ECONOMIC REFORMS & POVERTY ALLEVIATION: INDIA

A Tale of two Surveys

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Abstract

This paper examines the results from two recent surveys, the National Sample Survey (NSS) and the NCAER's Market Information Survey of Households (MISH) about the trends in poverty alleviation in India in the 1990's and finds that tsomehing seems to have gone seriously wrong with the NSS in recent years. Hence thee trends it charts are not credible. Poverty has declined , contrary to NSS estimates substantially since the reforms of 1991 as shown by MISH.

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INTRODUCTION

The question of the effects of economic reforms on poverty alleviation has come to the fore of public debate with the recent publication of the preliminary poverty ratios from the 53rd round of the National Sample Survey (NSS) for 1997, and the 54th round conducted between Jan-June 1998. These show no change in the urban poverty ratio (head count (HC) index), but a rise in the rural and all-India poverty ratios since economic reforms were undertaken in 1991. Some commentators (eg. Ghosh (2000)) have taken these results as a sign that the undoubted increase in growth has not 'trickled down' to the poor, while others (Aiyar (2000a, b) have cast doubt on the accuracy of the trends charted by the NSS, particularly in light of the growing divergence between the per capita consumption figures that are implied by the NSS and those given in the National Accounts Statistics(NAS).1/

However, since the mid 1980s there is another large scale survey, the Market Information survey of Households (MISH) of NCAER, which is less well known than the NSS which can provide consistant information on income trends in the country.

MISH was started in 1985-86 to estimate the size of the market for a variety of consumer goods, both durables and expendables and also to provide a profile of consumers of such goods in terms of income, occupation, location and the like. This is an annual survey, and (except 1988-89, 1990-91 and 1991-92) MISH was conducted for all years. The latest survey is for the year 1998-99. MISH uses the same sample design and sample size for all its annual surveys. The sample size is much larger at 300,000 than NSS (about 120,000). The distribution of sample sizes between the urban and rural is, however, different for the 2 surveys. While MISH has close to 70% of the sample from urban areas, NSS has only 40%. However, in absolute numbers, the rural sample of MISH is larger than the corresponding NSS sample. Since, MISH is mainly concerned with manufactured goods a large sample size was allocated to the urban areas where both the level and pattern of consumption is expected to show large variations between the households.

Unlike the NSS, which is an expenditure survey, MISH does not collect data on food consumption and therefore is not amenable to directly estimate the population below poverty line as defined by the Planning Commission.

However, just as NSS has data on expenditure distribution over time on a comparable basis, MISH provides income distributions. It may be noted that, the data on income from MISH is as perceived and reported by the respondent and therefore is conceptually different from the GDP as estimated in the National Accounts Statistics (NAS). Nevertheless, the trends in income and its distributions derived from MISH is likely to be reliable as the sample design, sample size, questionnaires and the method of estimations are same in all the rounds of MISH(See the Appendix).

The Planning Commission estimates the population below the poverty line using the expenditure distribution of NSS. Those whose per capita monthly expenditure is below a certain level are regarded as being ‘below the poverty line’. The cut-off expenditure is adjusted for inflation for successive years, and these levels are used to derive time series estimates of population below poverty line. The same data have been used by different analysts and official expert groups to estimate Indian poverty. Somewhat different results

have been obtained by different observers mainly depending on the use of different methods of price indexation. Bhalla (2000) has combined NSS data with NAS to estimate HC ratios which show a sharp decline during the nineties.

In a similar fashion one could derive an alternate set of estimates of poverty ratios from the data on income distribution from MISH, if a poverty line based on income is defined. However, the objective of this paper is not to provide another set of absolute poverty estimates but to examine the consistency in the trends of poverty ratios obtained from the expenditure distributions of NSS and the income distributions of MISH.

The first step is to determine the poverty lines based on income, IPL which can be applied to the MISH income distributions to estimate the HC ratios. As a first approximation, we used the expenditure poverty lines (EPL) of Planning Commission on our income distribution data. The rationale behind this is that these households are not likely to have any saving and their entire income would be spent on consumption and therefore the expenditure poverty line would be a good proxy for the poverty line based on income. The HC ratios thus estimated are presented in Table 1.

It is seen that the HC ratios estimated by this method for the year 1987-88 are well above those of the Planning Commission. The difference is more in rural (70% as against 39%). One reason could be that the poor spend more than they earn. In other words, they have negative saving and borrow for consumption. If, we assume that their income is less than their expenditure, we should probably take a lower poverty line on income which would bring down the poverty ratio.

What is surprising, however, is that, for MISH in 1997-98, the use of EPL gives estimates of HC ratios which are much lower than that of Planning Commission. Thus, the 2 distributions show different trends in the movement of HC ratios.

A second exercise was done to allow for the possible dissaving by the poor, as well as to trace the relative movements over time in the poverty ratios provided by the expenditure distribution of NSS and the income distribution of MISH.

In order to do this, we have taken the 1987-88 Planning Commission estimate of the poverty ratio as the base. If 'p' is the proportion of population below poverty line in 1987-88, we found the income level below which proportion 'p' of the population lie in 1987-88, based on the distribution of per capita income from MISH. For the successive years, upto 1997-98, this poverty line based on income is adjusted for inflation using the same price deflator as has been used by Planning Commission to derive its HC ratios from NSS. These poverty lines along with the corresponding income distributions are used to estimate the poverty ratios for the different years.

This exercise is done separately for rural and urban areas as well as for all the major states of India.

Table 2A summarizes the estimates of the HC ratio from MISH and the NSS for various years for the rural, urban and All-India levels while state level estimates are presented in Table 3. In addition to the PC estimates, those made on the basis of the NSS data set by various other researchers are also shown in the Table 2B. The differences between these estimates of HC ratios using the same NSS data set reflect divergences in the price deflators and in some cases

the poverty lines used.2/ But as Dubey and Gangopadhyay have shown this should not effect the trends in poverty alleviation that are derived.

Table 2A shows that during the decade 1987 to 1997, the HC ratios based on MISH data show a marked decline while the official estimates based on NSS show an initial decline upto 1993-94 and a rise thereafter. Even the decline between 1987-88 and 1993-94 is more moderate as compared to that from MISH. The estimates for the states also show a consistent decline in both rural and urban areas for all the states in the case of MISH while they do not show such a clear pattern in the case of NSS. So which of these two surveys is to be believed about the trends in poverty redressal during the reform era: MISH, as conventional wisdom and the experience of numerous other countries (see Lal-Myint) suggests, with a marked decline, or the stagnation in the poverty ratios suggested by the NSS, following the acceleration of growth?

To answer this question is the primary purpose of this paper. We follow a multi-pronged strategy. We begin by examining the most obvious hypothesis in section 1 that, the difference is due to divergences in the degree of inequality which can be derived from the two surveys. In the next section we examine, whether there are differences in the design and size of the two sets of sample surveys which might explain their divergent results. Finding neither of these explanations as valid, the only remaining possibility lies in differences in the implementation of the two surveys and the quality of data collected. In section 3, we offer some conjectures about these possible differences based on examining the state level data on the per capita consumption given by the NSS and the per capita incomes by the National Accounts for various years.

I

Differences in Inequality Trends?

The differences between MISH and NSS are perhaps due to differences in the trends of inequality at the respective levels charted by the two surveys?

Table 4, summarizes the Gini coefficients derived from the two sets of surveys for various years. It is clear that both series are trendless. The Ginis for MISH are higher than for the NSS, as the former are for income and the latter for consumption, and as is well known consumption tends to be less concentrated than incomes.

The divergent trends from MISH and the NSS for the HC ratios in the 1990's cannot therefore be explained by differing trends in their respective Ginis.

II

Differences in Design and Sample Size?

It has been claimed by some observers that both differences in the design and the size of the sample account for the differences between the trends charted by MISH and the NSS. In particular it has been argued that MISH is biased towards including richer households and under inclusion of poorer households. Also that the purported sample size of MISH does not allow robust estimates at disaggregated levels.

Both MISH and NSS have similar designs. In both the surveys, the district is a stratum for the rural sample. Villages are selected independently with probability proportional to population.

Similarly in the urban sample, cities, blocks and households are the 3 stages of selection. Perhaps, these are the only 2 surveys done in India where the penultimate sampling units namely, villages and blocks are listed to prepare a sample frame. Also, these are perhaps the only large-scale surveys where the selection is random at every stage.

The distribution of sample size over different expenditure classes of NSS and income classes of MISH is presented in Table 5. In order to make the 2 distributions comparable, the income classes for MISH are chosen as to give a per capita income which is slightly above the corresponding expenditure of NSS. It is seen that the 2 distributions are similar. It is also to be noted that the sample size for the lowest class is much higher, both in absolute and percentage terms, in MISH.

We therefore, believe that neither the design nor the sample and its spread account for the divergent trends seen in the 1990's in the HC ratio from the 2 surveys

III

What could have gone wrong with the NSS in the 1990s?

Clearly something has gone awry with the NSS in the 1990's. It cannot, as we have seen have anything do with the design and sample size.

1. Divergences between NSS & NAS – Expenditure and foodgrain availability

An essential clue is provided by Table 6, which charts the ratio of per capita consumption figures from NSS to the per capita expenditure figures from the national accounts. Also, provided in the table are the ratios of per capita availability of foodgrains as provided by the Directorate of Economics and Statistics, Department of Agriculture and Co-operation, to the consumption of foodgrains as estimated by NSS. Similar data at the state level are provided in Table 7.

As data on private final consumption at the state level is not available. we have instead used Net State Domestic Product" as the denominator for working out the ratios at the state level and these are presented in Table 7.

Table 6 shows that the ratio of foodgrains consumption to that of availability declined from 1.2 in 1977-88 to around 0.9 in 1997-98, a decline of about 1% a year. Professor Pravin Visaria, (2000) contends, that, these differences arise mainly due to the reference period used for collecting data on foodgrains consumption. According to him, that NSS was using 2 reference periods in the recent past, one month and one week for collecting data on foodgrains consumption and all the estimates were based on the 'one-month' reference period. However, if the latter reference period is used, the consumption goes up significantly and the gap between availability and consumption gets narrowed down. However, this may not materially affect the trend observed, as this change in the period of reference, if applied would push up the consumption estimates and therefore bring down the PC ratio of the earlier period also.

The ratio of estimated consumption expenditure of NSS to the private final consumption expenditure of NAS show that after an initial decline the ratio had stabilised after 1993-94.

An interesting feature that is observed from the state table is that the decline in the ratios of NSS expenditure to NSDP is not uniform. Over the states it varied from an average annual decline of 0.92% in Bihar to 5.61% in the case of Gujarat between 1987 and 1997-98. The growth rates of per-capita net state domestic product also varied widely between the states. Again the least growth was recorded for Bihar 0.20% per annum and the highest, 7.13 per cent, for Gujarat.

Table 8 presents the average annual growth rates in the per-capita NSDP and the average annual rate of decline in the ratio of NSS expenditure to NSDP for the different states. It is seen that the 2 indicators are inversely related, the co-fficient of correlation between the 2 series is -0.87. From this it appears that the over estimation of poverty ratios is higher among the richer states.

Some scholars, however, accept this observed trend and claim that this by itself does not necessarily lead to an overestimation of population below the poverty line. They argue that the data on availability of foodgrains as given by the ministry is not comparable to the consumption estimates of NSS as the former does not take into account the change in stock at the farm level and the trade level. Also a constant percentage of production is allowed for seed and wastage to arrive at the net availability which may not be realistic.

On the widening gap between NAS expenditure and NSS expenditure, they opine that NSS does not adequately cover the affluent in the population whose share has been increasing over time. Under representation of the rich in the sample would naturally understate the overall per capita expenditure, and the degree of underestimation has increased over time due to the higher representation of this group in later years. Further, the growth of this group is faster in progressive and rich states and this explains why the gap is higher in these states compared to states like Bihar etc. This, however, would not affect the estimate of per capita expenditure of the poor as they are adequately represented in the sample.

Let us examine these explanations one by one. It is conceded that the survey estimates of foodgrains consumption may not tally with the per capita availability derived from production data due to conceptual differences. In fact, for any particular year these two are bound to be different. But, as long as the concepts remain same, there is no reason why this difference should increase in successive years.

To draw a parallel, MISH attempts to estimate household income. These are incomes as perceived and stated by the respondents. The CSO, in its National Account Statistics, estimates personal income which should be very close to the household income. But, there are conceptual differences. The economic concept used in estimating national income is different from the concept of income as understood by the households. There are certain components of income included in national income which are not even considered as income by the respondents. As a result MISH captures only about two thirds of national income. However, in successive surveys, this ratio has stayed almost constant as revealed in Table 9. Conceptual differences may not therefore explain the divergence in the estimates of foodgrains' consumption.

Any random sample would normally be representative of the population from which it is chosen. Thus, if a group forms 'x' percent of the population, a random sample from this population would also approximately have 'x' percent from this group. However, when a rare population is sampled, we may not get a proportionate representation in the sample. Even, with a moderately large sample, a group with a representation of, say, 5 per cent or less in the population, might get either over represented or under represented in the sample. The fluctuation could be quite large in represented samples. If, the rich, as defined by these scholars is a rare population, then they should get over represented in some years and under represented in others. If such is the case, then the per capita expenditure would get over estimated in some years and understated in others. The trend observed in the ratio of NAS expenditure is not consistent with this.

In our view, underestimation rather than under representation is the major problem with the NSS data and the magnitude of underestimation is also increasing over time. Indirect evidence for this is available by comparing the NSS and the MISH data.

2. NSS Under estimation of in Distribution

For each year, NSS provides a frequency distribution of households by expenditure classes. In 1987-88, 3 percent of the rural households had a monthly per capita expenditure of Rs. 385 and above. If a saving rate of 20% is assumed, this would be equivalent to a per capita monthly income of about Rs. 482. The per capita income distribution data from MISH for 1987-88 show that 1.9 percent of rural population has more than this level of income. Similar results were found in the urban areas also. As compared with 2.8% from NSS the MISH data showed 2.9% of urban population over these cut off lines. Thus, the 2 distributions were consistent in 1987-88. Even in 1989-90, where NSS used a thin sample, the distributions were similar.

However, the 2 distributions started diverging in the 1990s as shown in table 10.

The size of the upper tail as estimated in NSS is considerably smaller, almost half, compared to MISH in 1993-94 and 1997-98.

Differences exist at the other end of the distribution as well. For the year 1987-88, it was seen that corresponding to the official poverty ratio, the expenditure poverty line was found to be more than the income poverty line indicating a certain level of dissaving for people below poverty line. However, things look different if the expenditure and income poverty lines are compared for the official poverty ratios in the subsequent years.

In the year 1993-94 (Table 11), the rural income poverty line (IPL) is still lower than the expenditure poverty line (EPL) showing a dissaving albeit at a lower level. But, the urban IPL is little over the corresponding EPL, showing a positive saving. For 1997-98, IPL is higher than EPL for both rural and urban, 10% more for rural and 30% for the urban. Thus, the population which is shown as below poverty line on NSS data, actually save upto 30% of their income, if MISH data is used.

These differences cannot be due to sampling fluctuations. MISH data are consistent with national income estimates. The estimate of 30% for the upper tail may not be an over estimate as even with this distribution MISH accounts only for two-thirds of GDP. If 30 percent is

the true value, then the probability of getting 15% as reported by NSS from a random sample of over 10,000 households is negligible.

NSS has been using the same sample design and similar sample sizes for all its surveys. In 1987-88, with a full sample and 1989-90 with a thin sample, they produced distributions consistent with MISH. This despite the fact that the upper tail was much smaller in these 2 years compared to the latter years. Therefore, the differences in the size of the upper tail in 1993-94 and 1997-98, cannot be attributed to under representation in the sample. What possibly must have happened is that the expenditures are understated.

The size of the rural upper tail in 1997-98 from the NSS is 15.2 per cent. From the income distribution of MISH, this corresponds to monthly per capita income level of Rs. 1,000. This translates itself into a per capita monthly expenditure of around Rs. 800 if 20% is reckoned as saving. The upper tail for rural areas in NSS is defined as those with monthly per capita expenditure of Rs. 560 and above. If this expenditure is an under estimate and in fact somewhere around Rs. 800, then, the size of tail would match for both MISH and NSS. The 2 distributions would be consistent and NSS data would also be consistent with the expenditure data from NAS.

Thus, it looks as though, the expenditure distribution as estimated by NSS has shifted towards the left on the expenditure axis from its true position after 1993-94. This probably is the reason why the NSS data does not show any reduction in poverty in 1997-98. Furthermore, the degree of under-estimation seems to vary directly with the level of income and growth rates of the states. This appears to be a systematic bias and its reasons need to be investigated by NSS.

3. Divergent Trends in Consumption of Durbales

A variety of consumer goods, both durables and expendables, entered in the Indian market soon after liberalisation. There was a consumer boom and the country witnessed impressive growth in the consumption of goods and services. Perhaps, NSS is not capturing these items adequately in their surveys. Estimates of expenditure on some of these items are also available in NAS. Estimates from these 3 sources can be compared to check if they are consistent. Since, both NSS and NAS have data on consumption in value terms, the quantity estimates of MISH are converted into value terms on the basis of the reported price.

NSS gives per-capita monthly expenditure for rural and urban areas separately for these items. It was found that the estimates of population reported by NSS is not consistent with the population census data. For example, NSS reports a population of 778 million in 1993-94, whereas according to census, the population of India was 840 million in 1991. The population estimates for 1997 at 806 million by NSS is well below the figure of 959 million as reported in the NAS. In fact, NSS estimates of population are consistently less in all the years as can be seen from Table 12.

The major reason for this underestimation is the low household size reported by the NSS. In the last 10 years, the average household size estimated by NSS is a little below 5 whereas census, both 1981 and 1991 and all other national surveys done in the country estimated the household size to be a little over 5.6 (Table 13) . This underestimation in household size also implies that the poverty numbers based on the NSS would larger if proper household sizes are used although it may not affect the trend as exhibited by NSS data.

Since, NSS population estimates are low, we have used the population as reported by NAS to estimate the aggregate expenditure from NSS data. To arrive at the pooled average expenditure for the rural and urban put together, the relative population as reported in NSS is used as weights.

There was a special tabulation on consumer durables covered in the 1993-94 NSS survey. Only for 5 of these durables are matching figures available from both the surveys. Estimates of consumption of these durables based on NSS and MISH along with the sales of these durables as available from various news-paper reports and business magazines are presented in Table 14.

It is seen that the consumption estimates of NSS are less than a fourth that of MISH. Sales figures of these durables are very close to the MISH estimates.

The NSS also collected and tabulated data on consumer durables in 1987-88. A comparison of this estimate with that of MISH for the same year and for the same 5 products is given in Table 15

Even in 1987-88, NSS estimates are far below the estimates from MISH, which were again very close to industry estimates. But, the degree of divergence is much less, nearly half against one fourth in 1993-94. This again confirms, that the under estimation in NSS is progressively increasing.

It is intriguing that NSS results were worse in 1993-94 when the penetration levels are relatively high compare to 1987-88.

NSS collects data on about 66 consumer durables. These include furniture and fixtures, recreational goods such as TV, Cassettes and musical instruments, clocks and watches, household utensils and appliances for cooking, heating, cooling and other work such as sewing, vehicles for personal transport, lamps & fluorescent tubes and other electrical and sanitary fittings. The data were collected in 2 ways, expenditure during the last 30 days and for the last year. However, NSS adopts the estimate based on the consumption during the last 30 days as it was felt that the annual estimate is biased due to recall lapse.

NAS also gives estimates of consumer durables. While NSS and MISH data pertain only to the household sector, NAS estimates are supposed to include non-households consumption as well. Also, MISH covers only 25 durables and therefore its estimate is expected to be less than that of NSS, which in turn should be lower than the NAS estimate in view of the non-household consumption being included in the latter. The estimates of consumption of consumer durables from these sources for the 3 years 1987-88, 1993-94 and 1997-98 are presented in Table 16.

The NSS estimates are well below that of MISH, despite the fact that MISH covers fewer durables. Further, NSS includes second hand purchases also while MISH data pertains only to new purchases. It is interesting to note that the estimate, provided for the 5 consumer durables in 1993-94 for MISH is equal to the total consumer durables estimates of NSS in that year.

It was seen earlier that NSS estimates of these 5 durables is about a fourth of the corresponding figure from MISH. If its same level of underestimation is presented for the other durables also, then this would mean a difference of Rs. 30 in the per-capita monthly expenditure.

Even the estimates of NAS appear to be understated as compared to MISH. In 1997-98, the NAS estimates is only 20% higher than that of MISH despite the fact that NAS covers more durables as well as the non-household sector. The consumption of some of the items like furniture and fixtures, electrical and sanitary fittings are highly significant in the non-household sector.

4. Divergent Trends in Consumption of Textiles

Another major item of consumption is textiles. While both NAS and NSS have consumption data on textiles, MISH does not cover this item. However, the Textiles Committee (TC) under Directorate of Handlooms and Powerlooms, Ministry of Textiles carries out an annual survey of households to estimate the consumption of textiles. This survey like the NSS does not cover the non-household consumption. As in the case of durables NAS covers both the households and the non-household sector. Table 17 gives the estimates of textiles for the 3 years 1987-88, 1993-94 and 1997-98 from the 3 sources.

It is seen that NSS estimates are less than a third of TC estimates. NAS estimates are somewhere between the two. Till 1993-94, NAS estimates were close to that of Textile Committee. But, NAS revised its estimate for 1993-94, making it less than half of its earlier estimate. Thus, in the year 1997-98, NSS and NAS estimates formed 33% and 44% of the estimates of the TC estimates.

In 1997-98, TC estimated that 15 million meters of cloth was consumed in the household sector. For the same year, a census of handlooms and Powerlooms was conducted on behalf of the Ministry of Textiles. According to this, the production of cloth by the handloom and powerloom sector was about 22 billion meters. It is estimated that if production of the organised mill sector, khadi and hosiery are included, the total production of cloth in the country would be a little over 30 billion meters. The TC estimate of textile consumption is therefore around half of the estimated production and TC itself concedes that their consumption estimates are understated.

5. Divergent Trends in Consumption of Expendables

The market for expendables also expanded rapidly in the nineties. MISH data show that the consumption of about 20 products covered in MISH more than doubled between 1992-93 and 1997-98. Both NSS and NAS also cover all these products. However, itemwise estimates are available only for two products, namely edible oils and footwear. Even here MISH covers only branded edible oils. NAS, as in other item covers non-household consumption also. Further, the estimates of edible oils here includes oil seeds as well. The estimates of consumption of both these products from the 3 sources for the 3 years are presented in Table 18.

It is clearly seen that the level of divergence between the NSS and MISH estimates of these products has increased over-time. In the case of edible oils, MISH estimate was less than that

of NSS in 1987-88, as it should be, as MISH does not cover unbranded oils. But, the 1997-98 estimate of MISH is 40% higher than that of NSS. NAS estimates are consistent with MISH.

Worse was the case of footwear where the NSS estimate from being about the same as the MISH estimate in 1987-88, became only a third in 1997-98. Even, NAS estimates of footwear are well below the MISH estimates.

The case of "Pan, Tabacco and Intoxicants" is also similar. Both, NAS and NSS give estimates of consumption of this item. MISH covers only cigarettes. Table 19 gives estimates from these 3 sources. In 1987-88, the estimated consumption from NSS was 50% more than that of NAS. It is the other may round in 1997-98. Even the estimate of MISH, which covers only cigarettes, is very close to total consumption of all tobacco products estimated by NSS in that year.

NSS gives estimates of all other consumer goods and services under the head "Miscellaneous goods and services". MISH does not cover services and hence these two are not comparable. However, for 1997-98, NSS provides a separate estimates for "miscellaneous" goods. MISH covers only 13 of these products. NAS also provides estimates of consumption of these products. Table 20 presents these estimates. Here again the NSS estimates are well below that of NAS. In fact, the estimated consumption of just the 13 products covered in MISH is more than the consumption under this category reported by NSS.

CONCLUSION

Enough evidence is cited in the preceding sections to conclude that of the two surveys, the results of MISH are more consistent than that of NSS with all other available secondary data. It is clear that till 1989-90, the 2 data sets were compatible. Thereafter, it appears that a systematic and progressive bias had crept into NSS in their method of data collection and estimation process. This probably is the major reason for the divergent trend in the poverty ratios estimated from the 2 data sets.

Finally, we must add here that we do not claim that the estimate of population below the poverty line is 28 per cent as estimated through MISH is the correct estimate. Because we do not know. For, it is one thing to define a poverty line but to estimate the poverty ratio consistent with this definition is totally a different matter. If the criteria for being below poverty line is applied to the entire population truthfully, we can label each individual as below or above poverty line and at the end of which we can make a statement that so many are below the poverty line and this is the 'truth'. No one knows what this 'truth' is nor is it feasible to adopt the method outlined above to arrive at this 'truth'. The only recourse available is to estimate this through sample surveys.

The trouble with sample surveys is that irrespective of the quality of design, sample size, method of data collection and estimation we always get a result. Every sample believes what he has got is closer to the 'truth' which can never be verified.

However, the interest is not the poverty ratio per se, but how it has moved over time. If the same design is used with similar sample size, same method of data collection and estimation, the emerging trend is likely to be robust. Both MISH and NSS adopt this route. The estimated poverty ratio for 1987-88 based on NSS data is 37.2 per cent which may or may

not be true. But what we claim is that if this figure is true then the chances are that in 1997-98, the poverty ratio is more likely to be closer to 17 per cent as estimated by MISH than the Planning Commission estimate of 37.2 per cent.

If the numbers are to be believed, then every sixth person was below poverty line in 1997-98. How poor are these people? What do they consume? MISH can provide an answer. While MISH does not cover food, clothing and services, it has data on consumption of a variety of manufactured goods both durables and expendables. The consumption pattern of the bottom 17 per cent corresponding to the population below poverty line is given in tables 21 and 22.

The total market size of the 20 expendable products in MISH was Rs. 800 billion in 1997-98. Of this about 7 per cent is consumed by the households classified as poor. Practically every one of them use toilet soap. Nearly 90 per cent use washing cake and cooking oil. Footwear of one kind or other was bought by almost all. Tea and hair oil were also bought by a vast majority. Only nail polish, lipstick and health beverages were bought by less than 5 per cent of these households. Every tenth household bought shampoo and face cream. Nearly a fourth bought body talcum powder. About 18 per cent bought packaged biscuits.

These households own a variety of consumer durables also. About three fourth of the households owned a wristwatch. Bicycle and radios were owned by 40 per cent and 30 per cent of the households. black & white TV and cassette recorders were owned by 10 per cent and 16 per cent respectively. Two percent had a mechanised two wheeler. The ownership is more in urban areas where a under than a third had a black & white TV. Nearly, a tenth had a sewing machine.

Also these are the households, of whom, more than 85 per cent claim, according to NSS, to be getting 2 square meals a day throughout the year.

If the bottom 18 per cent of households in India display such a consumption pattern, it provides further evidence that the estimate of 37 per cent being below the poverty line in India in 1997-98 is simply not credible- given the vary modest basis of the Indian poverty line based on minimum nutrition levels.

The National Sample Survey has been among the most robust and well respected of such national household surveys in the world over almost half a century. It is therefore natural that most observers accept the estimates thrown up by the NSS. That this survey indicates the stagnation of poverty at around 37-38 percent throughout the 1990s has severely coloured the perception of analysts and the lay public alike of the effects of economic policies carried out over the past decade. This influence has been so strong that even the World Bank has begun to question the efficiency of economic growth in poverty reduction.

We have documented the results obtained from NCAER's MISH in different ways and have also attempted to validate them through comparison with other secondary data.

The conclusion is inescapable that poverty reduction has accelerated significantly along with higher economic growth in India in the 1990s.

Our investigation suggests strongly that certain biases seem to have crept into NSS data collection in the 1990s, specially in the richer states. It is imperative that there biases be

corrected since the conclusions drawn from these faulty data may also influence economic policy in the wrong direction.

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Appendix : A Note on the data on income from MISH

In MISH, the data on income is collected from all the sample households. The income collected is as perceived and reported by the respondent. It is different from the income as defined by the economists and therefore not comparable to 'personal disposable income' as estimated in the NAS which uses the economic concept. The NAS income is higher than that of MISH as it includes unrealised accruals. These include employers contributions to provident fund (PF), interest on PF, interest on cumulative deposits and the like. MISH also does not invariably include incomes in kind. Further, certain components of income are not perceived as income by the respondents and hence get excluded from MISH incomes. Items like reimbursements for travel, medical and such other expenses are not reported in MISH. Thus, the income estimated from MISH is on a conservative side.

The data on income is collected through a single question where the respondent (s) is/are asked to report income for all members and from all sources. One of the criticism laid against MISH is that whether reliable data on income could be obtained through a single question.

Those who have experience in conducting socio-economic surveys in India would know that the questionnaire is only a guide under Indian conditions and for every question the respondent is to be probed to elicit a reasonably reliable information. This is true, not only of questions on income, but also for every bit of information, the researcher wants to collect.

In consumer expenditure surveys, also, the information is gathered only through a single question for each item although for items like textiles, data is sought for different items of clothing. Large-scale consumer expenditure surveys generally have a lengthy questionnaire as the information is gathered for a large number of items. For practical reasons, probing is not possible for all the questions. Thus, except for a few critical areas, the questionnaire is generally rushed through.

Moreover, the respondent normally does not keep a record of what he/she had spent on many of the items of expenditure. This is particularly true of all items where the frequency of purchase is not uniform. The respondent invariably has to make an intelligent guess on his expenditure for individual items and this is recorded by the interviewer.

On the other hand, the respondent knows how much he makes. This may not correspond to the economic concept of income but it is what is available to him for spending/saving. In fact, he keeps this figure in mind while taking decision on what and how much to buy. Therefore, it may be easier for the respondent to furnish the funds available to him or income than to provide his expenditure on items like say, tooth paste or washing powder.

It may be argued that the respondent may not reveal his true income, but tend to suppress it. This is only a hypothesis that can never be tested. Even, if there is underreporting, it is likely to be at higher income levels. It may be mentioned here that the range of incomes reported in MISH is very wide, ranging from less than Rs. 6,000 to over Rs. 10 millions a year.

To estimate the economic notion of household income the questionnaire needs to be specifically designed. The data collected should include all components of income both accrued and realised. The National Council has specialised in surveys on income and it has conducted several surveys in the past, the earliest was as far back as 1962. In all these surveys, data was also collected on disbursements. The questionnaire has several built in consistency checks to improve the reliability of data.

Given the large questionnaire, it takes a number of sittings, spread over a number of days with the respondent to complete it. Often, we have to refer back to the respondent in case of any inconsistency and for this reason, the sample sizes involved are often small around 5,000 to 7,500. The estimates and their distributions are only attempted at the all India level.

The most recent detailed survey on income was MIMAP for the year 1994-95. MISH being an annual survey was also conducted during this year. The estimates of both the level and distribution of household income based on Table A1 are given in table.

The rural distributions of the 2 surveys are fairly close to each other. However, the urban distribution looks different with MISH showing more poor households. The comparison of per capita income distributions (Table A2) from the 2 surveys also show similar results.

Coverage of income is better in MIMAP as it includes more components such as imputed and accrued but not realised incomes. The average household income of MIMAP is about 20% higher than that of MISH. The gap is more in the urban at 32%.

Thus, it is clear that the income distributions obtained from both the surveys are similar although, the level is higher in MIMAP, particularly in the urban areas. Since, MIMAP is a more intensive study on income, the distributions obtained here is expected to be more reliable. The difference between the 2 distributions appears to be only at the tail. While, MISH has more households at the lower tail, MIMAP has more at the upper tail.

From the point of view of estimating the population below poverty line, the lower tail is more relevant. The over estimation of the lower tail in MISH would probably exaggerate the population below poverty line.