only concern is whether the FEI method assures consistency in terms of real expenditure or some agreed measure of welfare. The main concern about the FEI method have arisen from the fact that the relationship between FEI and Income will shift according to differences in tastes, activity levels, relative prices, publicly by provided goods etc., besides consumption expenditure. The activity levels in typical urban jobs tend to require fewer calories to maintain the body weight than in the case of activities in the rural sector. The tastes may also differ. The urban household may simply have more expensive food tastes. They have to pay more for each calorie consumed and therefore the FEI will be lower at any given expenditure level. For these reasons, the real income at which an urban resident typically attains any given calorie requirement, will tend to be higher than in rural areas.



Note: \* - Consumption basket is more expensive in urban than in rural areas.

Access to better health care and schooling in the urban areas may mean that one tends to consume a diet which is nutritionally better balanced (with relatively fewer calories and more micro-nutrients). But then the FEI method will entail higher Poverty Line and more people will be deemed poor in urban areas than in rural areas. The FEI method is a good for setting a single poverty line, but one should be careful in applying it separately to each region or sector. It is more appropriate to compute different poverty lines for different regions, sector etc. This is important because the cost of the basket of goods necessary to achieve the minimum requirement of calories is different sector and regions.

### **SRI LANKA OFFICIAL POVERTY LINE (OPL)**

- Sri Lanka did not have a proper Official Poverty Line until recently, though different criteria were being used by DCS as well as other researchers to measure poverty. The DCS has now developed acceptable methodology to construct consistent poverty trends across time and space.
- **Absolute Poverty Line** approach is chosen so that changes in poverty over time or across regions can be easily checked with reference to explicitly fixed Poverty Line at a specific welfare level.
- OPL is fixed at a welfare level of a person who meets a certain minimum nutritional intake (2030 Kilocalories) in 2002. In other words, the OPL of 2002 is defined at the per-capita expenditure for a person to be able to meet the nutritional anchor of 2030 Kilocalories in 2002. For other years, the poverty lines are obtained by updating the OPL of 2002 with the Colombo Consumer Price Index (CCPI), for inflation.
- The OPL is fixed at a level of real total consumption expenditure rather than the nutritional anchor, because the welfare of an individual depends not only on his/her nutritional intake, but also on consumption of items other than food, such as clothing, shelter, education and health services. A poverty line fixed in terms of real consumption will capture the same welfare level across the survey years obtained from such goods.

- The welfare level of a person is measured by the person's per-capita expenditure adjusted for inflation to accommodate for changes in cost of living of the same bundle of goods. The OPL is updated by the CCPI in order to make it comparable to other official figures, especially GDP and private consumption in the National Accounts.

### **OPL – Cost of Basic Needs Method**

- The objective of a poverty line is to capture the basic needs necessary to meet minimum living standards. The Cost of Basic Needs (CBN) method addressed this objective through defining a consumption bundle – incorporating food and non-food items – that is adequate to meet the nutritional requirements and estimates the cost of purchasing that consumption bundle.
- The non-food component could be estimated from the expenditure composition of the house-holds whose food expenditures are close to what is required to achieve the nutritional anchor.
- The standard approach in CBN method is to first find a food consumption bundle of the population likely to be poor and then estimate the cost of consuming this bundle using the prices faced by the reference group. The food expenditure thus derived constitutes the food poverty line.

### **How the Food Poverty Line is derived**

- The households in the 2<sup>nd</sup> to 4<sup>th</sup> deciles ranked by real per-capita total consumption expenditure are chosen as the reference group.
- All food items for which both expenditure and quantity information are available are selected.
- The aggregates of food expenditures and caloric intakes in the reference group are calculated.
- The cost per calorie is derived by dividing the former by the latter
- The food poverty line (for 2002) is defined at Rs.973 per capita per month by multiplying the calorie cost by 30×2030 Kilocalories (Nutritional Anchor)

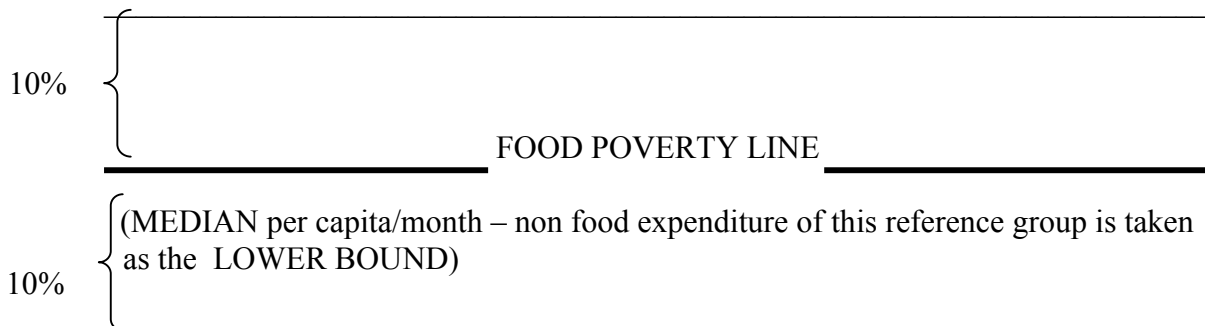
### **How the Non-Food Component of the Poverty Line is derived**

- The 'Food Poverty Line' obtained has to be translated into a 'Poverty Line' that also incorporates the expenditure required to attain basic non-food needs.
- Unlike in the case of food poverty level it is not very clear what level of non-food expenditures should be defined as basic needs

- The LOWER BOUND of the Non-Food Poverty line is defined as the Average Per Capita Non-Food Expenditure of the Households whose per capita Total Expenditure is close to the Food Poverty Line.
- For estimating the LOWER BOUND the reference group consists of households whose per capita Total Expenditure are within an interval of plus or minus 10 percent around the food poverty line.
- The median per capita Non-Food Expenditure of this reference group is taken as the LOWER BOUND.

### LOWER BOUND (LB)

Households whose real per capita total expenditure is 10% above the FOOD POVERTY LINE

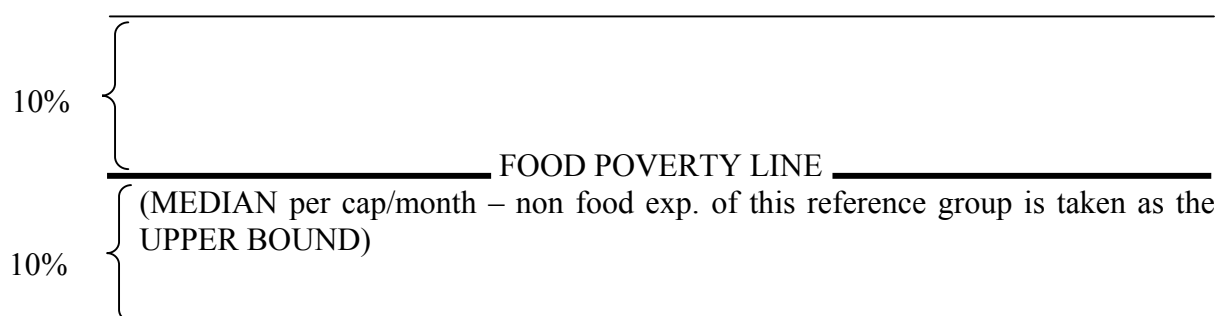


Household whose real per capita Total Expenditure is 10% below the FOOD POVERTY LINE

- The logic behind the use of Lower Bound is as follows: Non-Food Expenditure of such households should be considered as absolutely necessary for sustaining the minimum living standards, simply because any amount of spending on non-food items for such households necessarily reduces their food expenditure below what is required to attain the minimum calorie requirement.
- The UPPER BOUND of the Non-Food Poverty Line is defined as the Average per Capita Non-Food Expenditure of the households whose per capita Food Expenditure is close to the food poverty line.
- For estimating the UPPER BOUND the reference group consists of households whose Real Per Capita Food Expenditures are within an interval of plus or minus 10 percent around the food poverty food.
- The MEDIAN per-capita Non-Food Expenditure of this reference group is taken as the UPPER BOUND.

## **UPPER BOUND (UB)**

Households whose real per capita Food Expenditure is 10% above the Food Poverty Line



Household whose real per capita food Expenditure is 10% below the Food Poverty Line

- The rationale for such an UPPER BOUND is as follows: The average non-food expenditures among households whose food expenditure is around the food poverty line is applicable to households that no longer need to sacrifice food expenditure necessary to meet the minimum calorie requirement in order to consume non-food items.

## **THE NATIONAL OFFICIAL POVERTY LINE (NOPL)**

The National Poverty Line is computed as follows.

- Lower PL = Food PL + LB Non-food PL
- Upper PL = Food PL + UB Non-food PL
- The National Official Poverty Line (NOPL) for Sri Lanka is an arithmetic mean of the Lower and Upper Poverty lines.

That is,

$$\text{NOPL} = (\text{Lower PL} + \text{Upper PL})/2$$

## **Summary of Poverty Lines at 2002 National Prices**

(i). Food PL	= Rs.973 per cap/month
(ii). Lower PL	= Rs.1267 per cap/month
(iii). Upper PL	= Rs.1579 per cap/month
(iv). Official PL	= Rs.1423 per cap/month

## **How to adjust for price differences over time and across Districts**

- In applying the poverty line, one has to ensure that the line represents the same standard of living across time and accounts for variations in cost of living in different areas.
- The National Poverty Line is defined at 2002 national prices.
- Line need to be deflated with the Colombo Consumer Price Index CCPI to obtain the Official Poverty Lines at current prices for other survey years.

- Using the CCPI, the National Poverty Line for 1990/91 and 1995/96 are Rs.475 and Rs.833 respectively.
- The District Poverty Lines could be computed by adjusting the national poverty line with spatial price indices for each District.

### **The Poverty situation in Sri Lanka since 1990**

The analysis on poverty in Sri Lanka is based on the Household Income and Expenditure Surveys, conducted by the Department of Census and Statistics in the years 1990/91, 1995/96 and 2002.

The Table (1) gives the Official Poverty Line, Poverty Headcount Ratio and the percentage of Poor Households by Districts, based on the above surveys. The Table (1) shows that the poverty line for Colombo, after adjusting for price differences across districts, is higher than the national poverty line. It's also higher than poverty lines for all other districts for every survey year. This reflects the higher prices in Colombo District. On the other hand, Hambantota and Anuradhapura record significantly lower poverty lines than the national poverty line, due to the lower prices in these two Districts, than in Colombo. Using the poverty lines obtained, as given in Table (1), the poverty headcount ratios were computed for each District, which are given in columns 5 to 8 of the table. These figures shows that there are considerable regional disparities in the poverty situation in Sri Lanka, although the overall position has improved. The percentage of the population below poverty had been 26.1 percent in 1990/91 and the percentage has decreased to 22.7 in 2002.

However, in certain Districts outside the Western province, such as Hambantota, Badulla, Monaragala, Ratnapura and Kegalle, the percentage of population below poverty has remained more than 30 percent. In Badulla and Monaragala District the situation has worsened. In the three Districts in the Western Province (Colombo, Gampaha and Kalutara) the situation has improved. For example in Colombo District the percentage below poverty has dropped from 16 percent in 1990/91 to 6 percent in 2002. This type of information is extremely important in monitoring the poverty situation throughout the country. Action is being taken by the DCS to prepare poverty maps going down to small administrative area units, such as Divisional Secretary Division (DSD), which are sub-divisions of the Districts (Sri Lanka is divided in to 324 such DSD Divisions) as well as even smaller administrative levels called Grema Niladari Divisions (Sri Lanka has been divided in 14,008 such Divisions). The housing information collected in the Census of Population and Housing in 2001 and the results of the Household Income and Expenditure Survey – 2002 are being used to prepare these poverty maps. Such maps will be extremely useful to planners and policy makers who are involved in implementing and monitoring welfare programmes.

### **Developing Poverty Maps down to Smaller Administrative Areas**

At present the DCS is experimenting on developing poverty maps to identify poverty pockets using the Household Income and Expenditure Survey (HIES) data and the Population Census data. The first stage is concerned with identifying the common

variables that exist between the HIES and Population Census. These variables will form the “bridge” that allow us to predict consumption levels in the population census.

### Basic Idea of Poverty Mapping

The objective is to obtain statistically sound poverty index in a small geographical area. However, the HIES does not have sufficiently large sample of households to achieve this objective. To solve this problem, we could impute consumption level of census households. The poverty mapping exercise provides a statistically sound way to impute the unobserved consumption level of census households.

Relationship between consumption and a set of Poverty Predictors.

$$y_{HIES} = X_{HIES} \times \beta_{HIES} + e$$

$$y_{CENSUS} = X_{CENSUS} \times \beta_{CENSUS} + e$$

Where  $X_i$  denotes poverty predictors such as education and occupation.  $y_i$  denotes per capita monthly consumption.

Assumption: the partial correlation between a poverty predictor, say the educational attainment of the Head of the household and consumption is identical between HIES and the population census.

Under the above assumption, even if we do not observe  $Y_{CENSUS}$  (Consumption of census households), we can impute it using  $X_{CENSUS}$  as described below.

**HIES :**  $y_{HIES} = X_{HIES} \times \beta + e$

Then obtain  $\beta$

**CENSUS:**

$$\hat{Y}_{CENSUS} = X_{CENSUS} \times \hat{\beta}$$

However, this estimated consumption of Census households is not exactly the same as the true consumption level, since this procedure has two possible errors.

- (i) The estimated partial correlation between a poverty predictors and consumption is different from true correlation. That is,  $\beta \neq \hat{\beta}$ .
- (ii) We neglect the residual  $e$ .

The Poverty Mapping exercise computes standard errors of the predicted consumption of census households  $\left(\hat{y}_{CENSUS}\right)$  arising from these errors.

Requirements for this

- (i) Define a domain: sub sample used for regression in HIES
  - (a) This is necessary since different districts might have very different partial correlations between poverty predictors and consumption  $\beta$ .
  - (b) It is more appropriate to treat Urban and Rural (and Estate) separately.
  - (c) It is also necessary to ensure that enough observations (at least 200) are available.
- (ii) Need to find the common variables between HIES and CENSUS.
  - (a) There are common questions in both HIES and CENSUS schedules.
  - (b) The summary statistics of variables included in both CENSUS and HIES could be compared.

Following are domains used for regression in HIES.

District	Province	Sector			
		Urban	Rural	Estate	
Colombo Gampaha Kalutara	Western	U1	R1	E1	
		U2	R2		
			R3		
Kandy Matale Nuwara - Eliya	Central	U3	R4		
		U4	R5		
			R6		
Galle Matara Hambantota	Southern	U5	R7		
			R8		
			R9		
Kurunegala Puttalam	North Western	U6	R10		
			R11		
Anuradhapura Polonnaruwa	North Central		R12		
			R13		
Badulla Moneragala	Uva		U7		R14
					R15
Ratnapura Kegalle	Sabaragamuwa	R16			
		R17			

## Comparability between Census of Population and Housing – 2001 and HIES – 2002

1. The Census of Population and Housing was conducted in July 2001 and the Household Income and Expenditure Survey –2002 was conducted from January – December 2002. As the time gap between these two statistical operations is not so high, it could be assumed that the changes in preferences and the tastes of the households are not significant.
2. There are many common variables in CENSUS and HIES – Household size, Relationship with the Head of the Household, Sex, Marital Status, Religion, Ethnic group, Job status, Occupation and Industry are included in both CENSUS and HIES.
3. The definitions of the common variables should be the same. To make the definitions consistent, common variables could be redefined, if necessary.
4. Same location code should be used in both CENSUS and HIES.

The comparisons between CENSUS and HIES, in few of the common variables are given in the Appendix (1).

### Creating a Regression Data Set

To adjust to location specific effects, it is possible to construct community level variables (DSD level) from the Census.

$$y_{HIES} = X_{HIES} \times \beta_{HIES} + Z_{DS} \bullet \alpha + e$$

Where

$X_i$  = denotes poverty predictors such as education and occupation

$y_i$  = denotes per capita monthly consumption

$Z_{DS}$  = denotes DS average of housing unit information

**DS levels variables from CENSUS Housing unit information:** type of wall; type of floor; type of roof; type of structure; year of construction; Unit usage; number of rooms; availability of toilet; type of toilet; source of drinking water; principal type of lighting; principal type of cooking fuel.

### Consumption Model Estimation

Steps to be taken

- (i) Insert census means and ancillary variables

- (ii) Construct a series of Interaction terms and higher order terms with the household level variables in the survey dataset. For example, household size can be squared and cubed, education dummies can be interacted with occupation dummies.
- (iii) Next is to estimate a Model of consumption  $y$ , on a selection of household characteristics (not census mean or other ancillary data set) denoted by  $x$ .
- (iv) A separate model need to be estimated for each domain that has been already defined.
- (v) Add Census means and other means at the primary unit and corunure level.
- (vi) To select among eligible candidate variables following are being tried and tested

### **Key indicator**

- R – squared  $>0.5$
- T –test for parameters (prob  $<0.15$ )
- Usually less than 20 variables
- Goal is to obtain a good fit and precisely estimated coefficients

### **Robustness Test**

- Draw a sub – sample from the domain and estimate the model for that sub – sample.
- Parameter estimates from the estimated model can subsequently be applied to the remaining sub – sample and predicted mean consumption can then be compared to actual mean consumption.
- Stability of parameters after dropting one cluster
- Testing weighting: Deaton (1977) Test

### **Cluster Means**

1. Add Cluster means to the basic regression
2. To avoid over fitting, the number of cluster means must be no more than the square root of the number of clusters.

### **Procedure of selecting cluster means**

1. 50 cluster – 6 cluster means
2. Basic (weighted) regression of  $y$  on  $x$
3. Take the residuals of the regression above, and regress these on a series of cluster –level dummies
4. Take the parameter estimates on the cluster-level dummies
5. Regress them on 5 or 6 best cluster level means
6. Select the best model based of R-squared

### **Re-estimating a model of heteroskedasticity**

1. Take the residual of the final consumption model
2. Regress the residual on the vector of cluster dummies. Called the residual “household error”
3. Identify the highest value of the squared ‘household error’ term
4. Multiply this by 1.05 and denote it as A
5. Calculate A-squared household error term for each household, called B
6. Regress  $\sqrt{A}$  (squared household error/ B) on household variables (explanatory variables in consumption estimate + predicted (log) per capita consumption)
7. Focus on t-test and R-squared to select the right model

Above are the procedures and methodologies being tested to develop poverty maps down to lowest possible administrative area using the HIES and CENSUS. Once such maps are developed, they will be made available in the departments website for the use of policy makers, planners and other data users.

#### References

1. Bulletin on ‘Official Poverty Line’ for Sri Lanka
2. Nobuo - The Current Status of Poverty Mapping Exercise and the Future Plans.

**Table - 1 - POVERTY SITUATION IN SRI LANKA SINCE 1990/91 BY DISTRICTS BASED ON THE OFFICIAL POVERTY LINE**

District	Nominal Poverty Line (Rs)			Poverty Headcount Ratio			Percentage of Poor Households		
	2002	1995/96	1990/91	2002	1995/96	1990/91	2002	1995/96	1990/91
<b>Sri Lanka*</b>	<b>1423</b>	<b>833</b>	<b>475</b>	<b>22.7</b>	<b>28.8</b>	<b>26.1</b>	<b>19.2</b>	<b>24.3</b>	<b>21.8</b>
Colombo	1537	908	518	6	12	16	5	9	13
Gampaha	1508	875	489	11	14	15	9	11	12
Kalutara	1523	866	494	20	29	32	18	25	27
Kandy	1451	850	485	25	37	36	21	33	31
Matale	1395	816	466	30	42	29	25	37	24
Nuwara Eliya	1437	841	494	23	32	20	18	26	16
Galle	1466	833	489	26	32	30	22	26	25
Matara	1395	816	470	27	25	29	23	30	23
Hambantota	1338	791	470	32	31	32	28	26	26
Kurunegala	1352	791	456	25	26	27	21	23	23
Puttalam	1423	841	461	31	31	22	25	26	19
Anuradhapura	1380	816	456	20	27	24	17	22	20
Polonnaruwa	1366	783	475	24	20	24	20	17	21
Badulla	1409	850	485	37	41	31	32	36	27
Monaragala	1366	791	480	37	56	34	32	48	27
Ratnapura	1451	833	494	34	46	31	30	40	26
Kegalle	1437	858	466	32	36	31	28	32	27

Source: HIES 2002, 1995/96, 1990/91 and CCPI

Note: \* - Northern and Eastern Provinces not covered

**Table - 2 – Mean Household Income per Month and Share of Household Income to Total Household Income (%)**

National Household Income Deciles	Mean Household Income (Rs) Per month			Share of Household Income to Total Household Income (%)		
	1990/91	1995/96	2002	1990/91	1995/96	2002
D1	661	1139	2123	1.9	1.8	1.7
D2	1165	1958	3971	3.3	3.0	3.1
D3	1540	2614	5251	4.3	4.0	4.1
D4	1900	3210	6441	5.3	5.0	5.0
D5	2256	3830	7733	6.4	5.7	6.0
D6	2646	4515	9295	7.5	6.9	7.3
D7	3176	5535	11319	9.2	8.4	8.8
D8	3935	7092	14328	10.8	10.7	11.2
D9	5309	9750	19666	14.8	14.7	15.4
D10	12963	26187	47569	36.5	39.8	37.4
All Groups	3549	6579	12804	100.0	100.0	100.0
	First five Deciles (D1–D5)			21.2	19.5	19.9
	Last five Deciles (D6 – D10)			78.8	80.5	80.1
	First Four Deciles (D1 – D4)			14.8	13.8	13.9
	Last two Deciles (D9 - D10)			51.3	54.5	52.8

Source: Department of Census and Statistics, Household Income and Expenditure Surveys

**The Democratic Socialist Republic of Sri Lanka** (formerly known as Ceylon) comprises one large island and several islets, lying east of the southern tip of the Indian subcontinent. The maximum north-south length of the island, is 435 km. and its greatest width is 225km. The island (including adjacent small islands) covers a land area of 65,610 sq.km. The Bay of Bengal lies to its north and east and the Arabian Sea to its west. Sri Lanka is separated from India by the gulf of Mannar and the Palk Strait, between which there lies, in very shallow water. Sri Lanka stretches from 5 Dig. 55 min to 9 Dig. 50 Min North and from 79 Dig. 42 Min. to 81 Dig. 53 Min. East.

### District Summary 2002

District	No.of DS/AGA Division*	No.of Sub office	No.of Praseshiya Sabaha	No.of Municipal Council	No.of Urban Council	No.of Wards	No.of Electorate.	No.of Grama Niladari's Division.	No.of Villages
Colombo	13		6	4	3	121	15	557	808
Gampaha	13		12	2	5	72	13	1177	1911
Kalutara	14		10		4	35	8	762	2652
Kandy	20		17	1	4	58	13	1188	2987
Matale	11		11	1		13	4	545	1355
Nuwara Eliya	5		5	1	2	24	4	491	1421
Galle	18		15	1	2	37	10	896	2311
Matara	16		12	1	1	21	7	650	1598
Hambantota	12		9		2	12	4	576	1319
Jaffna	14		12	1	3	52	10	435	954
Mannar	5		4				1	153	684
Vavuniya	4		4		1	11	1	102	527
Mullaitivu	4	1	4				1	127	516
Kilinochchi	3	1	3				1	95	258
Batticaloa	12		10	1	1	19	3	345	857
Ampara	19		14		2	9	4	504	876
Trincomalee	10	1	10		1	12	3	230	645
Kurunegala	27	3	18	1	1	21	14	1610	4509
Puttalam	16		10		2	20	5	548	1284
Anuradhapura	22		18	1		10	7	694	3085
Polonnaruwa	7		6				3	290	657
Badulla	15		14	1	2	29	9	567	2229
Monaragala	11		10				3	319	1198
Ratnapura	17		13	1	1	24	8	575	1941
Kegalle	11		10		1	11	9	573	1677
<b>Sri Lanka</b>	<b>319</b>	<b>6</b>	<b>257</b>	<b>17</b>	<b>38</b>	<b>611</b>	<b>160</b>	<b>14,009</b>	<b>38,259</b>

\*No. of Divisional Secretary/Assistant Government Agent Division

**APPENDIX – 1**

**HIES**

<b>paisemp</b>	<b>Obs</b>	<b>Est.Proop</b>	<b>Std.Err.</b>
0	114	0.267	0.024
1	326	0.733	0.024

<b>occup</b>	<b>Obs</b>	<b>Est.Proop</b>	<b>Std.Err.</b>
1	45	0.144	0.026
2	40	0.139	0.024
3	33	0.099	0.017
4	17	0.049	0.012
5	21	0.061	0.015
6	0	0.000	0.000
7	43	0.126	0.023
8	38	0.109	0.019
9	82	0.250	0.039
10	0		

<b>ind</b>	<b>Obs</b>	<b>Est.Proop</b>	<b>Std.Err.</b>
1	1	0.004	0.004
2	0	0.000	0.000
3	0	0.000	0.000
4	73	0.223	0.032
5	1	0.004	0.004
6	21	0.074	0.019
7	48	0.153	0.026
8	5	0.014	0.006
9	27	0.086	0.018
10	9	0.029	0.009
11	10	0.035	0.010
12	51	0.170	0.027
13	11	0.040	0.011
14	17	0.060	0.015
15	13	0.042	0.012
16	21	0.066	0.016
17	0	0.000	0.000

**5% CENSUS**

<b>paisemp</b>	<b>Obs</b>	<b>Est.Proop</b>	<b>Std.Err.</b>
0	5389	0.273	0.008
1	14319	0.727	0.008

<b>occup</b>	<b>Obs</b>	<b>Est.Proop</b>	<b>Std.Err.</b>
1	1083	0.085	0.006
2	1131	0.092	0.005
3	1756	0.133	0.005
4	1126	0.081	0.003
5	1522	0.108	0.004
6	73	0.005	0.001
7	1844	0.128	0.007
8	1532	0.107	0.006
9	3666	0.254	0.011
10	29	0.002	0.000

<b>ind</b>	<b>Obs</b>	<b>Est.Proop</b>	<b>Std.Err.</b>
1	65	0.004	0.001
2	65	0.006	0.002
3	37	0.002	0.001
4	2769	0.206	0.010
5	51	0.004	0.001
6	656	0.046	0.003
7	1913	0.148	0.006
8	302	0.023	0.002
9	1473	0.109	0.007
10	439	0.034	0.002
11	715	0.058	0.003
12	2380	0.179	0.011
13	381	0.031	0.002
14	346	0.028	0.002
15	491	0.039	0.004
16	1171	0.083	0.006
17	15	0.001	0.000




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## District and DS division boundaries of Sri Lanka: 2001



### Boundaries

 Districts

 DS divisions





## National Poverty Line by District - 2002

