

# Household inequality in terms of consumption expenditure



## **An Empirical Investigation among BIMAROU States**

### **Introduction**

With economic and social progression of the nation the minimal basket of basic human needs which a society would expect for its citizen may be expected to keep expanding. These changes in the basic needs of the society may be affordable by the level of income. The level of income of the households ensures the minimum standard of living in the society.

Household income and consumption expenditure are two monetary measures used in assessing the economic well-being of a population.

However, consumption expenditure is preferred to income as it reflects long-term economic status of the household, particularly in low income countries (Friedman 1957). It is important to note however that expenditures are not similar with income, which may even be a better indicator of well-being, for various reasons. Among them is the possibility of consumption without expenditures at least within the same period. According to Atkinson, (1998), “ Expenditures are thus supposed to better reflect “ long-term” or “ permanent” income and are from this point of view considered to be a better measure of economic well-being and respective inequalities”.

Besides, in developing countries, income estimates are under-reported, drawn from multiple sources and vary across seasons. Though the consumption expenditure data are collected in many developing countries including India, the process is time-consuming, expensive and needs adjustment for household size, composition and for price level. Owing to these difficulties, the economic proxies (consumer durables, housing quality

and household amenities) are collected to measure the economic status of the households in both small-and large-scale population-based surveys.

In the context of the growth performance during these two decades, economists and policymakers have become interested in the trends in regional inequality during this period. Rising regional inequality can create economic, social and political problems for any country. For the Indian economy, it has serious ramification for the continuation of the reform process. Hence, it is of utmost importance to understand the regional disparity in terms of consumption expenditure on consumer durables, housing quality and household amenities of the economy.

Household expenditures as they result from budget limitations at the one hand and choices based on needs, demand, preferences etc. on the other may be regarded as manifestations of economic and social inequalities as well as cultural differences and social distinctions. Studying the patterns, disparities and determinants of household expenditures and their changes across time by making use of large scale population surveys thus seem to be promising in various respects. At a most general level it may provide insights into general consumption behaviour as a major source of human well-being and respective choices and restrictions.

Investigating household expenditures and consumption patterns is considered to be key for the monitoring and explanation of inequalities and changes in material living standards and general welfare. Studying expenditures and consumption behaviour of households also seems to be an important and promising strategy to extend and supplement mainstream

approaches of studying inequality as a key topic of sociological and economic research.

In a study in 2001, Bose had offered insights into how Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh were blocking India's progress and had coined the descriptive "BIMARU" for them, which literally means sick in Hindi. It has recently been modified to include Orissa in the list, resulting in the acronym BIMAROU. The present study focuses the level of inequality in term of consumption expenditure for BIMAROU states in India. In the light of above the section II deals with Review of Literature. Data and methodology have been presented in section III. Empirical results consist of section IV and section V represents conclusion of the study.

### **Review of Literature:**

As one would expect, research on household expenditures and consumption is much more common and popular among economists and looks back to a long tradition in economics (Stigler, 1954). This issue was also addressed by Houthakker (1957) as early as in the 1950s. The issues related to household expenditures and consumption have been disregarded in sociology and particularly empirical sociological research to a large degree, although family and household budget data frequently used for empirical study in the early days. Some observers and commentators of developments in sociological research thus conclude that consumption has been strongly neglected in sociological research (Rosenkranz and Schneider, 2000). Thus it is an area which needs greater attention to be paid.

Although there is a long history of research on patterns of household expenditures and their changes across time, which goes back to the 19th century and the famous work by Ernst Engel and others, these questions have attracted surprisingly little attention in recent years.

Blacklow and Ray, (2000) Bögenhold and Fachinger, (2000) have found differences in nature of income and consumption disparities for the various periods. Zaidi and Klass (2001) in their study on poverty and inequality in developed countries focus on income. This study presents trends in consumption-based poverty and inequality in nine member countries of the European Union. During the 1980s, both poverty and inequality increased in Italy, France, the United Kingdom, Germany and Belgium, while decreases in both poverty and inequality are observed for Spain and Portugal. In Greece only inequality increased. Dhawan-Biswal, (2002) measure inequality in Canada with a comprehensive look at inequality trends in Atlantic Canada during the period 1969 to 1996. They use consumption expenditure as a measure of family well being and compare it with the income based measure of well being. Overall consumption inequality has continuously been lower in Atlantic Canada in comparison to the rest of Canada. Kalwij and Salverda, (2004) examine in detail the changes in household expenditures patterns, and in particular services related expenditures, in the Netherlands over the years 1979, 1989 and 1998.

Bhattacharya and Mahalanobis (1967) had decomposed the Gini-coefficient and the standard deviation of logarithms for the year 1957-58 based on the household consumer expenditure survey data of India and found that one-quarter of the total inequality was being explained by between-state

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inequality and the remaining three-quarters was explained by the within-state inequality. Paul, (1988) studied the importance of household composition in the analysis of inequality measurement based on the National Sample Survey data (25th round). The results for rural Punjab reveal that the ranking of households by per equivalent adult consumption expenditure (PEAE) differs significantly from the ranking by per capita consumption expenditure (PCE). Many households classified as poor according to the criterion of PCE are not so classified by the criterion of PEAE. The exercise also reveals that the distribution of HCE, if not adjusted for household size and composition effects, gives biased measures of the extent of true inequality. Jain and Tendulkar (1989) in their paper deduces the analytical conditions for the movements in the same or in the opposite direction of the real and the nominal relative disparity in cereal consumption consequent upon the differential movements in the prices of cereals faced by the bottom and the top fractile groups of the population. These conditions are used for interpreting the movements in the real and the nominal relative disparity with reference to the Indian rural population over the period from 1953 to 1978. Datt and Ravallion, (1990) argued that the costs and the benefits of regional policies will tend to be borne widely within regions. Some benefits are likely to leak to the nonpoor in recipient regions, and some costs to the poor in donor regions. The paper suggests that the quantitative potential for alleviating national poverty through purely regional redistributive policies is small. Even assuming no political problems, the maximum impact on poverty is no more than could be achieved simply by giving everyone a uniform (untargeted) windfall gain equal to about 1.5 percent of India's mean consumption. And other considerations - including increased migration to <https://assignbuster.com/household-inequality-in-terms-of-consumption-expenditure/>

areas of higher benefits - make it unlikely that the maximum impact will be attained in practice. Greater alleviation of poverty requires supplementary interventions that reach the poor within regions, by reducing the costs borne by the poor in donor regions and enhancing benefits to the poor in recipient regions. Mishra and Parikh (1992) in their paper measured household consumer expenditure inequalities in India by regions (states) and sectors (urban-rural) for the years 1977-78 and 1983 based on the National Sample Survey data. The results consistently indicate that the inequality within states contributes much more towards national inequality and within-sector inequality explains a large part of state level inequality. The inequality at state levels has shown a decline from 1977-78 to 1983 due to a better monsoon season in 1983, and anti-poverty programmes. Dubey and Gangopadhyay (1998) in their analytical report mention intra-state disparities by using NSSO consumption income data set. There are several states in India where the incidence of poverty across regions within a state is very high. They reported for seven regions of Madhya Pradesh, poverty incidence varied from one of the lowest in the country in the western region to one of the highest in the eastern region. Deaton and Dreze (2002) in their paper presents a new set of integrated poverty and inequality estimates for India and Indian states for 1987-88, 1993-94 and 1999-2000. The poverty estimates are broadly consistent with independent evidence on per capita expenditure, state domestic product and real agricultural wages. They show that poverty decline in the 1990s proceeded more or less in line with earlier trends. Regional disparities increased in the 1990s, with the southern and western regions doing much better than the northern and eastern regions.

Economic inequality also increased within states, especially within urban  
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areas, and between urban and rural areas. They also examine other development indicators, relating for instance to health and education. Most indicators have continued to improve in the nineties, but social progress has followed very diverse patterns, ranging from accelerated progress in some fields to slow down and even regression in others. Gaiha, Thapa, Imai and Kulkarni (2007) in their analysis of the 61st round of the NSS for 2004-05 confirms higher incidence and intensity of poverty among the STs and SCs, relative to non-ST/SC (Others). A decomposition of poverty gap suggests that a large part of the gap between the ST and Others is due to differences in returns or structural differences while among the SCs it is due largely to differences in characteristics or endowments. Whether these structural differences are a reflection of 'current' discrimination is far from self-evident, given the important role of personal identity in determining performance. The policy design therefore cannot be limited to enhancing the endowments of the STs, SCs and other disadvantaged groups. Dubey (2009) examine the interstate disparity in five states in India i. e. Gujarat, Haryana, Kerala, Orissa and Punjab by using NSSO data of 50th round and 61st round. He used three indicators, consumption, inequality and incidence of poverty. Highest level of disparity emerged in Punjab followed by Gujarat and Kerala. Haryana has least disparities only marginally lower than that in Orissa. Singh (2010), in her study examined and analysed the disparities in level of living as measured by monthly per capita consumption expenditure across different income groups in various states in India based on 61st round survey of NSSO. Various measures like gini coefficient and rank for the states in rural and urban areas has been calculated. Disparities in MPCE across income groups are observed in Punjab. Srivastava and Mohanty (2010) in <https://assignbuster.com/household-inequality-in-terms-of-consumption-expenditure/>



their study used data from the World Health Survey, India, 2003, covering a nationally representative sample of 10, 750 households and 9, 994 adults, examines the extent of agreement of monthly per capita consumption expenditure and economic proxies (combined with the wealth index) with the differentials in health estimates. Cain, Rana, Rhoda and Tandon, (2010) utilise household-level consumption expenditure data to examine the evolution of inequality during 1983-2004 in India. Various measures of inequality show that inequality levels were relatively stable during 1983-93, but increased during 1993-2004.

In the light of above review of literature no significant study has been found in case of India specially BIMAROU states related with inequality decomposition, for rural urban and social groups as well as among BIMAROU states. In the present study data for study has been utilised for NSSO 63rd round of survey.

### **Objective of the study:**

The major objective of the present study is to know the level of inequality and within group and between group inequality in the Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh and Orissa (BIMAROU) States and All India level. The study also focus on the rural urban and social groups i. e. caste and religion inequality.

### **Data and Methodology**

Collecting consumption expenditure data is not new in India. The National Sample Survey Organisation (NSSO) conducted an all-India survey of households on participation and expenditure in education, employment,

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unemployment, migration and consumer expenditure on a regular basis for over four decades. Surveys on consumer expenditure are being conducted quinquennially on a large sample of households from the 27th round (October 1972 – September 1973) of NSS onwards. In the present study data will be utilised from the 63th rounds of NSSO consumer expenditure survey collected in the year 2006-07.

Data provided by NSSO is in text document. For the analysis of unit level data we statistical software STATA 11 has been used. Disparity in terms of MPCE has been calculated for the BIMAROU states, region wise, caste and religion.

There are the criteria (Mean Independence, Population size independence, Symmetry, Pigou Dalton Transfer sensitivity[1], Decomposability, Statistical Testability) that make a good measure of income inequality. Among the most widely used are the Theil indexes and the mean log deviation measure. Both belong to the family of generalized entropy. The formula is given by

Where is the mean income per person (or expenditure per capita). The value of the measures vary between zero and infinity, with zero representing an equal distribution and higher values representing higher levels of inequality. The parameter in the GE class represents the weight given to distances between incomes at different parts of the income distribution, and can take any real value. For lower value of GE is more sensitive to changes in the lower tail of the distribution and for higher values GE is more sensitive to changes the affect the upper tail. The most common values of used are 0, 1,

and 2.  $GE(1)$  is Theil's T index and  $GE(0)$  is Theil's L (sometimes referred to as the mean log deviation measures) are given by:

Atkinson has proposed another class of inequality measures that are used from time to time. This class also has a weighting parameter  $\epsilon$  (which measures aversion to inequality). The Atkinson inequality measures defined as

## **Decomposition of Income Inequality**

The issue of relating subgroup inequality levels to overall inequality has been discussed in the number of recent studies (Cowell 1980, Cowell and Kuga 1981, Bourguignon, 1979, Shorrocks 1980 and 1984, Shorrocks and Mukherjee, 1982, Das and Parikh 1982, Mishra and Parikh 1992).

If the total inequality can be expressed as a function of sub-group inequality values, when the sub-groups are mutually exclusive and exhaustive, then a variety of ways is found to decompose the total inequality. The particular method of decomposition depends on the nature of the inequality index and the way in which it is decomposed since the decomposability of the indices differ from measure to measure.

The most attractive type of decomposability has been additive decomposability. An index is additively decomposable if it can be neatly expressed as the sum of a "between-group" term and a "within-group" term. Conceptually, the between-group component can be defined as the value of the inequality index when all the within-group inequalities are assumed to be non-existent by a hypothetical assignment of the group average income to each member of the same group.

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The common inequality indicators mentioned above can be used to assess the major contributors to inequality, by different subgroups of the population and by region. For example, average income may vary from region to region, and this alone implies some inequality “ between groups.” Moreover, incomes vary inside each region, adding a “ within-group” component to total inequality. For policy purposes, it is useful to be able to decompose these sources of inequality: if most inequality is due to disparities across regions, for instance, then the focus of policy may need to be on regional economic development, with special attention to helping the poorer regions.

More generally, household income is determined by household and personal characteristics, such as education, gender, and occupation, as well as geographic factors including urban and regional location. Some overall inequality is due to differences in such characteristics-this is the “ between-group” component-and some occurs because there is inequality within each group, for instance, among people with a given level of education or in a given occupation. The generalized entropy (GE) class of indicators, including the Theil indexes, can be decomposed across these partitions in an additive way, but the Gini index cannot.

To decompose Theil’s T index (that is,  $GE(1)$ ), let  $Y$  be the total income of all  $N$  individuals in the sample, and  $\bar{y}$  be mean income. Likewise,  $Y_j$  is the total income of a subgroup (for example, the urban population) with  $N_j$  members, and  $\bar{y}_j$  is the mean income of this subgroup. Using  $T$  to represent  $GE(1)$ ,

Where is the value of GE(1) for subgroup j. Equation separate the inequality measure in to two components the first of which represents within group inequality while the second term measures the between-group inequality.

## **Findings of the study**

On the basis

State wise rural urban and total household population and average monthly per capita expenditure (AMPCE) of Rajasthan, Uttar Pradesh, Bihar, Orissa, Madhya Pradesh, BIMAROU and All-India are presented in Table 1. Except Rajasthan, all the four states Uttar Pradesh, Bihar, Madhya Pradesh and Orissa are having less AMPCE than All India AMPCE (i. e. ` 844. 00). Similar pattern has been found for rural and urban sector of BIMAROU states.

Table 2 presents percentage distribution of socio economic characteristics of rural, urban and total for BIMAROU states and All -India. Majority of household surveyed in the NSSO 63rd rounds are belongs to Hindu. Among the BIMAROU states only in Uttar Pradesh having Muslim families which is higher than the All India percentage. Orissa and Madhya Pradesh are having below All-India percentage of OBC households. Majority of Households are having their own houses in All-India and BIMAROU states. Rural Uttar Pradesh, Bihar, Orissa and Madhya Pradesh are having household with katcha and semi-pucca houses which is more than the pucca houses.

Table 3 presents average monthly per capita consumption expenditure in term of ` of rural urban and total for BIMAROU states and All -India based on some socio economic characteristics.