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MULTI DIMENSIONAL POVERTY INDEX: A CASE STUDY OF ELATHUR IN CALICUT DISTRICT

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ABSTRACT

Poverty means absence of basic necessities like food, cloth, shelter, etc. Poverty estimates are necessary for adopting proper poverty eradication programmes. Accurate poverty estimation is very difficult. In India we use so many approaches like income based and expenditure based. Most of the measurements are based on income because of the relation between income and poverty. But income is not the only criteria for determining poverty, it has multi phases. So this paper analyses the multi dimensions of poverty through multi dimensional index. This study is conducted in Calicut city.

KEY WORDS: Poverty, income, people, standard of living, Education.

INTRODUCTION

Multi dimensional poverty index defines poverty means multi deprivations of the dimensions: Health, Education and Standard of Living. This measurement got importance after the writings of Nobel Prize winner Amartya Sen. MPI introduced in July 2010 the OPHI's and UNDP's 20th anniversary Human Development Report. MPI is preparing for understand the depth of poverty that people face and implement proper policies according to the deprivations. Earlier methods only analyse the poverty and income relation where as MPI analyse the multi dimensions of poverty.

DIMENSIONS AND INDICATORS IN MPI

MPI include three major dimensions, they are health, education, and standard of living. These three indicators are further sub divided into ten indicators (Table 1). Health sub divided into nutrition and child mortality. Education categorised as years of schooling and enrolment. Standard of living sub divided into electricity, sanitation, drinking water, cooking fuel, floor and assets. These three dimensions got 1/3 weights. Mostly percentage is used as a measurement to find out the

distribution effect of different variables in the sample. $MPI = H \times A$ reflects the proportion of dimensions in which households all, on average deprived

Weights to Each Indicator:-

The MPI is a weighted index. Weights can be applied in three ways ;(a) between dimensions (the relative weight of health and education), (within dimensions) if more than one indicator is used and (c) among people in the distribution ,for example; to give greater priority to the most disadvantaged. It is important to note that the choice of dimensions, of cut offs, and of weights between dimensions is interconnected. For example, dimensions might be chosen such that they were of relatively equal weight. This indeed, is the recommendation s given by Atkinson et al (2002) in their work on social indicators in Europe. Weights may be set by a number of processes such as participatory processes or expert opinion that are informed by the public debate. Alternatively, weights may be drawn from survey question such as socially perceived necessities or interpreted using data on subjective evaluations. The important feature to consider is that the weights are meant to

represent a 'reasoned consensus' of the relevant community. Empirically, the relative weights are influenced by the cut offs, the normalisation (if any) of the variable and the explicit weights. The MPI explicitly weights each dimension equally and each indicator within the dimension equally.

OBJECTIVES

1. To estimate Multidimensional Poverty Index of Elathur

RESEARCH METHODOLOGY

This study is based on both theoretical and empirical one. Both primary and secondary data were used. For collecting secondary data books, articles, news papers etc were used. Empirical part of the study is conducted in Elathur city in Kozhikode District for analysing multi dimensional poverty index. The household survey was conducted with the help of a pre-tested scheduled by holding interviews. Data was analysed and presented by using simple statistical tool tables

STATEMENT OF THE PROBLEM

Multidimensional poverty index analyses the multi face of poverty. There are so many studies conducted in India but they does not analyse the multiple aspects of poverty. Multidimensional poverty index analyses the educational factors, health and standard of living. Multi dimensional poverty index shows the number of people who are multi dimensionally poor and the number of deprivations with which poor households' typically contend. It reveals a different pattern of poverty than income poverty as it illuminates a different set of deprivations. Even though there are numerous studies on poverty at national and state level, studies on multi-dimensional poverty, especially at regional level are few. In this context the present study is conducted in Elathur, Calicut district.

AREA PROFILE

Elathur is a municipality town in Kozhikode in the Indian states of Kerala. it is located about 12 km north of Kozhikode city. It is bounded by the Arabian sea at the west and Korappuzha River at the north. Elathur has a population of 41326 with a nearly equal proportion of Hindus and Muslims. The area covers 13.58 km² but a major portion of the area has been taken up by NH 17, The state highway, river and the Indian railways.

ANALYSIS

HEALTH

Availability and utilization of health facilities is an important indicator to measure the living standard of the households. Analysing the health facility (Table 2) majority peoples depends for their treatment both private and Government hospitals that is 53 percent. 20 percent households depends private hospitals and 27percent depends Government hospitals. There are five cases reported in child mortality. Nutritional analysis shows that 13 percent malnourished in age below 5. 40 percent malnourished in age 6-20. 29 percent

malnourished in age 21-50 and 18 percent malnourished in age above 51. (Table 3)

EDUCATION

Education, productivity and Economic growth is positively linked. Education has a positive link with poverty also. Poverty can be abolished only through improvement in the educational level of households. Proper education including mass literacy, formal education and technical education should be given to the poor. Analysing educational status (Table 4) most of the people getting primary education that is 65 percent, 11percent people are getting secondary education. 19 percent members are degree qualified and 3 percent were qualified in other education. Only 2 percent members are illiterate.

STANDARD OF LIVING

The extent and use of electricity can be considered as a good indicator of the level of living and development. Considering electricity 100 percent get the electric facility. Another indicator is water. Water is a basic necessity of mankind. Availability of good water has much influence on health condition of households. Cleanliness is an indicator of good health. Every house should have sanitary latrines and drainage for the proper disposal of waste water. There are 6 percent household exist without proper sanitation facility; the nature of water supply available to households indicates the health condition of the people. 57 percent households have their own source of water. While 23 percent meet their water requirement from neighbourhood well. 11 percent depends on public tap and 9 percent depend on community well (Table 5). Flooring condition of the households shows the standard of living (Table 6). Flooring condition of the sample respondents are much improved. There are no homes dung and dirt flooring. Majority of house are tiled that is 53 percent. 44 percent are cement floored, and only 3 percent among them are sand floored. Analysing fuel used by households 93 percent households used wood, 60% used LPG and 40% used kerosene. But in this analysis not found cooking fuel dung and charcoal used by households (Table 6). Size of asset holding is an important indicator of socio-economic condition of the households (Table 7). Analysis shows that 97 percent hold phone and television, 63 percent has motorbike, 82 percent hold refrigerator, 7 percent hold radio and 3 percent hold car.

CALCULATION OF MPI

The MPI is the product of two numbers; the head count, H or the percentage of people who are poor, and the average intensity of deprivation, A-which reflects the proportion of dimensions in which households all, on average deprived.

$$MPI = H \times A$$

H: percentage of people who are poor

A: Average intensity of deprivation in percentage

A person is considered poor if they are deprived in at least 30% of the weighted indicators. The intensity of poverty denotes the proportion of indicators in which they are deprived.

By calculating the multi dimensional poverty index in Elathur locality MPI =0.109. In this calculation 26.67% of the sample respondents are multi dimensionally poor. It shows

that multi dimensional poverty is low in this locality.

CONCLUSION

Multi dimensional poverty index is a better indicator of poverty because it analyses the socio economic aspects of poverty. It analyses health, education and standard of living. These indicators give a clear idea about the condition of people. Income or expenditure does not give such proper picture. Poverty is not purely based on economic aspects but too social a

TABLES

Table 1: Dimensions and Indicators with Relative Weights

Dimension	Weights	Indicator	Weights
Health	1/3	1.nutrition	1/6
		2.child mortality	1/6
Education	1/3	3.years of schooling	1/6
		4.enrolment	1/6
Standard of Living	1/3	5.electricity	1/18
		6.sanitation	1/18
		7.drinking water	1/18
		8.cooking fuel	1/18
		9.floor	1/18
		10.Assets	1/18

Source: OPHI Working Paper-38

Table 2. Medical Facility

Treatment	Percentage
Pvt. Hospital	20
Govt. hospital	27
both	53
total	100

Source: Primary data

Table 3 Nutritional status of the people

Age	Percentage
Below 5	13
6-20	40
21-50	29
51 above	18
total	100

Table 4: Educational Qualification of adult members

Educational Qualification	Percentage
illiterate	2
primary	65
secondary education	11
university education	19
others	3
total	100

Source: Primary data

Table.5: Water Availability

Source of water supply	Percentage
owned well	57
neighborhood	23
public tap	11
community well	9
total	100

Source: Primary

Table.6: Flooring

Floor	Percentage
dirt	0
sand	3
dung	0
cement	44
tile	53
total	100

Source: Primary data

Table.7: Cooking Fuel Used By Households

Cooking fuel	Percentage
wood	93
charcoal	0
dung	0
kerosene	40
LPG	60

Source: Primary data

Table.8: Distribution of Sample Respondent Based On Asset Holding

Assets	Percentage
Television	97
Radio	7
Phone	97
Motorbike	63
Refrigerator	82
Car/truck	3

Source: Primary data

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