Poverty across Socio-Religious Groups in Karnataka by Using NSSO Data

Dr.Niranjan.R[1] & Shivakumar[2]

Abstract

The present study attempt a horizontal analysis of division wise patterns of poverty on head count ratio of existing among social and religious groups in Karnataka state and specially focus on Hyderabad-Karnataka region. This region constrains six most backward districts in Karnataka that are below the state and national average in majority of socio economic indicators and also study cover four administrative divisions are Kalaburagi division, is also known as Hyderabad-Karnataka (HK) region, Bengaluru division, Mysuru division and Belagavi division. Methodology of my research work is primarily uses specific poverty line of Karnataka which is defined Tendulkar Methodology Rs.418 and Rs.588 in rural & urban area of 61st round (2004-05) and Rs.902 and Rs.1089 in rural & urban area of 68th round (2011-12) of NSSO rounds data to decipher micro level of poverty in districts of Karnataka, Division wise, Social groups and Religious groups such as SC/ST/OBC & Others. Study also estimates of logistic regression to identify key determinants of poverty of the independent variables. Poverty estimates district wise and division wise poverty, there is highest ratio found in Kalaburagi division or (HK) region, second larger poverty consist in Belagavi division of both rural and urban. While poverty in the state reduced by total 12.74%, points between 2004-05 and 2011-12. Remnants the incidence of poverty in social group wise reduced by 19.67% in Scheduled Tries, 20.66% in Scheduled Caste, 15.9% in OBC & 4.5% and the estimates poverty in religion wise reduced by 13.45% in Hindu and 11.46% in Muslims communities.

Key words: Measurement of Poverty, Districts and Divisions Poverty across Socio-Religious groups.

I. Introduction

Poverty is a multidimensional phenomenon and it is the greatest challenge to the mankind. Poverty is defined as deprivation in well-being. It must be seen as the scarcity of basic capabilities rather than simply taking into thought the monetary aspect which forms a usual dimension as to whether the person is poor or not[3]. Amartya Sen in his book, 'Poverty and Famines' importance of diverse concepts of poverty which has to be taken under deliberation for the effective understanding of poverty. In broad terms the poverty is defined as the

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[1] Assistant Professor, Dept of Studies and Research in Economics, Vijayanagara Sri Krishnadevaraya University, Ballari-583105.
[2] Doctoral Scholar, Dept of Studies and Research in Economics, Vijayanagara Sri Krishnadevaraya University, Ballari-583105
[3] Amartya Sen's Theory of Poverty Mubashshir Sarshar, *National Law University, Delhi*

inability to acquire the basic goods and services essential for survival with distinction. It also includes low levels of attainment, education and health, poor access to sanitation and clean water, insufficient physical security, and inadequate capacity and opportunity to better one's life[4]. Similarly it implies severe lack of material and none maternal goods which impede the normal development of the individuals. In absolute terms, it reflects the inability of an individual to satisfy certain basic minimum needs for a sustained, healthy and reasonably productive living.

Economic growth is the most powerful device for reducing poverty and improving the quality of life in developing countries. It's creates job opportunities and thus stronger exact for labour, the main and often the sole asset of the poor. In turn, increasing employment has been critical in delivering higher growth and is not just associated with eradicate poverty. There is also clear evidence for a positive linking with economic development and broader measures of human development. Amartya Sen has described economic growth as a critical means for increasing the substantive freedoms that people value. These freedoms are strongly associated with development in general living standards, such as greater opportunities for people to become improved, eat better and live longer[5].

Poverty is one of the most critical issues being faced by any economy. It has been defined variously by the scholars. "Poverty is conservatively measured by the expenditure or income level that can continue an exposed minimum standard of living". There has been considerable discussion on the question whether poverty line should reveal an 'absolute' or 'relative' view of poverty. 'Absolute view of poverty' considers the poverty line as the expenditure required to purchase a 'subsistence' pack of items by the individual, whereas 'Relative view of poverty' requires a comparative analysis of percentage of number of persons in different expenditure groups. The problem of poverty has persisted long and it is the central challenge of development at the global level. Poverty is said to be the inability to attain a minimum level of well-being, is the most fundamental economic and social problem facing humanity.

In India context, poverty is measured in terms of a specified normative poverty line reflecting the minimum living standard of people. The official approach has laid emphasis on ensuring a subsistence minimum and hence, on eradicating absolute poverty (M.H. Suryanarayana (2010). The measurement of poverty is a complex exercise and the estimates are broadly based on per capita consumption expenditure of household consumption expenditure surveys of NSSO. As per the estimates of Tendulkar committee in 2011-12, is 21.9 percentage of population are poor that is 269.9 millions of population is living below the poverty

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[4] World Bank (2006)
[5] Amarthya Sen, (1999)

line[6]. Globally two-third of world population is living below the international poverty line which is measured in terms of Purchasing Power Parity (PPP), of $ 1.90 per day[7].

II. Concept in Poverty Estimation

The various measures of poverty estimation are Headcount Ratio, Poverty Gap Index, and Squared Poverty Gap Index.

- **Head Count Ratio** (H_p)**:** The number of poor estimated as the proportion of people below the poverty line is known as head count ratio. Is calculated by dividing the number of people below the poverty line by the total population.

$$H_p = \frac{n}{N} \qquad\qquad (1)$$

H_p = Headcount ratio, n = Number of people below poverty line & N = Total population.

- **Poverty Gap Index (PGI):** Another poverty measure is Poverty Gap Index. It is the ratio of gap between the per capita income of the poor and poverty line income or it is difference between the poverty line and average income of all households living below the poverty line expressed as percentage of poverty line.

$$PGI = \frac{Z - M_p}{Z} \qquad\qquad (2)$$

PGI=Poverty gap index, Z= Poverty line income in Rs, M_p=Income of poor & Z - M_P= Aggregate poverty gap.

- **Income Gap Ratio / Poverty Gap Ratio (Ip)**

Sen (1976) called it Income Gap Ratio and Clark (1981) named it Poverty Gap Ratio. It is obtained by dividing the total expenditure of the poor by number of people below the poverty line. It measures the poor below the poverty line.

$$I_p = \frac{Z - M_p}{Z.N} \qquad\qquad (3)$$

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[6] Planning commission, Govt. of India 2014 report.
[7] World Bank 2014 report

Where N is the number of poor and the rest of symbols are defined as above.

➢ **Squared Poverty Gap (Ip^2):** it is the mean of the squared proportionate poverty gaps. It indicates the severity as well sensitive to inequality among the poor. It measures inequality among the poor. This measure is a member of Foster- Greer-Thorbecke (FGT) family of poverty measure (Rani Anita 2011).

$$\sum_{i=1}^{A} (Z - M_p)/Z]^2 \ I_p^2 = \qquad\qquad\qquad (4)$$

III. Poverty Estimation Methodology in India

The measurement of poverty is a complex exercise. Dadabhai Naoroji was the first person to discuss the concept of poverty Naoroji traced the extreme poverty the British colonial rule. After independence there have been several efforts to develop mechanisms methodologies to construct poverty line and also identify the number of poor in the country. In 1962, the Planning Commission constituted the working group to define the poverty line based on minimum calorie requirements suggested by the Indian Council for Medical Research (ICMR) 2,200 calories for rural and 2,100 calories for urban areas. The monetary value of these calories for a family of 5 people is fixed at Rs.100 per month or Rs.20 per capita per month in 1960-61 prices for urban areas. The urban poverty line is adjusted for prices and he working group fixed it for Rs.125 per month, this poverty line is employed widely at national and state level during early sixties and seventies. In 1979 the planning commission constituted Task Force committee to estimate the percentage of population below the poverty line the committee fixed 2400 calorie per capita per day in rural area and 2100 calories calorie per capita per day in urban area and estimated Rs.49.09 & Rs.56.64 monthly per capita for all India rural and urban areas using 28th round of NSSO household consumption expenditure data of 1973-74 prices.

The expert group (1984) did not re-defined the estimation methodology of poverty, in state it adopted the earlier task force committee estimation but it disintegrated the national poverty line into state specific poverty lines by considering the interstate price differentials measured by Fisher Index, by using data from CPIAL[8] and CPIIL[9]. To define Rs.89.50 and Rs.115.65 Monthly per capita for rural & urban area and find out the percentage of population below the poverty line of 45.65% rural area and 40.79% of urban area and total 44.48% population below the poverty line in all India. Subsequently Planning Commission using this same methodology to find out the poverty line in 1987-88, 1993-94, and 2004-05.

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[8] Consumer Price Index for Agricultural Labour
[9] Consumer Price Index for Industrial Labour

The planning commission constituted the expert group under the chairmanship of Tendulkar. The Tendulkar committee did not construct a poverty line but they adopt earlier expert group of Lakdawala methodology to estimate Rs.447 & Rs.579 per capita per month of both rural and urban area based on minimum calorie requirements is 2100 calorie for rural and 1776 calorie for urban. This actual intake very closed to revise of 1770 calories recommended by Food and Agricultural Organization (FAO) and find out 41.8% of poor in rural, 25.7% of poor in urban and 37.2% poor in all India to using 61st round of NSSO consumption expenditure data.

In 2012 the Rangarajan Committee computed the average requirements of calories of 2,155 kcal per person per day in rural areas and 2,090 kcal per person per day in urban areas. This is significantly lower than the 2,400 kcal in rural areas and slightly less than 2,100 kcal in urban areas based on proteins and fats suggested by Indian Council of Medical Research (ICMR) norms differentiated by age, gender and activity for all India. To find out 30.9% & 26.4% population below the poverty line in rural and urban area and 29.5% in all India used by the earlier Lakdawala panel and the new poverty line, thus, translates to a monthly per capita consumption expenditure of Rs 972 in rural areas and Rs 1,407 in urban areas or Rs 32 in rural areas and Rs 47 in urban areas on a per capita daily basis in 2011-12. The World Bank set a new goal to end extreme poverty in a generation target is to have no more than 3 percent of the world's population living on just $1.90 a day by 2030 and there has been marked progress in reducing poverty over the past decades. In 2013, estimates to the word bank 10.7 percent of the population lived or below $1.90 a day.

IV. Literature Review

The empirical study on measuring poverty and inequality by using different methodology to define the official poverty line on social religious groups in rural and urban areas by **Arvind Panagariya and Megha Mukim (2013)** brings out that, during 1993-94 and 2009-10 poverty is declining in various social and religious groups in all the states, secondly growing in growth rate and reduction of larger poverty scheduled caste and scheduled tribes than the upper cast groups has conical overt the time between 2004-05 and 2009-10 and finally they find that in case of India there is no strong relationship between poverty and inequality. Further, the study estimated the official poverty line and male and female using minimum calorie requirements by **Ranjan Ray & Geoffrey Lancaster (2004)** estimated official poverty line in India on the basis of cost of minimum calorie requirements for using the household specific estimated nutrient prices, and specified directly in terms of calories and study goes beyond previous investigations on the discrepancy between the official poverty estimates and the calorie based ones by identifying and quantifying in every major region the households who are poor on the calorie definition but deemed non poor in official Further study also estimated poverty by using

food and non-food by **Deaton Angus and Tarozzi Alessandro (2000)**, measures poverty in India on the basis of prices of food and non-food through Consumer Prices indexes of urban and rural areas separately. They used 43rd, 50th& 55th rounds of NSSO consumption data for two periods 1987-88 and 1993-94 and also estimated the rate of inflation over the six years for 17 largest states. After couple of years, estimated poverty line and calculated cost of living indices by **Himanshu (2010),** measures the all India poverty line based on Planning Commission food[10] and non-food expenditure, later estimate state-wise poverty line by used Fisher Index of state prices and using consumer price index[11] and set up new poverty line for consumption expenditure survey of 2004-05 and also based on Mixed Recall Period using NSSO data and used. The study finds that estimating of incidence of rural poverty shows a head count ratio of 41.8% for 2004-05 as against the official estimate of 28.3%. **Deaton Angus and Dreze Jean (2002),** Estimates poverty has declined in the 1990s preceded more or less in line with earlier trends based on National Sample Survey data and most widely-used poverty indicator is the headcount ratio. The study bring out that First, enduring poverty decline in nineties in terms of the headcount ratio, second, head count ratio, third, growth patterns by major regional imbalances fourth, of regional disparities pattern of increasing economic inequality in the nineties. Further, **Meenakshi V J and Ray Ranjan (1999),** the study Comprehensive set of poverty estimates for SC, ST and female-headed households at the state level and for rural and urban areas separately. Findings indicate that poverty rates are uniformly higher for the SC and ST communities, irrespective of the deprivation. Later, the study to measured by poverty and inequality in cast based discrimination by Comprehensive analysis of division wise with across social group by **Arora Akash & Singh P S (2015)** regional as well as disaggregated of district wise pattern of poverty prevailing among social groups of oh rural and urban areas in Uttar Pradesh by using unit level records of the 61st (2004-05) and 68th (2011-12) rounds of NSSO Consumption Expenditure Survey. It identifies the critical regions in UP, there poverty among social groups and particularly in the central, southern and eastern region is unfairly distributed. The study also attempt to gauge the causes for the unequal distributed of poverty among social and religious groups in the state and estimates of logistic regression for identify the cause of poverty among social and religious groups in rural and urban area of Uttar Pradesh.

V. Poverty in Karnataka: An Empirical Analysis

History of Karnataka shows that North Karnataka was more developed politically, economically and culturally. The regional disparities in state have always been studied by isolating the state by North Karnataka

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[10]Food expenditure on Recommended Dietary Allowances (RDA) of 2400 calorie in rural and 2100 calorie in urban areas on state level.
[11]Consumer price index for agriculture labour (CPIAL) in rural areas and consumer price index for industrial workers (CPIIW) in urban areas

and South Karnataka. In North again divided by two parts namely, Hyderabad Karnataka and Bombay Karnataka regions. The south Karnataka has relatively achieved a higher level of development compared to the North Karnataka and particularly the Hyderabad Karnataka region, This region constrains six most backward districts i.e.,. Bidar, Gulbarga, Bellary, Raichur, Yadgiri and Koppal in Karnataka that are below the state and national average in majority of socio economic indicators performed very poorly in majority of socio economic parameters. Intensive efforts are required to bridge the development gap and focus on education, health, and nutrition and skill development, along with development of farm and non-farm activities. The region will get by amendment to the constitution of India, Article 371(J). Study also cover four administrative divisions are Kalaburagi division, is also known as Hyderabad-Karnataka (HK) region, Bangalore division, Mysuru division and Belagavi division. Under this for division have 49 sub-divisions, 30 districts, 177 taluks for administrative purpose as per 2011 census. The Hyderabad-Karnataka (HK) region is one of the most neglected province, both by the state and the centre in developmental aspect. In fact, today the issue of inter-regional variations in development is being discussed much more seriously in Karnataka. Specific mention is being made about the north south disparity within the state. Therefore, a detailed analysis of poverty, social inequality and regional

Karnataka Government has taken several steps to reduce the regional disparities like setting up Hyderabad Karnataka Area Development Board, Border Area Development Programme, Bayaluseeme Development Board and Malanad Area Development Board and so on. Government had also appointed a high power committee for redressed of regional imbalances under the chairmanship of Prof. D. M. Nanjundappa during 2002-03. The committee found that Hyderabad Karnataka is most backward region and the north Karnataka was similar backward region. However there is still a general concern about relative backwardness of some districts belonging to the northern part of the state. The committee suggested various programmes for decline of regional inequalities. Karnataka government has started implementing the committee's recommendations since 2007-08[12].

The main objective of this current study is to provide a profile of social group poverty and social disparity. So the study is intended to examine the level of poverty by dividing the households into those belonging to scheduled castes (SC), scheduled tribes (ST) and OBCs in the region. A decomposition analysis is planned in order to comprehensively examine the level of poverty in HK region. To design effective policies and strategies to reduce poverty, it is vital to understand the characteristics of a given region. It can shed light on whether poverty is increasing or decreasing and on whether economic growth is benefiting the poor. Poverty profiles of regions can help governments identify the poor by region, by different social groups, level of

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[12] H Shiddalingaswami & V K Raghavendra, 2010

education, gender, or form of employment. Inequality can have many dimensions. Economists are concerned specifically with the monetarily-measurable dimension related to individual or household income and consumption. Methodologically, this is just one perspective and inequality can be linked to inequality in skills, education, opportunities, health and assets. The current research will, in reviewing the literature, give attention to the relationship between poverty and income inequality and the non income inequality dimensions. There exist several studies on assessments and determinants of poverty both a macro and micro level-Interstate and Intrastate studies focus on spatial divergence in poverty. However the empirical analyses on poverty focusing at district level on socio-religious groups are scanty. The study in respect to Karnataka since this gap by analyzing the status of district wise and division wise poverty across socio-religious groups.

The present study uses unit level data of the 61st (2004-05) and 68th (2011-12) rounds of NSSO's Consumption Expenditure Survey (CES) to define poverty in terms of Head Count Ratio (HCR) in Rural & Urban areas. The HCR measures poverty as a proportion of households living below the poverty line (BPL). Define poverty ratio by using household consumption expenditure which is Uniform Reference Period (URP[13]) consumption based into Mixed Reference Period (MRP[14]) consumption by Lakdawala Methodology and later the same methodology using Tendulkar Committee in 2005. The planning commission, on recommendation of Tendulkar Committee, decided to adopt consumption expenditure based on an MRP.

The study examines district wise and division wise status of poverty across socio-religious groups in Karnataka by making use of 61st and 68th round of NSSO Household Consumption Expenditure Data. The study also links the incidence of poverty to education at district level and division level across socio-religious groups. Section I to understand the official poverty estimation methodologies are set up by planning commission Govt. of India. Sectional II, estimates incidence of mean poverty by administrative division wise (there is a four division like, 1.Kalaburagi Division[15] is also known as (Hyderabad-Karnataka (HK) Region), 2.Belagavi Division[16], 3.Bengaluru Division[17] and 4.Mysuru division[18]) with across social and religious groups both rural and urban areas of Karnataka. Higher the poverty ration in across social and religion groups located in HK region of both rural and urban area. Section III, Level of education per household head and Type of ration card have secured below the poverty line of across social and religious groups in all division of Karnataka. Finally the Section IV, conclusion by summarizing the main findings of the result and policy implications.

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[13] URP = consumption data are collected from the households using 30 day recall period for all the items.

[14] MRP = consumption data for five non-food items viz., clothing, footwear, durable goods, education, and institutional medical expenses are collected using 365-day recall period and 30-day recall period for the remaining items.

[15] Kalaburagi Division consist of Bidar, Kalaburagi, Raichur, Ballari and Koppal

[16] Belagavi Division consist of Belagavi, Bagalkot, Dharwad, Gadag, Haveri, Uttar Kannada and Vijayapura

[17] Bengaluru Division consist of Bengaluru rural, Bengaluru urban, Chitradurga, Davangere, Kolar, Shivamogga and Tumkur

[18] Mysuru division consist of Chamrajnagara, Chikkamagaluru, Dakshin Kannada, Hassan, Kodagu, Mandya, Mysuru and Udupi

VI. Empirical Analysis

Karnataka a state in southern India was formed on November 1st, 1956 name of Mysore state on November 1st, 1973 renamed as Karnataka. The state is now the largest state in India by fifth largest state of gross domestic product and the state divided in four administrative divisions are 1. Kalaburagi Division is also known as Hyderabad-Karnataka (HK) region 2.Belagavi Division 3.Bengaluru Division and 4.Mysuru Division. Under this for division have 49 sub-divisions, 30 districts, 177 taluks for administrative purpose as per 2011 census. HK region it was based partly with intention of development the most backward region of the state which is the name gave to area which was the part of erstwhile Hyderabad province before the formation of new state. The region namely, Bidar, Kalaburagi, Raichur, Yadgir, Ballari and Koppal Intensive efforts are required to bridge the development gap and focus on education, health, and nutrition and skill development, along with development of farm and non-farm activities. The region will get by amendment to the constitution of India, Article 371(J).

The district level poverty along with division wise has been illustrated by rural and urban areas being mapped separately (refer figures 1, 2, 3 and 4).
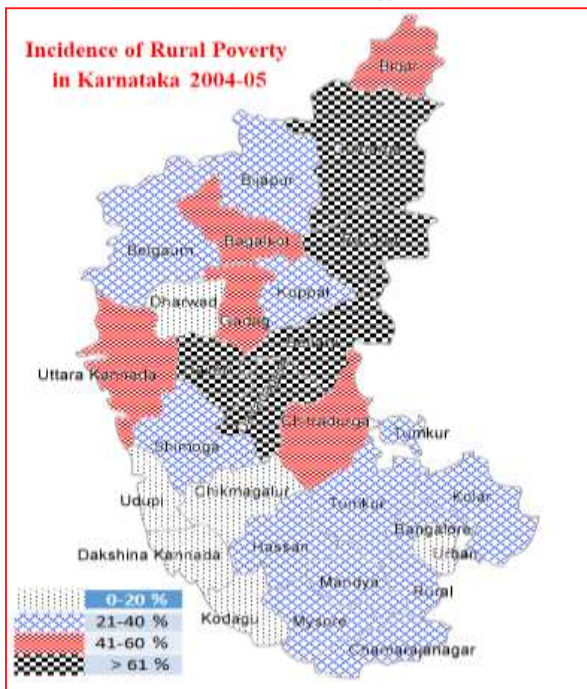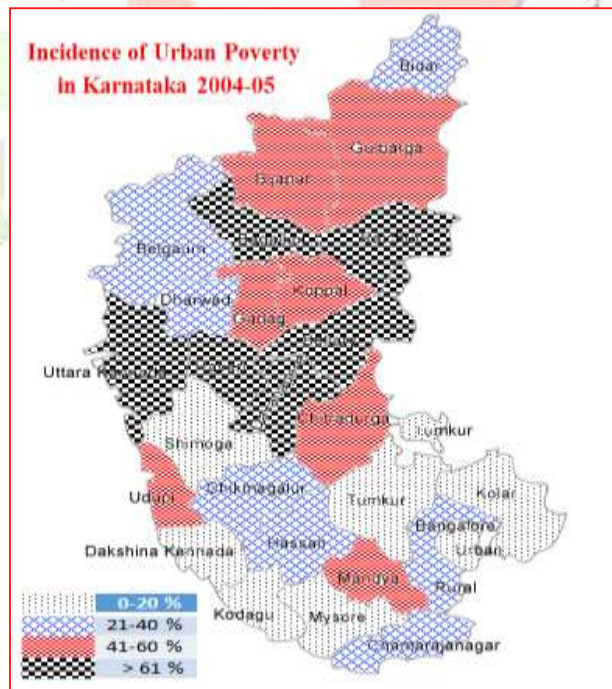

Figure: 01   Figure: 02

Source: Author Computed from estimated results of Poverty in Rural & Urban areas of Karnataka, using 61st round of CES, 2004-05
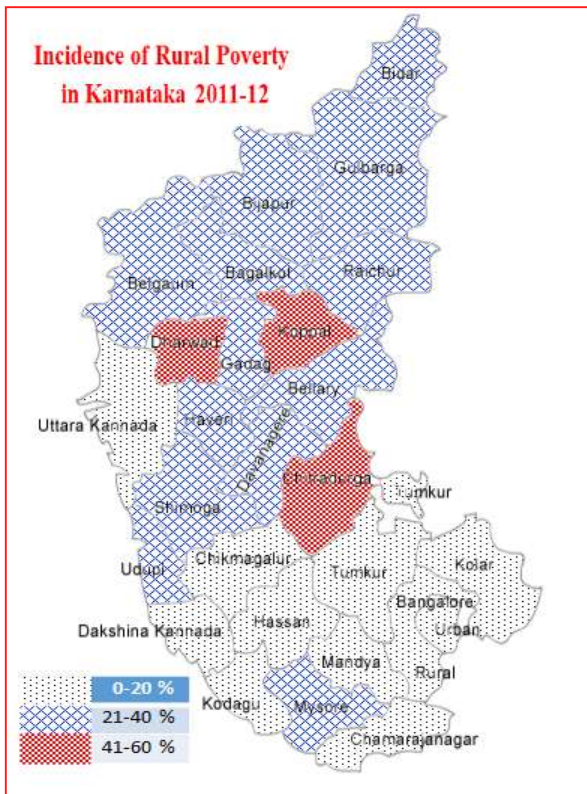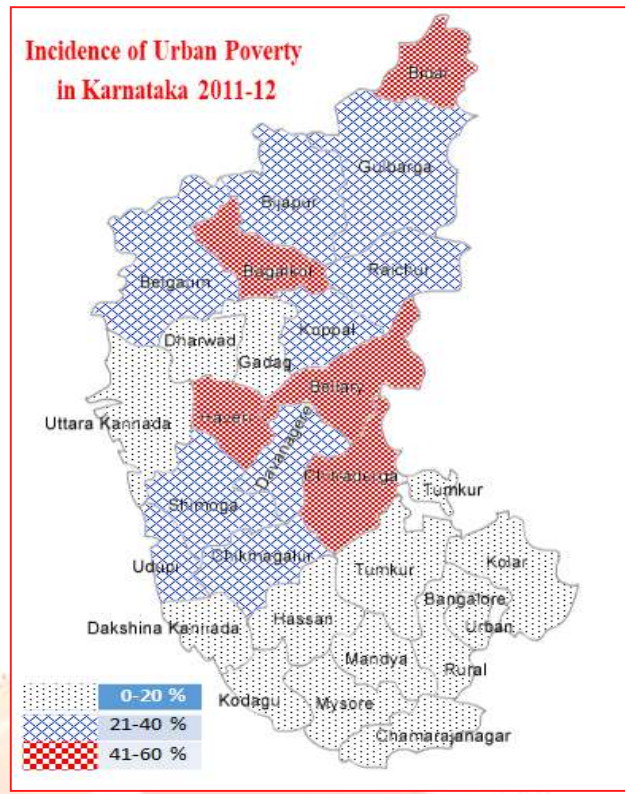
Figure: 03

Figure: 04

Source: Author Computed from estimated results of Poverty in Rural & Urban areas of Karnataka, using 68th round of CES, 2011-12

Table No.01
Incidence of Poverty by NSS Rounds & Sector in Karnataka

Round	Rural	Urban	Total
61	37.50	25.88	33.92
68	24.53	15.28	21.18
Total	**30.83**	**19.79**	**27.11**

Source: Authors estimate based on 61st and 68th round of NSS data.

Poverty can be a useful policy tool for focusing resources and development efforts in poor areas.

The study attempt to identify where the incidence of poverty in rural and urban area was improperly distributed in Karnataka during 2004-05 (61st NSS round) and 2011-12 (68th NSS round) rural poverty declining by 12.97% and urban poverty was 10.06% during 2004-05 to 2011-12. In 61st round the total poverty is 33.92% which is come down by 21.18% in 68th round so around 12.74% declining in the study period.

Table No.02
Incidence of Poverty District wise Scenario in Karnataka

Districts	Rural		Urban		Total	
	61st Round	68th Round	61st Round	68th Round	61st Round	68th Round
Belgaum	36.3	27.5	38.1	32.3	36.6	28.8
Bagalkot	42.8	32.1	66	45	47	35.8

Bijapur	30.6	21.4	47.5	28.5	35.4	23.1
Gulbarga	65.1	38.9	49.4	32	61.2	37.2
Bidar	54.7	32.5	29.8	45.9	51.3	35.1
Raichur	63.9	37.6	80.7	38.2	68.6	37.7
Koppal	26.2	42	56.6	34.6	29.4	40.7
Gadag	49.4	25.6	47.4	15	48.7	21.8
Dharwad	13.7	57.3	32.1	15.5	23.8	34
Uttar Kannada	59.2	19.3	63.5	20.1	60.5	19.6
Haveri	72.5	31.3	75.3	52.2	73	33.7
Ballari	60.3	33.1	64.6	53	61.3	40.8
Chitradurga	56.3	48.3	55.1	40.4	56.1	46.7
Davangere	70.8	23	62.4	23.8	69.1	23.3
Shivamogga	22.6	32.5	13.3	22.3	19.1	29.3
Udupi	4.4	22.7	42.2	21.4	5.8	22.4
Chikkamaglur	11.8	10.4	27.6	24.6	14.1	14.7
Tumkur	30.6	14.4	3.4	5.9	25.8	13
Kolar	30.8	4.7	20.1	2.5	28.4	4.2
Bangalore Urban	15.5	0	2.6	1.7	4.5	1.5
Bangalore Rural	34.7	15.2	22.9	2.2	33	13
Mandya	29.6	18.9	50.5	4.1	31.7	16.4
Hassana	20.2	11.3	37.5	13.9	22.9	11.6
Dakshin Kannada	15.3	1.5	8.9	1.9	13.7	1.6
Kodagu	11.5	1.2	5.6	2.8	11	1.5
Mysuru	20.8	20.7	18.6	7	20	15.5
Chamarajagara	22.2	1.3	37.1	4.1	24.4	1.6
Total	**37.5**	**24.5**	**25.9**	**15.3**	**33.9**	**21.1**

Source: Authors estimate based on 61st and 68th round of NSS data.

Incidence of poverty across district in Karnataka there are not significantly ratio in rural and urban areas of both rounds. Below the table no 02, in 61st (2004-05) round there higher poverty ratio in Davangere of 69.1%, is followed by Raichur 68.6%, Ballari 61.3%, Gulbarga 61.2%, and Uttar Kannada 60.5%. In 68th (2011-12) round higher the poverty ration in Chitradurga district was 46.7% is followed by Ballari 40.8% and Koppal was 40.7% and the lower the poverty ration in Bengaluru urban of 1.5% is followed by Kodagu 1.5%, Dakshin Kannada 1.6% and Chamarajnagara 1.6%.

Table No: 03
Incidence of Poverty & MPCE by Social Groups in Karnataka

Sector	Round	Round	ST	SC	OBC	Others
Rural	61st Round	Poverty	50.53	57.37	35.87	23.72
		MPCE	(452.73)	(454.68)	(538.73)	(626.06)
	68th Round	Poverty	30.81	37.06	20.75	21.62
		MPCE	(1191.89)	(1281.80)	(1452.47)	(1409.14)
Urban	61st Round	Poverty	55.7	41.22	32.14	14.31
		MPCE	(694.55)	(740.65)	(923.76)	(1463.37)
	68th Round	Poverty	33.69	24.96	15.09	8.77

MPCE	(1867.36)	(1931.20)	(2441.57)	(4214.18)		

Source: Authors estimate based on 61st and 68th round of NSS data.

Above the table no 03 shows that, incidence of headcount ratio and MPCE in across social groups in rural & urban in Karnataka comprehensive set of poverty estimates for Scheduled Casts (SCs), Scheduled Tribes (STs) households at the state level and for rural and urban areas separately are uniformly higher for the SCs and STs Communities, irrespective of the deprivation. In 61st round the poverty ratio more than 50% in SCs (57.37%), and STs (50.53%), is greater than others categories which are Other Backward Classes (OBC) of 35.87% and other categories where only 23.72% in rural areas & in urban areas because of OBC and Others is higher the monthly per capita consumption is more than SCs and STs. In 68th round there is declining the total percentages of poverty ration in all categories but the higher the poverty ratio seen in SCs (37.06%) and STs (30.81%) are rest of other categories.

Table No.04
Incidence of Poverty by Divisions in Karnataka

Division	Rural			Urban			Total		
	61st	68th	Change	61st	68th	Change	61st	68th	Change
Kalaburagi	56.9	37.1	-(2.82)	58.6	41.5	-(2.44)	57.4	38.2	-(2.73)
Belagavi	42.7	29.5	-(1.88)	47.1	28.2	-(2.70)	44.2	29.1	-(2.15)
Bangaluru	36.6	18.8	-(2.54)	9.1	5.5	-(0.51)	24.3	11.8	-(1.79)
Mysuru	18.5	12.6	-(0.84)	23.4	8.9	-(2.07)	19.5	11.7	-(1.11)
Total	**37.5**	**24.5**	**-(1.85)**	**25.9**	**15.3**	**-(1.51)**	**33.94**	**21.2**	**-(1.83)**

Source: Authors estimate based on 61st and 68th round of NSS data.

Table no 04 analysis incidence of headcount ratio by administrative divisions reveals ha extent and depth of poverty in Karnataka are greatest in the HK region, in both rural and urban areas. The poverty estimates reveal significant geographic imbalances, with much higher levels and concentration of poverty in the HK districts because of there is very low Monthly Per Capita Consumption Expenditure (MPCE) of Rs.467.3 of 61st (2004-05) NSS round and Rs.1218 of 68th (2011-12) NSS round. The Maximum poverty found in HK region and its decline by every year of 2.73%. In Belagavi division have also higher the poverty ration and there declining by every year of 2.15% respectively in Bengaluru division is 1.79%, the region is consuming very high MPCE because of the all districts have high per capita income and achieve the economic growth. Especially the Bengaluru city is capital city of state and it has fifth most populous city in country and second fastest growing major metropolis in India with economic growth of 10.3%. In Mysuru division is 1.11 of both rural and urban area this is the mean negative values and of the study period.

Table No.05
Incidence of Poverty by Division wise across Social Groups in Karnataka

Sector	Social	Kalaburagi Division	Belagavi Division	Mysuru Division	Bangaluru Division

	Groups	61	68	Change	61	68	Change	61	68	Change	61	68	Change
Rural	ST	73.73	28.2	-(6.5)	53.86	34.95	-(2.70)	14.7	25.82	(1.58)	46.22	34.49	-(1.67)
	SC	66.94	57.55	-(1.34)	65.06	41.47	-(3.37)	51.8	18.04	-(4.82)	48.91	29.9	-(2.71)
	OBC	62.32	35.72	-(3.8)	49.32	25.86	-(3.35)	18.75	13.4	-(0.76)	32.25	11.43	-(2.97)
	Others	37.41	28.68	-(1.24)	24.02	27.62	(0.51)	5.01	0	-(0.71)	27.57	21.22	-(0.90)
	TOTAL	**57.00**	**37.09**	**-(2.84)**	**43.18**	**29.52**	**-(1.95)**	**18.5**	**12.61**	**-(0.84)**	**36.56**	**18.83**	**-(2.53)**
Urban	ST	89.1	55.46	-(4.80)	80.25	46.48	-(4.82)	45.19	0	-(6.45)	22.12	4.97	-(24.5)
	SC	66.97	54.00	-(1.85)	46.97	34.9	-(1.72)	38.27	23.47	-(2.11)	27.14	16.76	-(1.48)
	OBC	68.39	40.21	-(4.02)	62.65	30.33	-(4.61)	28.84	9.55	-(2.75)	9.3	4.5	-(0.68)
	Others	42.73	31.02	-(1.67)	29.15	20.36	-(1.25)	6.04	3.37	-(0.38)	4.65	0.83	-(0.54)
	TOTAL	**58.64**	**41.5**	**-(2.44)**	**47.05**	**28.19**	**-(2.69)**	**23.39**	**8.9**	**-(2.07)**	**9.1**	**5.49**	**-(0.51)**

Source: Authors estimate based on 61st and 68th round of NSS data.

Above table 05 brings out that, during 2004-05 and 2011-12 poverty is declining in various social and religious groups in all the states, growing in growth rate and reduction of larger poverty scheduled cast and scheduled tribes than the upper cast groups has conical overt the time in all four region. Higher the poverty ration in HK region across social groups of 57% poverty in rural area and 58.64% of poverty in urban area followed by rest of divisions. In HK region where STs Poverty is very high of 73.73% (2004-05), is fastest declining by 28.20% in (2011-12) it was around 6.5 points reduced by every year of study period and respectively reduced by SCs 1.34, OBC 3.8 and Others 1.24 in rural area and also higher the poverty ratio seen in urban areas. But the highest points of poverty ratio are declining by every year in Belagavi division rural area both 61st and 68th NSS round, followed by Bengaluru and Mysuru divisions of the study period. The state has taken several steps to reduce by social, gender and regional disparities.

Table No.06
Incidence of Poverty by Division wise & Religion Groups in Karnataka

Sector	Religion Groups	Kalaburagi Division			Belagavi Division			Mysuru Division			Bangaluru Division		
		61	68	Change	61	68	Change	61	68	Change	61	68	Change
Rural	Hindu	56.37	36.34	-(2.86)	43.18	29.82	-(1.91)	19.76	13.27	-(0.93)	37.51	18.43	-(2.73)
	Muslim	62.65	41.5	-(3.02)	46.5	22.59	-(3.42)	8.07	8.69	(0.09)	25.37	25.92	(0.08)
	TOTAL	**56.94**	**37.1**	**-(2.83)**	**43.43**	**29.12**	**-(2.04)**	**18.92**	**13.1**	**-(0.83)**	**36.75**	**18.84**	**-(2.56)**
Urban	Hindu	53.85	38.25	-(2.23)	40.39	25.24	-(2.16)	21.23	7.96	-(1.90)	9.14	4.48	-(0.67)
	Muslim	68.3	53.95	-(2.05)	69.79	35.6	-(4.88)	34.17	14.91	-(2.75)	11.37	7.84	-(0.50)
	TOTAL	**58.47**	**41.81**	**-(2.38)**	**47.54**	**28.39**	**-(2.74)**	**23.69**	**9.29**	**-(2.06)**	**9.56**	**5.01**	**-(0.65)**

Source: Authors estimate based on 61st and 68th round of NSS data.

Above the table 06 exhibits that, incidence of poverty across religious groups where Muslims are found to be comparatively poorer in all the region of Karnataka, more than 60% of Muslim poor against Hindu religion in HK region and Belagavi division because of high percentage of Muslim population approximately 12.91% of Karnataka and it can similarly found in all districts but Muslims have a stronger presence in Gulbarga, Bidar, Raichur, Bijapur, Ballari, Belagavi and Dharwad districts these districts are comes under HK region and

Belagavi division but the Hindu populations are equally distributed in all the divisions. The higher MPCE is in Bengaluru division of Rs.1384 in 61st round (2004-05) and Rs.3690 in 68th round (2011) of rural area followed by other division. In rural area higher the MPCE in Mysuru division of Rs.638.6 in 61st round (2004-05) and Rs.1696 in 68th round (2011) followed by other divisions. But the lower MPCE is in HK region of both rural and urban areas of both NSS round.

The division wise poverty along with district level has been illustrated by rural and urban areas being tables and line graph separately (refer tables 7, 8, 9 and 10 & line graph refer figures 5, 6, 7 & 8).

Table No: 07- Poverty in H-K Region

Districts	61st Round	68th Round
Bidar	51.74	35.11
Gulbarga	61.18	37.24
Raichur	68.61	37.73
Koppal	29.42	40.71
Ballari	61.34	40.81
Total	**57.36**	**38.20**

Kalaburagi Division/H-K Region
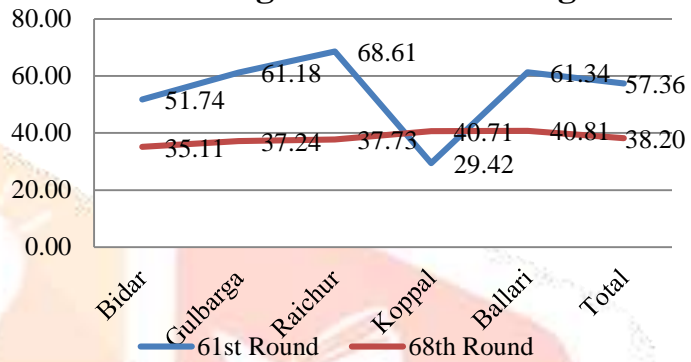
Figure: 05

Table No: 08 - Poverty in Belagavi Division

Districts	61st Round	68th Round
Belgaum	36.63	28.80
Bagalkot	47.00	35.76
Bijapur	35.37	23.12
Gadag	52.51	21.78
Dharwad	23.76	34.03
Uttar Kannada	60.48	19.55
Haveri	72.96	33.71
Total	**44.22**	**29.14**

Belagavi Division
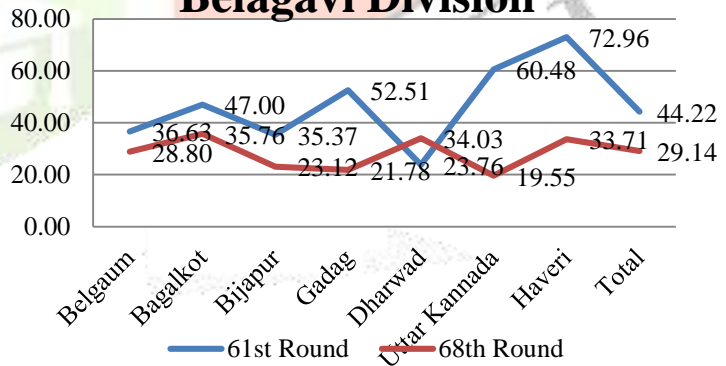
Figure: 06

Table No: 9 - Poverty in Bengaluru Division

Districts	61st Round	68th Round
Bangalore Urban	4.53	1.48
Bangalore Rural	33.02	13.02
Chitradurga	56.12	46.74
Davangere	69.05	23.30
Shivamogga	19.12	29.33
Tumkur	25.85	13.04
Kolar	28.42	4.17
Total	**24.32**	**11.76**
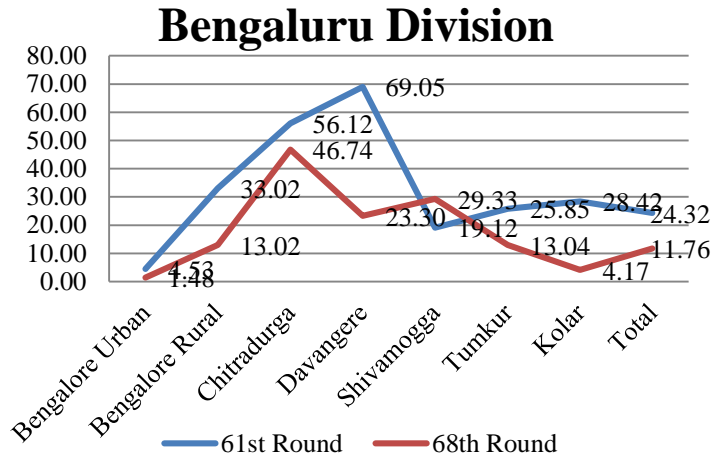
Figure: 07

Table No: 10 - Poverty in Mysuru Division

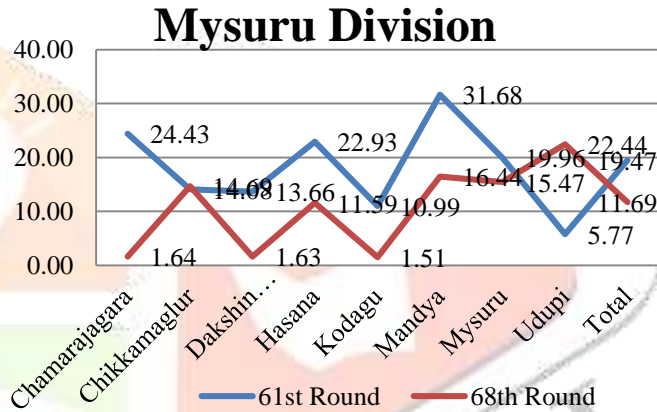| Districts	61st Round	68th Round
Chamarajagara	24.43	1.64
Chikkamaglur	14.08	14.69
Dakshin Kannada	13.66	1.63
Hassan	22.93	11.59
Kodagu	10.99	1.51
Mandya	31.68	16.44
Mysuru	19.96	15.47
Udupi	5.77	22.44
Total	**19.47**	**11.69**

Figure: 08

Table No: 11

Poverty and Level of Education across Socio-Religions groups in Karnataka

Education Level	Social Groups								Religion Groups			
	ST		SC		OBC		Others		Hindu		Muslim	
	61st	68th	61st	68th	61st	68th	61st	68th	61st	68th	61st	68th
Rural Sector												
NL	57.04	38.55	62.78	51.28	47.49	27.9	30.24	30.55	48.82	35.03	49.63	32.55
LWFS	32.82	(**)	50.59	(**)	25.56	(**)	30.95	13.94	33.25	2.96	19.97	(**)
BP	38.54	23.77	43.62	37.59	15.07	22.81	15.78	27.17	20.32	19.57	3.64	54.02
P-M	(**)	18.39	35.25	10.54	15.56	13.04	8.92	18.37	16.07	14.87	6.45	5.76
S-HS	(**)	27.23	19.47	20.24	21.37	16.69	4.73	4.52	12.94	15.27	(**)	6.18
Urban Sector												
NL	76.91	59.15	58.6	43.22	51.99	34.05	43.38	42.64	50.55	38.44	57.77	46.97
LWFS	60.5	(**)	50.61	(**)	50.94	(**)	31.05	(**)	36.86	40.44	59.25	(**)
BP	39.79	31.6	40.06	55.59	16.15	30.33	10.2	19.08	17.4	30.21	23.34	29.71
P-M	17.13	22.58	22.75	20.92	19.68	15.46	7.96	15.71	14.41	14.53	16.48	23.32

| S-HS | (**) | 4.18 | (**) | 8.05 | 4.47 | 8.04 | 0.54 | 6.08 | 1.59 | 6.65 | (**) | 13.32 |

Source: Authors estimate based on 61st and 68th round of NSS data.
Note: NL= Not Literate, LWFS= Literate Without Formal Schooling, BP: Below Primary, P-M: Primary-Middle,
S-Hs: Secondary-Higher Secondary.
(* *)= are excluded because of small sample size.

Above the table shows incidence of poverty and level of education across social groups, major religions and state as a whole. It is observed from these tables that during 2004-05 to 2011-12 in Karnataka the high incidence of poverty is associated among illiterates, irrespective of their caste and religion both in rural as well as in urban sector. The level of poverty among SCs & STs is higher in literate without formal schooling in relative to the other socio-religious groups. Nevertheless a rise in the literacy level of the head of the household LWFS decreases the prevalence of poverty among all the social groups. Similarly a rise in the literacy level of the head of the household decreases the prevalence of poverty among the two major religions.

VII. Logistic Regression

This study uses a binomial Logit or Probit regression model since it is an appropriate technique to observe the likelihood of a household for being poor or a risk of the household on entering or escaping poverty. The study uses a module to analyze probability-likelihood of a household being poor in relation to same independent variables[19].

To identify key determinants of poverty we first computed a dichotomous variable indicating whether the household is poor or not. That is,

$$\text{Poor} = \begin{cases} 1, \text{ if household is poor} \\ 0, \text{ if household non-poor} \end{cases}$$

The functional from of binary logistic regression model can be given as equation 1.

$$Z_i = \ln\left[\frac{p_i}{1-p_i}\right] = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} \dots + \beta_n X_{ni} + \varepsilon_i \dots 1$$

Where Z_i is a log odds of the ith household, α is constant $\beta_1, \beta_2, \beta_3$ and β_n and ε_i is an error term for the ith household. Independent variable includes wise range of household characteristics that determine poverty of the household. In equation 1, coefficient gives change in log odds of the dependent variable not the changes in the dependent variable itself. Therefore, to make the interpretation straightforward a logistic can be converted to the odds ration using exponential function[20]. The functional form of odds ratio can be given as equation

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[19] A binary logistic regression model is considered to be the most appropriate model for the econometric analysis when dependent variable is dichotomous (binary) variable such as incidence of poverty in our case. It fits well for both continuous as well as categorical independent variables.

[20] Prakash Niraj Joshi et.al 2012

$$Oddsratio = \left[\frac{p_i}{1-p_i}\right] = e^{\alpha+\beta_1 X_{1i}+\beta_2 X_{2i}+\beta_3 X_{3i}\ldots+\beta_n X_{ni}+\varepsilon_i \ldots 2}$$

Here, odds ratio is simply the ratio of the probability that the household will be poor to the probability that the household will be non-poor. In case of binary independent variables, exponential of the respective coefficient gives the proportion of change odds for shift in the given independent variable. However, if the independent variable is continuous exponential of coefficient is associated with the effect of per unit change in the given independent variable to odds ratio. In both type of variables sign of coefficient reveals the direction of change.

The Particulars of the Regression are As Follows.

- **Dependent variable** - A new dummy variable called poor is created, which takes the value' l' if the individual is poor and the value '0' if he or she is non poor.

- **Independent variables** – Sector, Round, Social Groups, Administrative Division, Education Level, Household Occupation, Land Ownership.

The final model that was fit to the data was given by

Logit (Z$_i$) = α+ β$_1$X$_1$+ β$_2$X$_2$+ β$_3$X$_3$+ β$_4$X$_4$+ β5X$_5$+ β$_6$X$_6$+ β$_7$X$_7$

Where X_1 is Sector, X_2 is Round, X_3 is Social Groups, X_4 is Administrative Division, X_5 is Education Level, X_6 is Household Occupation and X_7 is Land Ownership.

Table No: 12
Logistic Regression 61st & 68th Round of Karnataka

Poor	Odds Ratio	Std.Err.	Z	P>|Z|
Sector (Rural Reference)				
Urban	1.531125	0.121194	5.38	0***
Round (61st Reference)				
68th Round	0.571884	0.042768	-7.47	0***
Social Group (Others Reference)				
ST	2.664859	0.359506	7.27	0***
SC	2.853829	0.279291	10.72	0***
OBC	1.706293	0.135777	6.71	0***
Administrative Division (Mysuru Reference)				
Kalaburagi	4.203439	0.443021	13.62	0***
Belagavi	3.204364	0.321045	11.62	0***
Bengaluru	1.209348	0.12108	1.9	0.058
Household Size (< 3 Member)				
4 to 7 Member	3.134	0.271053	13.21	0***
> 8 Member	7.425937	0.898905	16.56	0***
Education Level (Not Literate Reference)				
LWFS	0.259115	0.165728	-2.11	0.035

Below Primary	0.966255	0.144214	-0.23	0.818
Primary-Middle	0.499544	0.041218	-8.41	0***
Sec-Higher Sec	0.218327	0.019154	-17.35	0***
Graduate & Above	0.046611	0.014792	-9.66	0***
Occupation (Self-Employed-non-Agricultural Reference)				
Self Employed in Agricultural	1.096708	0.092377	1.1	0.273
Agricultural labour	1.42449	0.142049	3.55	0***
casual labour-	0.951307	0.112758	-0.42	0.674
Other Labor	0.71033	0.169447	-1.43	0.152
Other	1.114892	0.15614	0.78	0.437
Land Ownership (0.001-0.004 Reference)				
0.005-0.400	0.671357	0.054892	-4.87	0***
0.410-1.000	0.568917	0.072987	-4.4	0***
1.001-2.000	0.453555	0.063039	-5.69	0***
2.001-4.000	0.347438	0.05248	-7	0***
>4.001	0.207238	0.036936	-8.83	0***
_cons	0.096951	0.015322	-14.77	0***
Log likelihood=-3099.1651				Prob>chi2=0
LR chi2(25)=1843.37				Pseudo R2=0.2292
Source: Author Estimated Based on 61st & 68th NSS data *** , **, * significant at 1%, 5% and 10% degree of precision respectively				

Above the table exhibits that, the probability of becoming poor person belonging to female poor households headed is an almost equal probability of falling under poverty to (Male) reference group. Among the social group ST and SC category are almost double poor as compare to people belonging to reference group but the OBC households are one times higher the probabilities of falling under poverty of the study period. Study also reveals among the administrative division there Kalaburagi division has four times and Belagavi division has three times probability of falling under poverty is statistically significance at 1 percent but Bengaluru division is almost same as reference group. The household size also has strong positive relationship with poverty status as well the household occupation.

Conclusion

Poverty reduction is a key policy debate in recent literature on the social issues. The elaboration of policies for poverty relief requires a thorough knowledge of this phenomenon. Therefore, there is a need for research aimed at the identification of determinants of poverty and assessing the impact of policies and welfare programs on the poor[21]. Poverty of India is of great importance today even thought so many measures have been taken by various Governments and International Organization to alleviate the global poverty. Since the Government of Karnataka also has initiated various poverty alleviation programmers in both rural and urban areas have achieved to eradicate extreme poverty in the state. The study examines district wise and division wise status of poverty across socio-religious groups in Karnataka by making use of 61st and 68th round of NSSO Household Consumption Expenditure Data. There is significance between poverty across socio-religious groups in both round of rural and urban areas in Karnataka and poverty to education at district level and division level across socio-religious groups. To find out expose that while poverty in the state reduced by total 12.74%, points between 2004-05 and 2011-12 in Karnataka. Remnants the incidence of poverty in social group wise reduced by 19.67% in Scheduled Tries, 20.66% in Scheduled Caste, 15.9% in OBC & 4.5% and the estimates poverty in religion wise reduced by 13.45% in Hindu and 11.46% in Muslims religion. Higher the poverty ration in HK region across social groups of 57% poverty in rural area and 58.64% of poverty in urban area followed by rest of divisions. In HK region where STs Poverty is very high of 73.73% (2004-05), is fastest declining by 28.20% in (2011-12) it was around -6.5 points reduced by every year of study period and respectively reduced by SCs 1.34, OBC -38 and Others -1.24 in rural area and also higher the poverty ratio seen in urban areas.

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[21] Hanna Dudek, Iga Lisicka 2015

Reference:

- Arora Akash & Singh P S (2015) "Poverty across Social and Religious Groups in Uttar Pradesh an Interregional Analysis" *Economic & Political Weekly* vol. L No 52-2015.

- Borooah K. Vani (2005) *"*Caste, Inequality, and Poverty in India" *Review of Development Economics,* 9(3), 399–414, 2005

- Bradshaw K. Ted (2005) "Theories of Poverty and Anti-Poverty Programs in Community Development" *RPRC Working Paper No. 06-05.*

- Chandra Hukum and U. C. Sud (2010), "Estimation of District Level Poor Households in the State of Uttar Pradesh in India by Combining NSSO Survey and Census Data".

- Deaton Angus and Dreze Jean (2002) "Poverty and Inequality in India: A Re-Examination" *Economic and Political Weekly* September, 2002.

- Deaton Angus and Tarozzi Alessandro (2000) "Prices and poverty in India" *Research Program in Development Studies Princeton University* Version 4, July 29, 2000.

- Jha Raghbendra (2000) "Reducing Poverty and Inequality in India: Has Liberalization Helped?" *Working paper no. 204* (UNU/WIDER).

- Methodology for Estimation of Poverty 2014 report, Planning Commission Govt. of India.

- Murgai Rinku et.all (2003) "Measuring poverty in Karnataka the Regional Dimension" *Economic and Political Weekly January* 25th, 2003.

- Meenakshi V J and Ray Ranjan (1999) 'Poverty, Household Size and Female Headed Household in India

- Mutatkar Rohit (2005) "Social Group Disparities and Poverty in India" *Working Paper (IGIDR)* Series No. WP-2005-004-2005.

- Panagariya Arvind & Mukim Megha (2013). "A comprehensive analysis of poverty in India" *working paper* no. 2013-01.

- Rani Anita (2011) "Poverty in Punjab: A District Level Study" *Ph.D. Thesis*

- Suryanarayana M H (2009) "Intra-State Economic Disparities: Karnataka and Maharashtra" *Economic & Political Weekly* Vol-xliv no 26 & 27.

- Ranjan Ray and Geoffrey Lancaster (2004) "On Setting the Poverty Line Based on Estimated Nutrient Prices With Application to the Socially Disadvantaged Groups in India During the Reforms Period" *Discussion Paper 2004-09* ISSN 1443-8593-ISBN 1 86295 216 7.

- Tilak B. G Jandhyala (2000) "Education poverty in Karnataka" *National Institute of Education Planning and Administration"*, New-Delhi"