

Measurement of Income Inequalities in Urban and Rural Areas in India

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1. Introduction

In India programs for reducing income inequalities and poverty alleviation are an integral part of development plans. In order to evaluate these programs and assess their effectiveness in reducing income inequalities, various statistical data on income distribution are being collected and analyzed. The results obtained from the different sources of data are not entirely consistent with each other. The changes in reference periods in the successive rounds of National Sample Surveys have also made trend analysis of income inequalities difficult. The object of this paper is to explain how the data on income distribution are collected and analyzed in India and how these procedures could be improved.

2. Sources of Data on Income Inequalities

The main source of data for measuring income inequalities in India are the National Sample Surveys (NSS) on Consumer Expenditure which are carried out on a regular basis since early 1950s. In addition the Market Information Survey of Households (MISH) and MIMAP (Micro Impact of Macro Adjustment Policies) Surveys carried out by the National Council for Applied Economic Research (NCAER) and the National Accounting Statistics (NAS) compiled by the Central Statistical Organization have been widely used for studying inequalities in income.

2.1 National Sample Surveys:

The National Sample Surveys in India are integrated household surveys carried out every year on an All India basis with the exception of some border areas. The annual consumer expenditure survey (CES) covers a sample of 10,000-30,000 households (known as the "thin" sample) spread throughout the year with four sub-rounds for the four quarters of the year. In addition, once every five years the CES is carried out in a large sample of approximately 100,000 households (known as the "large" sample or quinquennial sample). A stratified two-stage sampling design is adopted - the first stage units being villages in rural areas and enumeration blocks in urban areas, while the second stage units are households in both rural and urban areas. Therefore the sampling frame is the updated list of villages/enumeration blocks. The household constitutes of those who normally live together and take food from the same kitchen. The survey elicits information on 19 groups of consumer items - both the quantity of these items consumed during the reference period and their monetary value. The key parameter derived from this survey is the household consumer expenditure which is the aggregate of the monetary values of the various consumption items, namely - food, tobacco, intoxicants, expenses for accommodation, electricity and water, clothing and footwear, and miscellaneous goods and services during the reference period.

The annual series of CES since the 42nd round (1986-87) up to the 49th round (1992-93) used a uniform reference period of "last 30 days" for all items of consumption. In the quinquennial "large" sample surveys, an additional reference period of "last 365" days was used for some items of consumption such as clothing, footwear and durable goods, but most results were tabulated for the reference period of "last 30 days". Since the 51st round (1994-95) the NSS introduced two types of schedules for experimental purposes - Type 1 with uniform reference period of 30 days for all commodities and Type 2 with different reference periods for different items. For items of daily consumption the reference period was a week, and for durable and other infrequent items the reference period was 365 days, and for the rest the reference period was 30 days. In the 55th round (1999-2000), questions on consumption of clothing, footwear, education and health (institutional) and durable goods were asked only for the past 365 days reference period, while the questions on consumption of food, tobacco and intoxicants were asked for both the 30 days and one week reference periods.

2.2 The Market Information Survey of Households (MISH):

The major source of information for income distribution statistics in India is the Market Information Survey of Households (MISH) carried out by the NCAER providing a profile of the consumers of various goods according to their income, occupation, location and other characteristics (Lal, Mohan and Natarajan, 2000). The sample size of MISH (300,000 households) is larger than the sample size of NSS and is tilted in favour of urban areas (70 percent). The information on household income is collected through a question on the incomes from all sources received by the members of the selected households. The NCAER also carries out a household survey known as MIMAP (Micro Impact of Macro and Adjustment Policies) Survey based on a sub-sample of the MISH sample in urban areas and an independent sample in rural areas (Pradhan, Roy, Saluja and Venkatram, 2000).

2.3 National Accounts Statistics

The National Accounts Statistics (NAS) compiled by the Central Statistical Organization are available up to 1998-99 with base year 1980-81, but a new series was introduced with the base year of 1993-94. NAS are however not available for rural and urban areas. There is a great divergence between the consumption estimates provided by the NSS and NAS. The NSS estimates relate only to consumer expenditures of households and exclude any consumption expenditures of non-government / non-profit institutions, which are included in NAS estimates of private consumption expenditures.

3. Methods of Analysis

The Monthly Per Capita Expenditure (MPCE) is defined as the household consumption expenditure over a period of 30 days divided by household size. The CES reports present national and state level estimates of various socio-economic indicators and distribution of households and persons over different socio-economic categories for 12 MPCE classes in both rural and urban areas (NSS, 1996). The class limits are so chosen that each class, excepting the top two and bottom two classes, approximately contains an estimated 10 percent of rural and urban population respectively, while the balance four each contain an estimated 5 percent of the population. The MPCE classes adopted in the 43rd round (1986-87) of NSS has been maintained till the 49th round (1992-93).

The CES provides estimates of per capita consumption expenditure and inequality measures (lorenz ratios) for fractile groups of expenditure classes for rural and urban areas, for regions and for socio-economic groups of households based on occupation, education, land ownership etc. The CES data has

been used to derive estimates of the poor with reference to a poverty line using the expenditure distribution and comparison of the poor and non-poor in respect of indicators of living standards (Datta and Sharma, 2000). The MIMAP Survey of NCAER provides estimates of income distribution and expenditure pattern by occupational categories for rural and urban and also allows comparison between poor and non-poor in respect of education, health and other social sector indicators (Pradhan, Roy, Saluja and Venkatram, 2000).

4. Inequalities in Urban and Rural India

The CES of 1993-94 showed that in the rural areas, the bottom 30 percent of population contributed to 14.25 percent of total consumption expenditure in comparison to the 51.7 percent by the top 30 percent. Whereas, in the urban areas, the bottom 30 percent of the population contributed to 12.14 percent of total consumption expenditure against the 56.05 percent by the top 30 percent. This in effect indicated that the poor were poorer and the rich richer in urban areas in comparison to those living in rural areas. Comparing these results with the CES of 1987-88, it is observed that in both rural and urban areas the share of the bottom 30 percent of the population had declined while the share of the top 30 percent had increased indicating an increase in inequalities.

There are wide regional variations and rural and urban disparities in per capita consumption. The per capita total consumption in urban areas is 63 percent greater than that of rural areas, while the per capita food consumption expenditure in urban areas exceeds that of rural areas by 41 percent. Defining poor as the lowest 30 percent expenditure class, and the rest as non-poor, the total consumption of the non-poor was 2.2 times that of the poor in rural areas and 2.7 times in urban areas. It was found that the per capita consumption was lowest among the agricultural labourers in rural areas and among the casual labourers in urban areas. Per capita consumption of agricultural workers is about three-fourths the average for rural areas, while the per capita consumption of casual workers in urban areas is about three-fifth the average for urban areas. Male and female-headed households do not differ significantly in per capita consumption. In rural areas, the per capita consumption of female-headed households is 6.5 percent more than that of male-headed households, while in urban areas the per capita consumption of female-headed households is 4.1 percent less than that of male-headed households. The per capita consumption is inversely related to the size of the household in both rural and urban areas and the extent of land owned in rural areas.

5. Suggestions for Improvements in the Statistics of Income Distribution

1. NSSO should explore the possibility of collecting information on income as an adjunct to the surveys on economically active population, to facilitate comparisons between findings of the income surveys with the results of the CES. Data maybe collected separately for wages and salaries, property and other entrepreneurial incomes as recommended by United Nations (United Nations, 1977).
2. The interviews in the CES are spread evenly over the 12 months to overcome seasonal variations. Since consumption expenditures (and income flows) tend to be greater during the first week of each month it will also be better to spread the sample evenly over the 52 weeks of the year.
3. In order to adjust estimates obtained with different reference periods for time series comparisons, one "large" sample survey needs to be carried out applying three different reference periods to three independent sub-samples as follows : (i) Reference period of one month for all items of consumption expenditure as in the past rounds of NSS (ii) Reference period of one week for food, pan, tobacco and

intoxicants and one month for the rest ; (iii) Reference period of 365 days for clothing, footwear, durable goods, educational and institutional/medical expenses and one month for the rest.

4. Stratification of households by socio-economic classes is needed to give adequate representation to the two tails of the distribution (the lowest and highest income deciles). At the upper-end consumer expenditure falls short of income whereas at the lower end income falls short of consumer expenditure.

5. The valuation of consumption of home-grown crops / products at the farm level or ex-factory prices introduces underestimation of such expenditures. An additional column may be introduced in the CES questionnaire to include the market value of such products as reported by the respondent.

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RESUME

The reduction of income inequalities is a major concern in India's development plans. This has led to the compilation of income distribution statistics for policy making and for evaluation of poverty alleviation programmes. The sources of income distribution statistics are consumer expenditure surveys of NSS, income surveys of NCAER and national accounts statistics of the CSO. Unfortunately the estimates from these three sources of data have not been mutually consistent, leading to arguments about the accuracy of the data. This paper presents an overview of the methodology adopted for data collection in the three sources and their use for measuring income inequalities in India. The paper also presents some observations from the data and suggestions for improving the statistics of income distribution in India.