

Poverty and Neo-Liberalism*

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I Introduction

I have chosen the topic of poverty and neo-liberalism for this lecture for two reasons: first, the beginning of poverty studies in India is associated with the names of Prof. V M Dandekar and Prof. Nilakantha Rath, both long associated with this Institute, who carried out a pioneering conceptualization of poverty and laid the basis for subsequent estimates of the numbers of the poor. Second, today we cannot escape from the pervasiveness of neo-liberal policies in our lives, and when discussing poverty trends we have to consider the differential impact these policies have had on the living standards of the well-to-do on the one hand, and on the other, their impact on the livelihoods and food security of the vast masses of the poor who still comprise the majority of this country's population even six decades after Independence. Since the majority of the poor are in rural areas the focus of the discussion will be on rural poverty.

There are two sets of questions, which arise when we talk of poverty and its estimation. The first set of questions relates to the conceptualization of poverty, and how to make its measurement operational in terms of some readily computable index or indices. The idea of poverty has many dimensions, and can be thought of as not merely material deprivation and a low material standard of life including poor health indicators, but also deprivation in relation to education and culture. One particular dimension of material deprivation however, has been picked out as the most crucial dimension, which must be addressed before any other dimension can be introduced: namely, the ability to access a minimum nutrition level expressed in terms of a norm of daily energy intake in calories, required for working health. This index although it captured poverty only partially, was simple, and obtained widespread acceptance. It was suggested in Dandekar and Rath's pioneering 1971 paper and was taken up by the Planning Commission in India, which set up in 1979 a Task Force on Projection of Minimum Needs and Effective Consumption Demand. Its recommendation which was accepted, was based in turn on the Indian Council of Medical Research norms, that 2400 and 2100 calories per day per capita should be the minimum Required Daily Allowance (RDA) for energy intake, for rural and urban areas respectively, and all persons unable to access this through their actually observed expenditure were to be considered as poor.

This measure using a nutrition norm, is an absolute measure of poverty as distinct from the relative measures used in many other, more advanced countries - such as, considering all those to be poor, who have less than half the average per head income in the economy. With a relative measure of poverty, rise in inequality will imply rise in poverty. The poverty measure adopted in India, based on the idea of absolute poverty, however, requires stronger conditions for poverty to show a rise. Increase in the inequality of income and of expenditure could be quite consistent with poverty so defined, showing a decline. Only an absolute decline in expenditure (for sections of the

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population, or for the entire population) would lead to poverty rising on the absolute measure used in India.

The second set of questions relate to whether as a trend, poverty defined in the absolute sense as explained above, has been declining in India. The academic consensus was that, starting from high levels of poverty, there were sharp fluctuations but no trend decline before the 1980s, but a decline did take place in the 1980s. The question of poverty trends has become a particularly contentious one however, during the last fifteen years, owing to the repeated claims by the government, by a number of academics associated with the government and by economists associated with the World Bank, that a substantial decline in poverty – rural poverty in particular – has taken place in the 1990s, during the period of implementation neo-liberal economic policies and trade liberalization. More precisely, rural poverty is said by the planning Commission to have declined from 37.3 to 27.1 per cent of the population comparing the 50th Round (1993-94) and the 55th Round (1999-00) data from the NSS on consumer expenditure. The World Bank's latest World Development Report 2006 also reproduces these figures, the 1999-00 figure being slightly adjusted upwards to 30.2 per cent to take account of recall-period change. This alleged decline is put forward as an argument for continuing with the same policies.

On the other hand, the available official data show, that over the same period a number of crucial and inter-related indicators of rural well-being have worsened: crop growth rates have halved in the 1990s compared to the 1980s, rural development expenditures have gone down as a share of National Product and in real per head terms. Rural employment growth has dropped sharply and open unemployment has been growing fast. Bank credit to farmers has declined and there is higher dependence on private usurious credit. Price declines have been severe for many crops, and food grains absorption per head has declined sharply to reach levels prevalent fifty years ago. Mounting un-repayable farm debts have led to the historically unprecedented situation of many thousands of farmer suicides in widely separated areas in different states (Andhra Pradesh, Karnataka, Vidarbha in Maharashtra, Punjab, and Kerala) and these suicides are continuing. All these indicators of acute agrarian distress are quite inconsistent with the claims of decline or constancy of poverty. These indicators suggest that as a ground level reality, rural poverty is high and rising in many areas.

This raises a broader question – since overwhelming evidence exists for the adverse trends in the rural economy, is it the case that the official method of poverty estimation is itself faulty and is failing to capture the actual trends in poverty? Further, while up to the mid-1990s, poverty estimates were mainly of academic interest, from 1997 the food subsidy has been targeted and the population divided into 'above poverty line' and 'below poverty line', with differential pricing of food grains. Lower-cost food grains from the public distribution system are made available only to those identified as spending below the poverty line. How the poverty line expenditure is arrived at and how the poor are actually counted, has therefore, acquired an important policy dimension affecting the lives and welfare of millions of people in the country. If the counting is incorrect, it will lead to the implementation of wrong policy measures lowering mass welfare.

How are economic reforms related to the issue of poverty? Neo-liberal economic policies guided by the Bretton Woods Institutions (BWI), comprise a set of macroeconomic policies, which are more than merely conservative in financial terms. When examined carefully the policy package is seen to comprise a systematically

expenditure deflating, contractionary set of policies which reduces the level of activity in the material productive sectors of the concerned economy, even as the tertiary including the financial sectors may show rapid growth. A well-known set of studies sponsored by UNICEF of structural adjustment policies followed under BWI guidance in a number of developing countries in the 1980s, found that the majority of countries experienced reduced investment and growth rates, higher infant mortality rates, reduced rates of improvement in literacy, fall in real wages and rise in poverty (Cornia, Jolly and Stewart, 1987). Table 1 details the policies followed in 78 countries in the 1980s under IMF guidance, which clearly add up to a policy package which is strongly expenditure-deflating. Since neo-liberal policies in India have also been expenditure deflating as regards the material productive sectors, and strongly so with respect to agriculture, it is not surprising that we see an agrarian crisis unfolding, while every indication is that absolute poverty is rising.

Table 1: Policies followed by 78 Countries under Fund-guided Reforms

	Percentage of Total Number of Countries Implementing Policy
1. Restraint on Central Government Expenditure	91
Limits on Credit Expansion	99
2. Reduction in Ratio of Budget Deficit to GDP	83
3. Wage Restraint	65
4. Exchange Rate Policy	54

Source: Quoted in Cornia, Jolly and Stewart (Eds), *Adjustment with a Human Face*, 1987, Vol.1, p.11.

The purpose of this paper is to explore why the poverty estimates by the Planning Commission and many individual academics following the same method, show low levels, as well as, decline in poverty over the 1990s, whereas all other economic and social indicators suggest that absolute poverty is high and there has been an adverse impact of neo-liberal policies on poverty. On examining the actual estimation method officially followed, we find that the Planning Commission applied its own definition of poverty using the nutrition norm, only in one year, 1973-74, to the NSS consumption expenditure data to obtain the poverty line expenditure. For all subsequent years the nutrition norm has been treated as irrelevant for estimation and the method actually used has been to take 1973-74 as a base year and bring forward the poverty line for that year to more recent years by using a price index. The fact has been ignored that the use of price indices is always problematic, and additionally when the quantity weights of the price index relate to an increasingly distant base year, even the best of price indices cannot capture many important structural changes leading to the actual increasingly higher cost of accessing nutrition.

The result has been extremely low and grossly unrealistic official poverty lines – for example for rural areas, All-India for 1999-00, the poverty line was Rs.328 per month or less than Rs.11 per day (just under US 25 cents at the exchange rate then prevailing) which was supposed to meet all daily expenses on goods and services for one person. This paltry sum in fact would not have bought even a single one-liter bottle of mineral water, which cost Rs.12 at that time. International agencies like the World Bank too have been complicit in promoting equally unrealistic poverty lines: the norm of one-dollar-a-day is deflated to just above a quarter dollar a day for India for that year, to adjust for

purchasing power, and the national poverty percentage of 35.3 is thereby derived.¹ The question is, would a dollar a day be a reasonable poverty line for the USA – clearly not, for it would have bought at most one bottle of mineral water there, just as the PPP adjusted one dollar in India, could barely buy a single bottle of water. At this very low daily expenditure level, the nutrition norm of 2400 kcal energy intake per person obviously could not be accessed in India's villages and the actual energy intake at this level is found to be less than 1900 calories. At the official poverty lines in many individual states in India, less than 1600 calories could be accessed.

The direct method of examining the current nutritional intake related to expenditure, on the other hand, shows that in order to access the required energy intake norm of 2400 calories, nearly double the official expenditure was required, and 75 per cent of the rural population of India was below this required spending level, while 44 per cent of urban population spent less than the sum required to access the urban nutrition norm of 2100 calories.

The proposition of this paper is that the available NSS consumption expenditure data, on which poverty estimates are based, are completely consistent with the adverse trends in the rural economy which suggest high levels of poverty and increase in poverty depth in the 1990s. The correct estimates, rounded to the nearest whole number, of head-count rural poverty for the 55th Round, 1999-00 are 75 per cent in rural India and 44 per cent in urban India, without any adjustment for recall period change in the 55th Round compared to earlier ones. The estimates would be higher still by up to 3 per cent if the necessary adjustments are made for the change in recall period, giving us rural and urban poverty percentages approaching nearly four-fifths and nearly one-half, respectively. Not only is poverty very high on applying the official definition of poverty based on the nutrition norm; it represents rise over the 1993-94 level in all except five of the fifteen major states in India (as Table 8 shows), even without adjustment for recall period change. At least three of these five states would also show rise in poverty if adjustment for recall period change is made.

The reason that official estimates do not capture the true picture, is that after the initial estimate relating to 1973-74, the nutrition norm has not been applied to obtain the correct poverty line at each point of time as should have been done. The actual method of price index adjustment to the base year poverty line to obtain the current poverty line continues to be officially followed at present (with some modifications suggested by an Expert Committee in 1993) even though the base year is now 33 years in the past. Although current information on actual calorie intakes and their cost are available in published form, from as many as four of the six large-scale NSS Sample Surveys on consumer expenditure to date, none of this information has been used to obtain realistic current poverty lines, as had been done for the first and only time for the year 1973-74. The official method which may be termed an indirect method, of simply updating with price indices, an increasingly distant base year poverty line, has led to increasing underestimation over time, of the actual current cost of accessing the nutrition norm (the RDA of energy). Thus, the official poverty line expenditure for India as a whole permitted less than 2200 calorie daily intake in 1983 (>200 calories below RDA), less than 2000 calorie daily intake in 1993-94 (> 400 calories below RDA) and less than 1900 calories daily intake by 1999-00, or >500 calories below the RDA. By 2005-06 the poverty line will permit less than 1800 calories or >600 calories deficit from RDA. The

¹ See World Development Report, 2006, Table A1 on p.278, cols. 9 and 10.

public is not informed of this however when poverty estimates are quoted and decline is claimed.

Further, while for all states the official poverty line has been too low and the corresponding nutritional intake far below the RDA, for a number of states the use of state-specific price indices has meant that their official poverty lines have been pushed down so low that at these poverty lines, by the 55th Round, 1999-00 the consumer could access only 1440 calories to 1600 calories, or a deficit of between 800 calories to nearly 1000 calories per diem from the nutrition norm. These 'poverty lines' have become a travesty of the very idea of poverty line.

The conclusion that 'poverty has declined in the 1990s' is solely the result of this clandestine lowering of the consumption standard over time, a lowering, which is inherent in the official price-index adjusted estimation method. I point out in the paper that the official method is logically not correct and involves the 'fallacy of equivocation' - a particular type of verbal fallacy arising from the incorrect use of terms. The term 'poverty line' has a definition based on nutrition to start with but the nutrition norm later has been quietly given up, because in the actual method followed for later years, the definition of poverty line is altered and completely de-linked from nutrition. The claim of decline in poverty is fallacious because the inference of decline in poverty is not true when the meaning of a term, here the 'poverty line', is changed in the course of the argument. In fact no inference at all- whether constancy, rise or decline - can be validly drawn when the meaning of 'poverty line' is changed such that the consumption standard is being altered over time.

When the consumption norm is held unchanged over time it means that the same definition of poverty line is applied for obtaining successive estimates. This is the logically correct method of comparison over time. Applying this method, which we may term the direct method, we find that poverty is very high, it has not declined but on the contrary has risen and the depth of poverty has increased over the 1990s in a number of states. This paper presents from the large scale NSS surveys from 1973-74 to 1999-00, the All-India direct estimates of rural poverty, namely the actual cost of accessing the nutrition norm and the percentage of persons below these spending levels. It also presents both the official and the direct estimate for the different states of India for the years 1993-94 and 1999-00, to show that a very large divergence has emerged. The conclusion is that a logically correct method of estimating poverty shows a trend, which is completely consistent with the other macroeconomic trends in the rural economy pointing to agrarian distress.

The main policy implications drawn from the analysis of the macroeconomic trends and from accepting the realistic direct poverty estimates, are that targeting the food subsidy makes little sense and that there should be a reversal to the system of universal access; that the steep fall in per capita food grains absorption, a major indicator of deepening poverty, requires to be reversed; and that the current Employment Guarantee Act needs to be seriously and urgently implemented for that purpose. The following sections amplify the arguments summarized above.

II The Meaning of Neo-liberalism as an Economic Policy Package

We have pointed out above that neo-liberalism entails a strongly expenditure deflating policy package at the macroeconomic level and India has been no exception. This proposition may seem strange at first sight since India has seen 6 to 7 per cent annual GDP growth rates. The overall growth rate can be misleading however, for it tells us

nothing about the sectoral composition of growth. It is perfectly possible for the material productive sectors to stagnate or decline while services are booming, and this has been the case with India's growth in the 1990s. More rapid structural shifts in the sectoral contribution to GDP, have taken place than in any previous period, and these shifts are by no means entirely of a desirable nature. The manufacturing sector's share in GDP has stagnated in the last 15 years while its contribution to employment has declined. The share of agricultural and allied activities has fallen sharply.

Agriculture is always a 'soft' target for the misguided deflationary policies which continue to be urged by the Bretton Woods Institutions, no matter how high unemployment and hunger might be. The impact of deflationary policies has been especially severe in India's agricultural sector which saw sharp reduction in public planned development expenditures in rural areas. In 'rural development expenditures' for the purpose of this paper, I include the five Plan heads of (a) agriculture; (b) rural development; (c) irrigation and flood control; (d) special areas programmes and (e) village and small-scale industry. All these expenditures are vital for maintaining rural productivity and employment.

Out of these the employment-generating programmes, had assumed a special importance from the drought year 1987 onwards. During the 7th Plan period marking the pre-reforms phase, from 1985 to 1990, an average of a 3.8 per cent of Net National Product was spent annually as Rural Development Expenditures (RDE) as defined above, with well-documented positive effects in raising non-farm employment and raising rural wages. From 1991 as contractionary Fund-guided policies started, as Table 2 shows, the share of RDE was cut sharply to below 2.6 per cent of NNP by 1995-56 and fell further to 1.9 per cent by year 2000-01.

Table 2: Reduction in Rural Development Expenditures under Economic Reforms, Selected Years 1985-90 to 2000-01

	1985-90 Average	1993-94	1995-96	1997-98	2000-01
1. Rural Development Expenditures as Per cent of NNP	3.8	2.8	2.6	2.3	1.9
2. Above plus Infrastructure	11.1	8.4	6.9	6.4	5.8

Source: Government of India, Ministry of Finance, annual *Economic Survey*, for years 2001-02 to 2003-04, Appendix Table S-44. 'Rural Development Expenditures' here are the plan outlays of Centre and States under the five heads of agriculture, rural development, irrigation and flood control, special areas programmes, and village and small-scale industry. Infrastructure includes all energy and transport including urban. Calculated from current values of expenditure and of NNP at factor cost.

Even though it was the agrarian crisis which had led to the fall of the NDA coalition at the May 2004 general elections, the assumption of power by the UPA government saw the deflationary hammer being applied once more by the new Finance Minister on agriculture with budget estimates of RDE for fiscal 2004-05 being much lower than the already low levels of the preceding years, and with cut by one-third in funding for the employment generation schemes. The simultaneous passing of the Fiscal Responsibility and Budgetary Management Act, 2004 underscored the strongly deflationist stance of government even in the face of rising unemployment. The gross fiscal deficit as percent of GDP has been brought down from 6.1 in 2000-01 to 4.1 by 2005-06 and is slated to be

further lowered to 3.8 per cent in 2006-07. This harsh contractionary policy has had nothing to do with any objective resource constraint - indeed with strong income shifts towards the already well-to-do, tax receipts have been buoyant and the tax-GDP ratio has been rising - but has simply reflected the government's acceptance of the deflationary dogmas of the Bretton Woods Institutions which advise expenditure reduction no matter how high unemployment might be and thereby greatly worsen the problems of unemployment and income loss, since the expenditure cuts have multiplier effects in reducing incomes and employment further. Indeed the expenditure-reduction prescriptions of the BWI are based precisely on the untenable assumption of full employment, for without this assumption they could not maintain as they do, the pre-Keynesian proposition that there is a fixed savings pool in the economy such that increase in public expenditure will necessarily 'crowd out' private investment.²

Total capital formation in agriculture continues to stagnate in India in real terms, with sharply reducing public investment not being compensated adequately by rising private investment. There is no economic rationale for believing that "public investment crowds out private investment" which is the common deflationist argument put forward for reducing the state's role in rural development. Precisely the contrary has been shown to hold for certain types of investment essential for an irrigation-dependent agriculture like India's such as, irrigation projects of all types. Private tube-well investment is profitable only where the water table remains high owing to seepage from state-built canal irrigation systems, and where community integrated watershed management (planting trees and using check-dams) is encouraged with state help. Private over-exploitation of ground water has now reached a crisis point in many states in India, with the water table falling rapidly and with even the richest farmers unable to reach water after investing heavily in deep bore-wells and submersible pumps. Other infrastructure investment such as, rural power projects, roads, bridges, school buildings, clinics and so on, are never undertaken by private investors but are vital for stimulating development and providing livelihoods both directly to those employed in building them and through the important multiplier effects of the increased incomes being spent on simple consumer goods and services in villages.

The net results of the unwise cut-back of public investment and in RDE has been two-fold - a halving of the rate of crop output growth and a collapse of employment growth. Both foodgrains and non-foodgrains growth rates have almost halved in the nineties compared to the pre-reform eighties, and both have fallen below the population growth rate even though this too is slowing down (Table 3). This has led to declining per capita output during the nineties, for the first time since the mid-sixties agricultural crisis which however had been short-lived, whereas per head agricultural output continues to fall today even after a decade. The Agricultural Universities had earlier played a major role in developing and helping to disseminate new crop varieties, and the cut in funding for research in these Universities by affecting the search for better rain-fed crop varieties, has also contributed to the deceleration in the growth of yields. With increasing use of land for commercial and residential purposes, the gross sown area in India has remained

² For a critique of the 'reduce the fiscal deficit' doctrine of the BWI and the theoretical premise of full employment on which it is based, see the discussion on balanced budgets and the Keynes - Kuhn multiplier in P. Patnaik 1999. For a brief discussion of the identity of the impact of balanced-budget doctrines of the Great Depression years and the present deflationary stance of international financial institutions (see U Patnaik, 2003).

static since 1991, so it is only through yield rise that output growth can be maintained and it is here that the failure is evident.

Table 3: Decelerating Growth Rates of Agricultural Output and of Population

Period	Foodgrains	Non-Foodgrains	All Crops	Population
1980-81 to 1989-90	2.85	3.77	3.19	2.1
1990-91 to 2000-01	1.66	1.86	1.73	1.9

Source : Govt of India, Ministry of Finance, Economic Survey, 2001-02, p.189. Note that slowing down of output growth is much steeper than slowing down of population growth implying falling per head output.

The combination of decline in state RDE and the near-halving of agricultural growth has produced a major crisis of rising unemployment. There is both fast growing open unemployment and fall in number of days employed of the work force during the economic reforms period. Even with constant labour coefficients (labour days used per unit of crop output) a near halving of employment growth was to be expected given the decline in crop output growth, but the decline in jobs has been even more as some mechanization and use of chemical weedicides rather than manual weeding, has led to falling labour coefficients over time.

The ratio of labour force to population, or the participation rate, has declined (lower participation rate reflects difficulty of finding work), the ratio of work force to labour force has declined because open unemployment has been growing at over 5 per cent annually (Table 4). The elasticity of employment with respect to output was 0.5 during 1983 to 1993-94 but has declined to zero taking the reforms period 1993-94 to 1999-00. Let no-one imagine that unemployed rural workers are migrating and finding employment in industry: there have also been substantial job losses in manufacturing during the reform period and the share of the secondary sector inclusive of public utilities, in total employment has fallen. The agricultural depression has reduced the share of agriculture in GDP from about a third at the beginning of the nineties to just over a fifth a decade later, but the labour force and population dependent on agriculture has hardly fallen and there has been a decline in real per head output. Thus, both the material productive sectors have stagnated or declined, and the only sector, which has ballooned in an abnormal manner,³ is the tertiary or services sector which now accounts for over half of GDP.

Table 4: Employment Decline in Rural India

	Year	Year	Year	Growth per Annum	
	1983	1993-1994	1999-2000	1983 to 1993-94 (%)	1993-94 to 1999-00 (%)
Rural					
Population, mn.	546.6	658.8	727.5	1.79	1.67
Labour force, mn.	204.2	255.4	270.4	2.15	0.96
Work force mn.	187.9	241.0	250.9	2.40	0.67
Unemployed mn. (2-3)	16.3	14.4	19.5	-1.19	5.26

Source: Govt. of India, Ministry of Finance, Economic Survey 2002-03, p.218.

³ A rising contribution of services to GDP from an initial situation of a high share of industry to GDP has been typical for advanced economies. India however is seeing a fast shift to services from a relatively low, initial share of manufacturing and mining output, less than 30 per cent of GDP, which is now down to about one-quarter. This shift to services reflects de-industrialization and worsening income distribution.

I have earlier written extensively on the fact that per capita foodgrains availability, which measures domestic absorption, has fallen steeply from 177 kg. annual level per head of total population at the beginning of the 1990s, to only 153 kg. annual average per head by the three year period ending in 2003-04, with over four-fifths of the fall occurring after 1998. This is the same very low level as prevailed fifty years ago, during the First Five-Year Plan period in the early 1950s. The present food grains absorption level is actually a little lower than the 157 kg. level seen as far back as 1937-41. Forty years of effort to raise foodgrains availability slowly from 152 kg. average during the First five-year Plan to 178 kg average by the three years ending in 1991, has been wiped out in a mere dozen years of economic reforms. The average Indian family today is absorbing 100 kg. less per year of food grains than in 1991, average calorie intake has fallen from already low levels, and since urban absorption and average calorie intake has risen, it is rural absorption which has fallen much more than the average.

This steep fall in foodgrains availability per head (see Table 5), is a highly abnormal trend which we do not expect to see in an economy where average per capita income is rising, nor has it been observed for any length of time in the past in this country after Independence: it is consistent only with worsening income distribution of a particular type, involving an *absolute decline* in incomes and purchasing power for a major part of the population (Patnaik, 2003). The foodgrains absorption figures are calculated from physical net output in tonnes, adjusted for stocks and trade, and have to meet all final uses in the economy—direct consumption as food, use as feed for producing animal products (a part of this is exported), and industrial use. The present level is one of the lowest in the world and only the Sub-Saharan African countries and the least developed countries have a lower level than India.

Table 5: Summary of Annual per capita Foodgrains Output and Availability in India, 1990-91 to 2002-03 (Three Year Average)

Three yr. Period Ending in	Average Population million	Net output per Head		Net Availability		Per Head Foodgrain	
		Cereals Kg.	Foodgrains	Cereals Kg.	Pulses Kg.	Kg./Year	Grm./Day
1991-92	850.70	163.43	178.77	162.8	14.2	177.0	485
1994-95	901.02	166.74	181.59	160.8	13.5	174.3	478
1997-98	953.07	162.98	176.81	161.6	12.6	174.2	477
2000-01	1008.14	164.84	177.71	151.7	11.5	163.2	447
2002-03#	1050.67	153.85	164.1	142.91	10.12	153.0	419
Individual Year							
2003-04*	1087.6	158.33	170.83	n.a.	n.a.	n.a.	n.a.
2004-05*	1107.0	151.21	162.35	n.a.	n.a.	n.a.	n.a.
Change in Capita Availability of Foodgrains, %							
Triennium ending 1991-92		Triennium ending 1997-98				-1.6	
Triennium ending 1997-98		Triennium ending 2002-03				-12.2	
Total Change, 1991-92 to 2002-03						-13.6	

Source: For output, trade and stocks, Reserve Bank of India, Report on Currency and Finance, various years; and Govt. of India, Ministry of Finance, *Economic Survey*, various years. For population, the annual compound growth rate of 1.89 per cent has been derived from the Census population totals for 1991 and 2001 and used to interpolate for inter-censal years. Before 1991 and from 2001 onwards, the population figures given in the *Economic Survey 2004-05* have been used.

Note that only the last triennium overlaps with previous one— as availability data for 2003-04 is not yet available, last triennium has been taken as 2000-01 to 2002-03.

* indicates provisional.

The major part of the decline of food grains absorption has come after 1998. The interested reader is referred to my earlier papers for a more detailed analysis which

locates the reasons for the decline, in the severe loss of purchasing power inherent in the unemployment –raising and demand-deflating policies detailed briefly above combined with exposure of our farmers to global price declines after 1996 as trade restrictions were removed (U. Patnaik, 2003, 2004, 2005). These were also added to by the attempt to cut the food subsidy by raising issue prices more than procurement prices which simply resulted in pricing out the poor from the PDS, and the final blow was the misguided ‘targeting’ of the PDS from 1997 under which access to cheap food was no longer universal and demand-driven but restricted to those arbitrarily defined as ‘poor’ by the government. The result was a massive fall in foodgrains sales from the ration shops, from 20 million tonnes in 1991 to only 13 million tones by 2001 while normally sales should have been rising as the population rose (Swaminathan, 2002).

To sum up this section, macroeconomic policies of expenditure *deflation* is the key to understanding the agrarian crisis, and the resulting loss of purchasing power or, in Keynesian terms, a severe squeeze on aggregate effective demand of the majority of the population, the key to understanding why such abnormal levels of public foodgrains stocks of 64 million tonnes, 40 million tonnes in excess of buffer norms, had built up by July 2002. These stocks were coming out of more and more empty stomachs.

Subsequent analysis of expenditure trends from the latest thin-sample rounds of NSS data confirm this analysis (see Sen and Himanshu, 2005) for they show that the lowest 40 per cent of persons ranked by expenditure levels had absolutely lower per capita real expenditure by 2001-02 compared to 1995-96 while the next 40 per cent had stagnant real income. In fact the real situation is worse because for the lowest deciles even this stagnant or reduced real expenditure and reduced food intake, is seen after they have incurred unrepayable debts, and in many cases further lowering of consumption has only been prevented by liquidation of assets including loss of land.

The government and the majority of economists have put forward a totally incorrect analysis of the rising stocks and falling availability. They closed their eyes to the falling purchasing power deliberately brought about by public deflationary policies and instead they put the blame on allegedly ‘too high’ minimum support price (MSP) which they claimed gave the ‘wrong signals’ to the farmers who therefore, produced more than the market required, and they advocated reduction of MSP. This fallacious argument ignored the fact that food grains growth rates had virtually halved, so that output per capita has been declining (owing to the investment and development expenditure cuts), and this should have led to the need for imports had demand been maintained at normal levels. The freeze on procurement price which followed this wrong analysis, when input prices have been rising, has generalized deflation further to include more farmers and added to the problem of deficient demand. Rather than generating demand by using food stocks for food-for-work programmes, the government exported 22 million tonnes of grains out of public stocks at a subsidized price during 2002 and 2003, which apparently was mainly used as animal feed abroad.

III Large and Growing Divergence between Direct and Official Indirect Poverty Estimates

As discussed in the Introduction, poverty studies in India since the 1970s, have been based on the use of a ‘poverty line’ expenditure level, defined as that particular observed level of expenditure per capita per month on all goods and services, whose food expenditure component provided an energy intake of 2400 kcal per capita in rural areas and 2100 kcal per capita in urban areas. Rural energy norms were set higher owing to the

hard physical labour that more rural workers perform compared to a higher proportion doing sedentary work in urban areas. Actual observed average calorie intake in rural India was also higher than average intake in urban India from the 1950s until the 1990s, after which with rural intake decline and urban intake rise, the position has been reversed by 1999-00.

All persons spending below the poverty line expenditure are considered to be poor. While Dandekar and Rath (1971) had adopted a uniform nutrition norm of 2250 calories per head, the Task Force on Projections of Minimum Needs and Effective Consumption Demand, constituted by the Planning Commission in 1979, did not find a uniform calorie norm to be suitable and suggested different norms for rural and urban areas. Using the Census data projected to 1982, the population was divided into sixteen groups defined by age, sex and activity, with calorie intakes recommended varying from 300 calories for children below 1 year to 3600 for a young man doing heavy work. The average norm was derived as a weighted average, and was 2435 and 2095 calories per person, rural and urban, rounded down to 2400 and up to 2100. These nutrition norms have been the accepted basis for poverty studies in India. This is a minimalist definition of poverty, since no norms are set for essential non-food items of spending such as, on fuel for cooking and lighting, clothing, shelter, transport, medical care or education. A household, which is observed to be above the poverty level expenditure so defined, satisfies only the nutrition norm and may not be able to access adequate amounts of other goods and services from its observed non-food expenditure.

The data base for estimating poverty has been the National Sample Survey Rounds on Consumer Expenditure which take the household as the sampling unit and carry out large sample surveys every five years with smaller samples being canvassed in intervening years. The NSS Reports present the distribution of persons by monthly per capita expenditure groups, and they also present the calorie intake per capita per diem by expenditure groups. The quantities of food items actually purchased are noted (as are farm-produced food items retained for consumption by farmers). These are valued at prevailing prices, and added to expenditure on non-food items to give the total monthly per capita expenditure. The different food items have specified calorie equivalents per gram, from which the calorie intake per day per capita is derived. Thus, the very derivation of per capita expenditure on food is from exactly the same data set on physical quantities, which gives the per capita calorie intake. There is a tight direct association between per capita expenditure and per capita calorie intake (see Table 6).

That particular total monthly per capita expenditure group whose food expenditure part met the calorie norms, was identified by inspecting the 28th Round NSS data relating to 1973-74, and the relevant expenditure was defined as the poverty line expenditure (However there is some doubt whether even the 1973-74 estimates are consistent with the declared norms, a matter discussed later). Often this expenditure is labelled poverty line income, and economists talk of 'income poverty' but this is imprecise, for we have no information on income, only on expenditure. It is quite possible that observed expenditure at or below the poverty line, is higher than income and is met through borrowing or asset-depletion by some households. For those spending above the poverty line level, income can be expected to exceed spending and there would be increasing savings. Large sample surveys on consumer expenditure are carried out by the NSS every five years, the latest published data being from the 55th Round relating to 1999-2000, from which the relevant information for All-India has been reproduced in Table 6 of this paper using two published Reports of the NSS.

Table 6: Percentage Distribution of Persons by Monthly Per Capita Expenditure (MPCE) Groups and Average Calorie Intake Per Diem, 1999-2000, All-India

Monthly per capita Expenditure Rupees	Average MPCE Rupees	Calorie Intake per diem per Capita	Per cent of Persons %	Cumulative per cent of Persons %
Rural				
Below 225	191	1383	5.1	5.1
225- 255	242	1609	5.0	10.1
255- 300	279	1733	10.1	20.2
300- 340	321	1868	10.0	30.2
340- 380	361	1957	10.3	40.5
380- 420	400	2054	9.7	50.2
420- 470	445	2173	10.2	60.4
470- 525	497	2289	9.3	69.7
525- 615	567	2403	10.3	80.0
615- 775	686	2581	9.9	89.9
775- 900	851	2735	5.0	94.9
900 & more	1344	3178	5.0	99.9
ALL	486	2149	99.9	
Summary				
470- 525 & less		2289 & less		69.7
525- 615		2403		10.3
615-775 & more		2581 & more		19.9
Urban				
Monthly per capita Expenditure Rupees		Calorie Intake per diem per Capita	Per cent of Persons %	Cumulative Per cent of Persons %
Below 300		1398	5.0	5.0
300- 350		1654	5.1	10.1
350- 425		1729	9.6	19.7
425- 500		1912	10.1	29.8
500- 575		1968	9.9	39.7
575- 665		2091	10.0	49.7
665- 775		2187	10.1	59.8
775-915		2297	10.0	69.8
915-1120		2467	10.0	79.8
1120-1500		2536	10.1	89.9
1500- 1925		2736	5.0	94.9
1925 & more		2938	5.0	100
ALL		2156	99.9	
Summary				
500- 575 & less		1968 & less		39.7
575- 665		2091		10.0
665- 775 & more		2187 & more		50.2

Source: National Sample Survey Organization (55th Round, 1999-2000) Report No. 471, *Nutritional Intake in India* for calorie intake data by expenditure groups and Report No. 454, *Household Consumer Expenditure in India - Key Results* for the distribution of persons. The calorie intake data refers to the 30 day recall so the distribution of persons by the same recall period is taken above.

A good idea of the current magnitude of head-count poverty can be obtained easily by the non-specialist without making any calculations at all, simply by inspecting the data in Table 6. Looking at the first, second and the fourth columns, 69.7 per cent or say seven-tenths of the rural population of India, spending less than Rs.525 per month per person, was below the average calorie level of 2403 (almost the same as the 2400 norm), which was obtained only by the next higher spending group of Rs. 525 - 615. Since the

lower part of this latter group, roughly half the 10.3 per cent of persons in this group or about 5 per cent, also obtained below 2400 calories, the actual total percentage of persons in poverty is about three-quarters. On plotting the data on graphs we obtain 74.5 per cent as the exact figure. Yet, the official Planning Commission figure of rural poverty from the same data is only 27.1 per cent! The difference between percentage of population in poverty obtained by direct inspection of the latest data, 74.5 per cent and the figure as given by the Planning Commission, 27.1 per cent is enormous. Nearly half of the rural population - 47.4 per cent or 372 million people - who are actually poor, are being excluded from the set of the officially poor (The direct estimate is without any adjustment for recall period change in the 55th Round, 1999-00; with adjustment the poverty percentage would be at least 77.5).

Again, from direct inspection of Table 6 we see that nearly 40 per cent of the urban population spending below Rs.575 per capita per month obtained less than 2091 calories (very close to the 2100 urban norm) which was the average for the next higher spending group. Since the lower half of this latter group also obtained less than 2100 calories, on plotting the graphs, the exact percentage in poverty is 44 per cent Yet the Planning Commission figure for urban poverty for the same year using the same data is only about half of this at 23.5 per cent.

As regards the graphs referred to above for obtaining the exact poverty estimates, we only need to plot two simple graphs for each region - rural and urban - from the Table 6 data to see what is going on. First, *a*) the ogive, which is the cumulative distribution of persons plotted against the upper-end value of each expenditure class - this tells us what percentage of persons is below any given expenditure level (column 5 against column 1) and second, on the same graph, *b*) the per capita calorie intake plotted against the per capita expenditure (column 3 against column 2) - this enables us to read off the calorie intake at any given expenditure level. Consider the three variables: (1) the poverty line expenditure, (2) the percentage of the population in poverty (3) the calorie norm. If we know the value of any one of the three variables, the corresponding values of the other two can be read off from the graphs.

The official rural poverty line of Rs.328 for 1999-00 corresponded to the poverty percentage of 27.1 in 1999-00 using relation (a), the ogive from the Table 6 data, and this is indeed the stated official poverty figure. Using the relation (b) from the same data, we find that only 1890 calories could be obtained at this poverty line, over 500 calories per day less than the norm. The true poverty line at which 2400 calories could be accessed however was Rs 565, and as high as 74.5 per cent of persons spent less than this amount - the correct estimate of poverty for 1999-00.

Why does the official poverty line come to less than three-fifths of the actual cost of accessing the nutrition norm and in what sense therefore, is it any longer a 'poverty line' at all? It is this unrealistically low official 'poverty line' which is giving rise to the low poverty estimate, which leaves out 47 per cent of the rural population who are actually poor. The basic reason for this very large official underestimation of actual poverty is that the Planning Commission has not been applying its own original nutrition norm directly to the current data but has been simply bringing forward the poverty line calculated for 1973-74, by using a price index. It is only in this base year, 1973-74, that what may be termed the direct method of applying the nutrition norm to the consumption data to obtain the poverty line at which the nutrition norm could be accessed, was actually followed (Even here there is some doubt about the actual norm applied, a matter we discuss later). Ever since then the method has been an indirect one of applying a price

index to this base year poverty line to bring it forward, without any reference to the actual current cost of obtaining the nutrition norm, information on which was available. At the indirect, price adjusted poverty line however, the nutrition norm can no longer be accessed. The crucial fact, which is not mentioned to the public, is that at this price-adjusted poverty line of Rs.328, food giving only 1890 calories daily could be purchased, over 500 calories below the RDA.

Rohini Nayyar (1991), discussing poverty estimates for the 1960s and 1970s, and Jaya Mehta and Shanta Venkatraman (2000) discussing the 50th Round, 1993-4, had already drawn attention to the inability of the price-adjusted poverty lines to capture the actual current cost of reaching the nutrition norm. The fact is also well known to the Planning Commission and to the individual estimators following the price-index method in more recent times. What these economists still do not seem to realize, is that the methodological basis of their estimates is thereby rendered incorrect and the inference they draw regarding change in poverty over time or regarding relative poverty across states, has no logical validity. As we will show in this paper, the All-India and state wise estimates of poverty obtained by the Planning Commission and by individual academics who follow the same method, cannot be validly compared over time and statements about rise or decline in poverty cannot be made. Nor at a given point of time, can the states be compared with respect to their extent of poverty.

The divergence between the official poverty lines and the actual cost of accessing the nutrition norm, was small to begin with but has been steadily widening as the base year gets further back in time. The rural poverty lines derived by bringing forward the base year, 1973-74 poverty line of Rs.49, came to Rs 86 in 1983, Rs.206 in 1993-94 and Rs. 328 in 1999-00. These official poverty lines are summarized in line 3a of Table 7. When we apply the CPIAL to the last figure to bring it to 2004 we get Rs.354, which a source in the Planning Commission has confirmed to me, is indeed the official poverty line for 2004. The NSS consumer surveys have thus been rendered irrelevant for deriving the official poverty lines. All that is used is the base year direct poverty line and the price index.

The NSS consumer expenditure surveys have been officially used, only to apply these independently calculated poverty lines, to the cumulative distribution of persons or the ogive, to arrive at the percentage of persons below these poverty lines. The poverty percentages so derived, shown in line Table 4a of Table 7, are 53.1 in 1977-78, 45.7 in 1983, 37.3 in 1993-94 and 27.1 in 1999-00. I have also used the small sample 60th Round data, Jan.-June 2004 and applied Rs.354 as the price-adjusted poverty line to obtain 21.5 per cent in poverty. (The 61st Round, the large sample, for the next year has been completed but the data will become available with a lag).

At these official poverty lines which give these percentages, we find by using the second graph we have plotted for each year, namely the relation between per capita expenditure and the per capita calorie intake, that the maximum calorie intake accessible per diem was 2170 calories in 1977-78 (230 calories below RDA), 2060 calories in 1983 (340 calories below RDA), 1990 calories in 1993-94 (410 calories below RDA) and 1890 calories in 1999-00 (510 calories below RDA). The calorie level accessible at the 2005-06 poverty line is likely to be 1800 or less, entailing a deficit of 600 calories or more per diem from RDA – we will know the exact situation when the data of the large-sample 61st Round become available. The last line of Table 7 shows the steadily increasing deficit from RDA of the energy intake at the official poverty lines for successive large-sample years.

Table 7 The Rural Poor as Percent of Rural Population in India

Round:	28 th 1973-74	32 nd 1977-78	38 th 1983	50 th 1993-94	55 th 1999-00	60 th 2004*
Direct method						
Poverty Line in Rs.: MPCE giving 2400 calories	56* (49)	67	120	325	565	n. a. (>600 likely)
Percentage of Persons below poverty line giving 2400 calories, %	72* 56.4	65.5	70.0	74.5	74.5 (77.5)#	n. a. (>80 likely)
Indirect Method						
Price-adjusted Poverty Line, Rs.						
a) Official	a) 49	56	86	206	328	354**
b) Taking base year spending at 2400 cal.	b) (56)	(64)	(98)	(235)	(374)	(404)
Percentage of Persons below price-adjusted Poverty lines, %						
a)	56.4	53.1	45.7	37.3	27.4	21.5**
b)	(72.0)	(63)	(54)	(49.2)	(39)	
Calorie 'norm' accessible at official Poverty Line						
a)	2200	2170	2060	1990	1890	n. a. (1800 likely)
Shortfall of Calorie intake a) from Nutrition norm RDA of 2400 Calories						
	-200	-230	-340	-410	-510	n.a (-600 likely)

Source: First line other than base year 1973-74, calculated from NSS Reports on Consumer Expenditure, 32nd, 38th, 50th, 55th and 60th Rounds., MPCE is Monthly Per Capita Expenditure in Rupees.

*As explained in the text, the actual norm applied in the base year 1973-74 is likely to have been 2200 calories given the official Rs 49 poverty line below which 56.4 per cent of the population lay, since the 2400 calorie norm is consistent only with a higher poverty line of Rs.56 giving a poverty percentage of about 72. The official values are 3a), and the 3b) values in brackets are calculated by author, taking the 2400 norm in base year and applying the same price index adjustment as in 3a). The corresponding poverty percentages are 4a and 4b.

Figures in brackets are rough adjustments for changed recall period

**Poverty line for 2004 obtained by applying the CPIAL to the 1999-2000 poverty line and the corresponding poverty percentage read from the ogive of schedule type I in the 60th Round.

Thus, the nutritional intake implied by the price-adjusted official poverty line has been steadily falling over the successive estimates. The poor are being counted not below an invariant standard but below a standard, which is undergoing a lowering over time. This very important fact, although it is well-known to the estimators, is never mentioned by them in their papers. The price index adjustment obviously has not only failed to capture the actual current cost of accessing minimum nutrition at each point of time, additionally the extent of failure has been increasing over time. It is not the case that the particular price index being used has a problem and there exists some 'ideal price index', which can capture the changing actual cost of accessing the required energy intake. Angus Deaton's exercise with alternative price indices produce even lower poverty estimates than the official one (Deaton b). As we will argue later the structural changes in the economy are such that no price index can adequately capture the altered set of choices that consumers face over time. The real question is, why use an indirect price index adjustment to a base year at all, with all its attendant problems, when current data are available which permit the direct estimate of poverty line every five years (At most, the price-index adjustment should be confined to the inter-quinquennial period and thus,

the base year should not be more than four years back at a maximum, before the next large sample data set become available).

This lowering of the nutrition standard over time inherent in the official method, is the reason for the observed 'decline' both in official poverty estimates, as well as, in the individual estimates published in EPW 2003 - which quite clearly is a spurious decline, for no valid comparison over time is possible when the standard is being lowered (or altered in any other way). To give an analogy, suppose we are watching an Olympic high jump event not directly but mediated through television, where the camera focuses only on the successive jumps. At the first try the jumper clears the bar by three inches, at the second try she clears the bar by six inches and at the third try she clears the bar by one foot. It is claimed that the performance has improved greatly over the successive tries and obviously everyone believes the claim. However without anyone's knowledge, the bar has been lowered by one foot for the second try compared to the first and again by one foot for the third try compared to the second. The actual situation is that the performance has worsened and the jumper is jumping nine inches lower at the second attempt and fifteen inches lower at the third attempt. Obviously the claim of 'improvement' is spurious and moreover it involves suppression of information since the fact of the lowering of the bar is kept carefully hidden from the public.

Official and individual claims of poverty reduction in the 1990s are spurious and arise from the clandestine lowering of the consumption standard, a lowering which is inherent in the official estimation method itself which has de-linked estimation from the nutrition norm after 1973-74. The strong word 'clandestine' is used advisedly because unfortunately, neither the Planning Commission economists, nor a single one of the estimators presenting their poverty estimate using the official price adjustment method, have bothered to mention the crucial fact of the lowered calorie intake corresponding to their estimates when publishing their papers, although they are well aware of it since exactly the same data set they are using for expenditure, also give the calorie intakes. As we have seen, the data on physical quantities of foods, gives the calorie intakes on applying the standard table of calories per gram for different foods; and exactly these same physical quantities are valued and aggregated to give the food expenditure, which is added to other spending to give the total expenditure. It is not proper academic procedure to use data selectively - to use the expenditure data while ignoring and never mentioning the associated energy intake, as is being done by those estimating by the indirect method.

The Planning Commission has never officially given up the nutrition norms on the basis of which rural and urban poverty was defined. The majority of economists in India believe that these norms are still being followed. The reality is however that the actual procedure of estimation has meant giving up not just these particular nutrition norms after 1973-74, but has meant giving up any nutrition norm whatsoever. There is not even any lower bound which is set to the fall in the energy intake corresponding to official poverty lines - for some states it has already fallen to 1500 calories or less by 1999-00 (see Table 8), hence single-digit poverty levels are being claimed although in reality poverty is very high. Thus, a completely different measure entailing a different definition of 'poverty' is being used, compared to that which is adhered to theoretically. This definition will logically lead to further absurd claims of great 'success' in poverty reduction when the official poverty estimates for all-India reach single digit levels as they will soon do. The real reason would be that the official poverty line is far too low for anyone except a few unfortunate destitutes and beggars to survive below it.

Even if the concerned economists making the estimates might have believed initially that price indices could capture the rise in the cost of accessing the nutrition norm, they no longer had any reason to believe it by the early 1990s. By then it was clear that much lower calorie intake than the RDA, could be accessed at official poverty lines. Rohini Nayyar in her careful doctoral study, *Rural Poverty in India* (1991) had clearly pointed out the sharply widening difference over time, between poverty percentages obtained by direct application of calorie norm to the data and the poverty percentages obtained by taking a base year poverty line brought forward using a price index, and had specifically concluded that the direct method of applying the calorie norm, was preferable to using the indirect price adjustment method.

Table 8: Planning Commission Poverty Percentage by States and Calorie Intake

	Indirect Estimate				Direct Estimate			
	1993-94		1999-2000		1993-1994	1999-2000	1993-1994	1999-2000
	Official Poverty at PL %	Calorie Intake at PL %	Official Poverty at PL %	Calorie Intake at PL %	< 2400 Poverty %	< 2400 Poverty %	< 2100 poverty %	< 2100 poverty %
All-India	37	1980	27.4	1890	75	74.5 (>77.5)	49.2	49.5 (>52.5)
East								
Assam	45.0	1935	40.0	1790	93	91	62	71.0
Bihar	58.2	2150	44.3	2010	73	78	51	53.5
Orissa	49.7	2230	48.0	2120	70	79	42.5	45.5
West Bengal	40.8	2080	31.9	1900	72	81	42.5	55.0
South								
Andhra Pradesh	15.9	1650	11.1	1590	84	84	56	62
Karnataka	29.9	1815	17.3	1600	75.5	82.5	57	50
Kerala	25.8	1625	9.4	1440	84	82.5	64	60
Tamil Nadu	32.5	1650	20.6	1510	87	95	77.5	76
West-Central								
Gujarat	22.2	1660	13.2	1680	83.5	85.0	64	68.5
Madhya Pradesh	40.6	2010	37.1	1850	72.5	78	47.5	57.5
Maharashtra	37.9	1820	23.7	1760	89.5	92	75	55.0
Rajasthan	26.5	2100	13.7	1925	46	52.5	26.5	27.5
North								
Punjab	12.0	1825	6.4	1710	52.5	58.5	30	36.5
Haryana	28.0	1990	8.3	1720	55	47.5	34	30.5
Uttar Pradesh	48.3	2230	31.2	2040	65.5	61.5	38.5	37.5

Source: As Table 6. For each state, on the same graph I have plotted a) the ogive or cumulative frequency distribution of persons below specified per capita expenditure levels, and b) the relation of per capita expenditure and per capita calorie intake. Calorie intake corresponding to the official estimates was obtained from these graphs. For 1993-94 the mid-point value of each expenditure class has been plotted against the per capita calorie intake as the arithmetic average was not available in the published tables - this implies that direct poverty is very slightly underestimated. For 1999-2000 arithmetic average by expenditure classes was available and has been used in deriving the direct poverty figures. This derivation is also available in R. Ram (2004). Figures in brackets for All-India, indicate rough adjustment for recall-period change.

The 1993 "Report of the Expert Group on Estimation of Proportion and Number of Poor", made two recommendations - that the practice should be discontinued, of blowing up the NSS fractile-specific consumption figures data by using the proportion of aggregate CSO consumption to NSS consumption, and it also recommended that state-specific price indices should be used to estimate the state poverty lines. The official estimates for all years after 1973-74, have been reworked according to these recommendations. But, unfortunately, it did not consider departing from the indirect method of price-adjustment in favour of the direct method for all previous estimates, nor

did it bring the base year itself for quantities consumed, forward to 1993-94 as it could have done (this would have meant a rural poverty line for 1993-94 of Rs.325 and not Rs.206, the price-adjusted 1973-74 poverty line – see Table 7).⁴

The poverty lines as calculated according to the recommendations of the Expert Committee, were thus de-linked from the necessity of satisfying any nutrition norm at all, but most academics, including most economists are totally unaware of this and so is the educated public. This *de facto* deviation from the original definition of poverty has far-reaching methodological implications, which have not been fully appreciated by the academic community. It renders logically invalid every attempt to compare the extent of poverty, both across states at a given point of time, as well as, over time both for individual states and at the All-India level. The precise type of the logical fallacy involved is the fallacy of equivocation, discussed briefly in the last section.

The only logically correct method is to apply the same consumption standard over time to obtain the actual changing current cost of accessing it. If we apply the official 2400 rural calorie norm we find that the true poverty lines at which this norm could be actually accessed, was Rs.120 in 1983, Rs.325 in 1993-94 and Rs.565 in 1999-00. The true poverty lines were higher than the official poverty lines by 40 per cent, 58 per cent, and 72 per cent at these dates. The percentage of persons below the true poverty lines were 70 per cent in 1983, 74.5 per cent in 1993-94 and without adjustment for recall period change, 74.5 per cent also in 1999-00 while with adjustment the last figure would be at least 77.5 per cent. Thus, poverty is extremely high affecting at least three quarters of the population and far from declining, it has been increasing (Table 7). Considering the persons below a lower nutrition level of 2100 calories, which gives an idea of poverty depth, the conclusion of increase in rural poverty in the 1990s does not change. They made up 52 per cent in 1977-78, 48.5 per cent in 1983, 49.2 per cent in 1993-94 and 49.5 per cent in 1999-00 without adjustment for change in recall period, and at least 52.5 per cent after adjustment.

Some authors have been misled by the repeated claims that the observed fall in the share of food expenditure in total expenditure over the successive Rounds, shows the operation of positive 'Engel effects' indicating people are getting better off. But they forget that while a fall in the food share of total expenditure is a necessary condition for people to be better off, it is not a sufficient condition. The food share of total expenditure will fall also when people are getting worse off and their income and expenditure is stagnant or falling. This is because under such conditions of stagnant or falling income, the minimum unavoidable non-food spending on fuel for lighting and cooking, health, debt service, transport to work and so on, which are becoming more expensive, will force reduction in the food expenditure and raise hunger. For over three-quarters of India's rural population it is such absolute decline in spending on food and rise in hunger which is associated with the falling food share. This proposition receives support from the fact that the share of spending on fuels and on 'miscellaneous goods and services' has risen further during the decade between the 50th and 60th Rounds. It is also supported by the calculations earlier mentioned by Sen and Himanshu (2005) using the thin sample data of the 56th to 60th Rounds, showing that the average real per capita total expenditure has declined for the lowest 80 per cent of the rural population. It is only for the top one-fifth

⁴ If the base year had been brought forward to 1993-94, the new poverty line of Rs. 325 adjusted by the CPIAL up to 1999-00 would be Rs.517, no doubt below the directly observed, correct poverty line of Rs.565 for that year, but not such a gross underestimate as the Rs.328 official poverty line. The extent of poverty corresponding to Rs.517 for 1999-00, is 68 per cent as may be checked from Table 6.

of the population that the falling food share is associated with increased real spending. We may add here, that real spending on food has declined much more than total spending has.

Many authors have pointed out that the estimation basis for the initial official poverty lines was itself opaque, since the calorie data for that year, 1973-74, were never published and the estimate was based on a limited nine-month NSS sample (Mehta and Venkatraman, 2000; Rath, 2003). As a check we find, plotting the NSS data for the earlier year 1970-71, which did give the calorie data and which have been reproduced in Nayyar (1991), that 72 per cent of the rural population was below 2400 calories, and 54 per cent was below 2200 calories in 1970-71.

This suggests that the official estimate of 56.4 per cent in poverty for 1973-74, was not of the right order of magnitude to correspond to the official norm of 2400 calories RDA. The period 1970-71 to 1973-74 was of rapid food price inflation, which gave rise to widespread unrest and to the Price Rise Resistance Movement led by Jaiprakash Narain. Inflation did not moderate until the draconian laws of the Emergency period 1975-78. It is most improbable that using the same norm of 2400 the poverty percentage could have declined to such a large extent over a mere three years from 72 per cent in 1970-71 to 56 per cent by 1973-74.

The official 56 per cent figure for 1973-74 while not at all consistent with a 2400 calorie norm, is entirely consistent with a 2200 calorie norm. Our hypothesis is that the initial official estimate itself was fudged, perhaps because the actual estimate of 72 per cent or more of the population in poverty corresponding to the recommended 2400 RDA, appeared far too 'alarming'. This would explain the non-transparency – probably quite deliberate – of the basis of the estimate, that earlier writers have noted. This also implies that the initial 'poverty lines' themselves are likely to have been underestimates for the 2400 norm since they actually corresponded to a lower norm. This is borne out by a quick check – in 1970-71, the expenditure enabling a rural person to access 2400 calories was Rs.40, and since the CPIAL rose by 40 per cent it should have been Rs.56 at least by 1973-74 and not Rs.49, the official figure. The same argument applies to the urban poverty line, which should have been higher than stated.

Any fudging of this kind always results in the estimators being hoist by their own petard. Initial poverty levels appear less alarming, but the subsequent rise in poverty applying the official nutrition norm, appears more alarming than it actually is – from 56 per cent in the base year to nearly 75 per cent by 1999-00 while the actual increase is likely to have been from around 72 per cent to nearly 75 per cent (and to at least 77.5 per cent with adjustment for recall period change in 1999-00). In Table 7, line 3b, we give in brackets below the official poverty lines, the price-index adjusted poverty lines appropriate for a 2400 calorie norm in the base year which cost Rs.56 and not Rs 49, and in line 4b, the corresponding poverty percentages. The difference by 1999-2000 is quite large – the poverty line should have been Rs.374 and the corresponding poverty percentage 39 and not 27, even using the faulty price adjustment method, if the 2400 norm had been actually applied in the base year.

The official procedure of simply bringing forward the base-year poverty line, amounts to computing a Laspeyres index *with the base-year quantities assumed unchanged* and adjustment being made only for price change. A good survey of the price-index adjustment method and the methodology advised by the 1993 Expert Group is available in S. Rath (2003). Most of the individual estimates, which arrive at similar or even lower poverty estimates than the Planning Commission, were presented at a World

Bank sponsored conference in 2002 (the authors include A. Deaton; K. Sundaram; S. D. Tendulkar; S. Bhalla; G. Dutt; V. Kozler and M. Ravallion) and these papers were conveniently collected in a special issue of the *Economic and Political Weekly*, January 2003 which carried the tendentious legend on the cover, 'Poverty Reduction in the 1990s'.

As already noted, no mention is made by the Planning Commission and by individual estimators making the claim of poverty reduction in the 1990s, to the fact that at their poverty lines by 1999-00 a person could access at most an energy intake 510 calories per day below the Required Daily Allowance (RDA) of 2400 calories, and nor is this fact ever mentioned to the public when poverty estimates are quoted. The dilution of the consumption standard for All-India, large though it is, however does not prepare us for the truly heroic reduction of the consumption standard inherent in official poverty estimates for many individual states, owing to the extremely low state-specific poverty lines being calculated and applied, which are much lower than the already unrealistically low All-India poverty line.

For example we can see from the basic data, which is available in the same format for each state as for all-India, that the calorie intake accessible to the rural consumer at the official 'poverty line' of Rs. 308 per month (or Rs.10 per day) for 1999-2000 in Tamil Nadu, was only 1510, a full 900 calories below RDA while in Kerala it was 1440 calories, nearly 1000 calories below RDA (See Table 8). At some level simple common sense appears to have been abandoned by the estimators. Since we are not talking of historical data, the current cost of living is known to the estimators from their own daily experience. It is strange that any economist can seriously propose that Rs.10 per day even in an Indian village can meet one person's expenditure on all food and non-food requirements (and this is inclusive of the value of farm-produced output which is consumed). In reality it will buy just over one kilogram of rice in the open market, or one litre of bottled drinking water. For Andhra Pradesh the 1999-2000 official poverty line was even lower at Rs.263 per month or Rs.8.7 per day. Only about one-tenth of the population was found to live below this spending level, at which they could access at most 1590 calories per day. The fact that any persons are to be found at all at such extremely low levels of spending is surprising; we may imagine how much more adverse their morbidity and mortality rates would be in relation to already adverse average rural levels. These unfortunate persons would be on their way to early death.

The official and individual poverty estimates would certainly be much more widely and sharply questioned than they are at present, if it was generally known that the nutrition norm has been abandoned, and hence the consumption standard corresponding to official poverty lines is being quietly lowered over time, and lowered to widely different degrees across states, owing to the actual estimation method which is being followed. Assertions about alleged decline in poverty, based on such undesirable and non-academic practices, once these practices are understood, are bound to be discredited. For it is only owing to the de facto but unstated drastic dilution of the energy intake norm over time, that the poverty percentage for some of the states mainly located in South India, with the highest levels of actual poverty of over 70 per cent, are stated to be below 15 per cent.

There is a debate among the academics following the official, indirect method, that owing to change in the recall period during the 55th Round, 1999-2000 compared to earlier Rounds, actual expenditure is overstated in every expenditure class, and hence the distribution of persons by expenditure classes has been affected. Making the required

adjustment for comparability alters the distribution slightly and raises the 27 per cent below the Rs.328 official price-adjusted poverty line, by another one per cent according to Sundaram and Tendulkar (2003), and by three per cent according to Deaton (2003a). If these adjustments are correct, quite obviously, the percentage of persons below the directly observed poverty line of Rs.570 would also rise, to roughly an equal extent if we assume a uniform rightward shift of the relevant ogive. The already large difference between the indirect official estimate and the direct estimate would increase further. Thus all those with less than 2400 calories intake per diem, in 1999-2000 would be at least $74.5 + 3 = 77.5$ per cent of rural population, which is a rise compared to 74.5 per cent in the 50th Round, 1993-94. Similarly those below 2100 calories would rise from 49.5 per cent to at least 52.5 per cent.

The lack of comparability arising from alteration in the recall period however, is of trivial importance, lowering the official estimate at most by one to three per cent of population, compared to the fundamental problem of lack of comparability arising from the unstated alteration in the consumption standard inherent in the indirect method all these estimators uncritically use, which as we have seen, lowers the official estimate by 47 per cent of the population to only 27.4 per cent compared to the true estimate of 74.5 per cent.

In Table 8 we have given the direct estimate for 1999-2000 unadjusted for recall period, as well as, the roughly adjusted direct estimate in brackets below. The main analytical point being made in this section, focuses on the mistake involved in the indirect method itself which is leaving out nearly half the actually poor, and this basic problem with all indirect estimates not only remains but gets further aggravated, whenever adjustments are made by the estimators on account of altered recall period. It may be noted that with the adjustment for recall period, they are leaving out more than 50 per cent of the actually poor rural population from their set of 'the poor' while without the adjustment, they were leaving out 47 per cent of the population.

IV The Fallacy of Equivocation in the Official Method

The fallacy of equivocation' is a logical fallacy, arising from a specific type of verbal fallacy, in which the same term is improperly used with two different meanings in the course of the argument to draw the inference, which therefore, is not deductively valid. Modern books on logic follow Aristotle's classification of fallacies supplemented by recent analysis (Aristotle, 1866). They usually give the students examples of the fallacy of equivocation, which are quite transparent, in that it is obvious from the context of the word or phrase used, where the fallacy lies. Such an example of the fallacy of equivocation is the following:

"The Professor has been delivering her address for one hour to the gathering of students. Therefore, every student knows the exact address where she lives."

In this sentence it is clear that the term "address" is being used in two quite different senses in the premise and in the conclusion - 'address' in the sense of speech, and 'address' in the sense of place of habitation. There is *equivocal* use of the term, so the inference 'every student knows exactly where she lives' is not true.

Fallacies of equivocation in economics are more difficult to spot than in the above simple example. Intelligent people who are not specialists, do not scrutinize arguments by economists carefully (and nor do fellow economists not directly working in that particular area) because they trust the specialists at the intellectual level and so tend to take it for granted that terms which express concepts, must be correctly used by these

trained professional scholars. This is a reasonable expectation but unfortunately it is by no means always satisfied, as the official method of poverty estimation and the uncritical following of the same method by individual economists following the 1993 Expert Group Report, shows.

The official poverty estimation method discussed in the previous sections provide an excellent example of the fallacy of equivocation. The issue turns on declaring a particular concept and definition of the term 'poverty line expenditure' and applying it in a particular year, but then using a completely different definition of 'poverty line expenditure', and improperly drawing the inference that 'poverty' has declined. The fallacy of equivocation thus arises because the term 'poverty line' is used in two different senses in the course of the same argument, so the inference about change in poverty, is not true. The fallacy has been committed by the Planning Commission in India since 1973-74, by the 1993 Expert Group which recommended continuing with the same fallacious method and by a number of individual economists following the procedure advised by the 1993 Expert Group.

Some academics try to rescue their erring peers by saying that the *de facto* norm has been lowered a bit from the *de jure* one, and it is not such an important matter to make a fuss about. They point out that bodies like the Food and Agriculture Organization, have been suggesting of late, lower than 2400 calories RDA – the figures being 2110 calories for south Asia and an even lower level of 1810 for India as a minimum. It is indeed a fact that, having signally failed to reduce poverty itself, all international bodies which talk of poverty reduction are lowering the nutrition norms instead and thereby sanitizing their global poverty estimates to lower and less embarrassing ones.

But no international body has said, or can ever say that 1400 to 1600 calories are acceptable nutrition norms. Not even the late P.V.Sukhatme who was a vigorous campaigner for a less than 2400 calories norm, would ever have agreed that a 1700 calories or less daily intake per capita for any population, was reasonable – he himself had used a 2200 calories norm in one of his own estimates (Sukhatme, 1971). These sub-human energy intake levels of 1700 calories and less however, by 1999-00 are associated with the official poverty lines for many states (Andhra Pradesh, Gujarat, Kerala, Tamil Nadu) while Punjab and Haryana are very close with 1720 calories or less being accessible at their official poverty lines.

Drastic lowering of the calorie intake owing to low poverty lines are necessarily also implied in the same procedure followed by the individual academics writing in *EPW 2003*. Thus, Angus Deaton calculates, using his own price indices, a All-India rural poverty line of Rs 303 per month for 1999-00, even lower than the official Rs.328, and thereby arrives at a rural poverty percentage of 21.6, lower than the official 27.4 per cent (Deaton, 2003b). He does not mention however that at his poverty line of Rs.10 per day, equal to 22 US cents per day, the calorie intake per diem accessible is only 1800.

The fact of the matter is that once the nutrition norm is abandoned owing to following the faulty indirect estimation procedure, there is not even a lower bound which is set to the extent of decline in the energy intake accessible at the poverty line. 'Poverty' so estimated will officially disappear even when it is actually high and rising, simply because hardly anyone can survive at the sub-human poverty lines of the Planning Commission and the equally low poverty lines of other economists or of the World Bank. The argument that for international comparison, the already very low one U.S. dollar a day poverty line should be further adjusted downwards to only one-quarter to one-fifth, according to the varying purchasing power of developing country currencies, makes no

economic sense. Even the reverse adjustment to the one-dollar poverty line, namely taking a multiple according to purchasing power, would not give us anything but a travesty of a poverty line for the U.S. Thus, today, one U.S. dollar when spent within India buys exactly as much as Rs.44.33 does, given the exchange rate of Rs. 44.33 = US \$ 1. While the purchasing power of the U.S. dollar is about a quarter in the U.S. compared to its purchasing power in India, surely it is not the case that \$ 4 per day, or less than \$1500 per year, would be a reasonable per capita poverty line for the USA. Economists need to re-think the logic_ or lack of it _ behind deflating the one-dollar measure.

It is the state-wise estimates in India which really bring out most starkly, how the price-index adjustment procedure has led to a most bizarre and arbitrary variation of the calorie intake levels corresponding to the official 'poverty' estimates for states. For each state the data are available in published form and can be put in the same format as the All-India data of Table 5. I have plotted, for each state and for each large-sample year after 1973-74 that the nutrition data were available, relation (a), the ogive, as well as, relation (b) between per capita expenditure and per capita calorie intake. This enables us to obtain the calorie intake accessible in each state at the Planning Commission's state-specific poverty line. Table 8 gives the data only for the two latest Rounds. We can see the amazing range of state-wise variation of the calorie intakes accessible at official poverty lines in 1993-94, from 1625 calories in Kerala to 2230 calories in Orissa, with the All-India figure standing at 1980.

By 1999-00 there is further decline in the calorie intake which can be accessed at the official price-adjusted poverty lines, in every state except Gujarat: the range now being from 1440 calories in Kerala to 2120 in Orissa with the All-India figure dropping further to 1890. The other Southern states also have extremely low official poverty lines, at which the calorie intakes are, 1600 in Karnataka, 1590 in Andhra Pradesh and 1510 in Tamil Nadu and the corresponding poverty estimates are accordingly pushed down to very low levels. The official position is that the Southern states have reduced poverty to 10 per cent (Kerala) to 20 per cent (Tamil Nadu) of the population and are much better off than are states like Bihar, Orissa, West Bengal or Uttar Pradesh where officially measured poverty is 32 per cent (W. Bengal) to 48 per cent (Orissa). Such a conclusion is incorrect because it makes no sense, as the official method does, to compare the numbers of persons with intake below 1600 calories and less in the Southern states with the number of persons with intake below 2000 calories and more, in Bihar, Orissa, West Bengal or Uttar Pradesh.

The official estimate of poverty for Orissa was 48 per cent, over four times higher than official poverty estimate for neighboring Andhra Pradesh at only 11 per cent. But how can we possibly validly compare and infer that Orissa was poorer than Andhra Pradesh once we know from Table 7, that the officially poor in Andhra Pradesh are all those persons consuming below 1590 calories while the officially poor in Orissa are all those consuming below 2120 calories? In fact the actual poverty in Orissa (persons accessing less than the RDA of 2400 calories) was lower than in Andhra Pradesh and poverty depth was also substantially less, those accessing below 2100 calories being 46 per cent compared to 62 per cent in Andhra Pradesh. Similarly the 13 per cent official poverty figure for Gujarat cannot be validly compared with the 44 per cent official poverty figure for Bihar and the former state said to be less poor, when we see that the calorie intake standard has been pushed down to 1680 in Gujarat compared to 2010 in Bihar. In fact actual poverty incidence in Bihar was less than in Gujarat and poverty

depth was also less as the last two columns show. The official poverty estimates are simply not comparable across states just as they are not comparable across time.

The conceptual confusion surrounding the poverty debate has been compounded by many authors who talk of 'calorie deprivation' and 'income poverty' as though they are two separate concepts. As argued throughout this paper, and it is a point worth re-stating, there do not exist two different concepts of poverty but only one concept, using a nutrition norm, though there exist two different statistical methods, of which the price-adjustment method is highly problematic. The official definition is based as we have seen, precisely on the *concept* of 'calorie deprivation' ascertained by direct inspection of the data on the distribution of persons by expenditure levels and the corresponding energy intakes, and the poverty line is simply the expenditure at which the stated nutrition norm could be accessed. The problem has arisen because of the subsequent unwarranted switch to an estimation *method* which has abandoned the nutrition norm completely by adopting a different implicit definition of poverty line, namely a price index adjustment to the 1973-74 poverty line. This switch to a different measure has entailed a steady decline in the actual average energy intakes accessible at official poverty lines and rendered the poverty estimates incorrect, as well as, non-comparable over time. The de-linking of the official and individual academics' estimation method from the nutrition norm, combined with state-specific poverty lines, has led by 1999-2000 to the most bizarre outcome in terms of widely differing extents of lowering of the official poverty lines and hence of the consumption standard below which the poor are counted, ranging from 1440 calories per diem in Kerala, nearly 1000 calories below RDA to 2120 calories per diem in Orissa, 280 calories below RDA.

By the 61st Round 2205-06 the calorie intake corresponding to the new official poverty lines in the Southern states would be further lowered to between 1300 and 1450. Punjab and Haryana the most prosperous states in rural India, have been experiencing serious problems with the loss of an internal market to the tune of 26 million tones of foodgrains owing to the sharp fall in per capita foodgrains absorption in the country following income-deflation, shown in Table 5. Poverty has been made to nearly disappear in Punjab and Haryana however, because their official state-specific poverty lines are so low that only those able to access less than 1720 calories are being counted as the officially poor. The actual situation is disturbing. In both Punjab and Haryana over half the rural population is in poverty and in Punjab the depth of poverty has increased (Table 8).

The picture with respect to actual poverty is fully consistent with the adverse macroeconomic trends in the rural economy in terms of rising unemployment and falling foodgrains absorption discussed in the first section. In only 4 states out of the 15 major states of India (Assam, Kerala, Haryana and Uttar Pradesh) has directly estimated rural poverty fallen slightly between 1993-94 and 1999-00 as Table 7 shows, while in 11 of the remaining 12 states poverty has risen over the period. It must be remembered that we are making no adjustment for the change in recall period and the rise in poverty in these 11 states would be greater if this was done. In the remaining state, Andhra Pradesh poverty is high and constant at 84 per cent over the period, but poverty depth has increased, since the percentage of population below 2100 calories has risen. Karnataka registers moderately lowered poverty depth despite rise in poverty.

The only state in the country which has reduced poverty depth very substantially despite overall poverty rising a bit, is Maharashtra where the percentage below 2100 calories has fallen drastically from 75 to 55 while the below 1800 calories percentage

(not shown), has also fallen from 38 to 26. This undoubtedly is the positive result of Maharashtra's long-standing employment guarantee scheme and is a good augury for the current National Rural Employment Guarantee Act, 2005 provided it is properly implemented.

The rise in poverty in West Bengal might surprise some given the positive effects of land reforms and revived functioning of panchayats in that state since 1978. In fact between the 32nd Round, 1977-78 and 50th Round, 1993-94 there was a large drop in poverty in West Bengal, the percentage of persons with intake below 2400 calories declining from 84 to 72, and also a big drop in poverty depth, the percentage of persons below 2100 calories declining from 67 to 43 while the below 1800 calories percentage also declined from 40 to 17 (The 1977-78 and 1983 data for states have not been presented here since it would lengthen the paper inordinately). Some of these gains have been reversed by 1999-00: thus, the percentage below 2100 calories has risen again to 55 and the below 1800 calories percentage to 22, which is certainly a disturbing development.

It must not be thought that all economists have been following the fallacious official method recommended by the 1993 Expert Committee which has resulted in the contretemps of drastic underestimation of poverty and arbitrary variations in poverty across states, in the official estimates. There are a number of academics who are not only critical of the official method but who have rightly put nutrition back at the centre of their analysis of poverty. However they have followed a different direct poverty estimation route, as compared to inspecting current NSS data – the method we have followed. They have estimated the minimum cost of accessing the calorie RDA on the basis of current nutrient prices, and thus, have obtained normative food expenditure. By comparing with the actual expenditure on food in the NSS, they arrive at the percentage of persons failing to reach the RDA and this is 66 per cent at the All-India level for the 55th Round (See Coondoo, Majumdar, Lancaster and Ray 2004, Ray and Lancaster 2005). Subramanian (2005) has used indirect method base years closer to the present, as well as, the direct method we use, to see how the trends in poverty behave.

J.V.Meenakshi and B.Viswanathan have used the technique of kernel density functions to estimate the distribution of persons by calorie intake (which is not available in the published NSS Reports) and have usefully juxtaposed the high percentages of persons below different calorie intake levels and the low official poverty estimates. However their method of obtaining the calorie ogive somewhat overestimates direct poverty and its depth, since there would be many persons with high incomes who have reasons to voluntarily reduce calorie intake (racing jockeys, models) or who are sick: their low calorie intake does not arise from lack of income to spend – in short, low calorie intake is a necessary, but not a sufficient index of poverty. We are not interested, when we estimate poverty, in including high-income but low energy intake cases as these authors' method is doing. The converse is not likely to be true – there may be some, but not too many people with high calorie intake at lower than average levels of income and expenditure. For this reason in our view it is preferable to use our simple method of taking the relation between per capita expenditure and per capita calorie intake in every large sample set, to ascertain direct poverty levels as in Table 7 and 8 of this paper. We find that six states in India had a third or more of population below the 1800 calorie norm, while Meenakshi and Viswanathan's Tables show eight states to be in that position, which we think is an overestimate. It may be noted that the authors treat official

estimates uncritically and do not give the energy intake levels corresponding to the official poverty lines.

Why has the official method increasingly understated the actual incidence of poverty until it has reached such an absurd extent? As we have seen, price index adjustment to a base year poverty line cannot capture the actual changing cost of accessing the energy RDA over time. This is not entirely because the particular price index which is used has a problem, and there exists some other, ideal price index which would do the job. Altering the weighting diagram of the consumer price index for agricultural labourers (to take account of some items like spending on healthcare and utilities which are now relatively more costly but have a negligible weight) would certainly help a bit, but not much. No price-index applied to a fixed consumption basket, which goes back as far as 33 years, can reflect important non-reversible structural changes taking place in the economy over time, which are responsible for changing the actual consumption basket such that there is a much higher cost of accessing the minimum energy intake.

The official position in adopting a fixed basket of commodities actually consumed over three decades ago, amounts to saying that, if people consumed the same goods in the same amounts in 2004 as they did in 1973-74 they would be able to satisfy the original calorie norm at Rs 354 per month. They actually 'choose' today to consume a different basket at which they are not satisfying the nutrition norm, but that is their problem. The implicit assumption in this position is that all actually observed consumption baskets are *voluntarily chosen* so the lower calorie intake associated with the official poverty line is also an outcome of voluntary choice. However this is not a reasonable position. To give an analogy, it is like telling a 32 year old person that he has the choice to be conventionally clothed by buying the mere one metre of cloth that was needed in 1973-74, to clothe the six month old baby he was then. Suppose one metre of cloth cost Rs. 10 then, and the Planning Commission hands him a perfect price adjusted Rs. 70 for buying one metre of cloth today. Obviously the irreversible changes in the person over time means that the choice of being properly clothed with one metre no longer exists, no matter how perfectly the price index captures higher price. At this unchanged real expenditure on cloth, the consumer will be semi-naked and it would be most unreasonable to say that it is 'voluntary'.

Of course, this is only an analogy, the point of which is to stress the irreversible structural changes which force an alteration of choices. The implicit assumption of voluntary choice ignores the irreversible changes which are taking place in the economy over time which have altered the set of choices available, especially to poorer consumers. Many of these changes by their very nature are not capable of being captured by any price index however well-constructed, because after all the quantity weighting diagram of the price index cannot be changed ever year whereas many long-term and shorter term factors are changing the economic environment. The long-term changes include a higher degree of monetization of wages and of inputs and reduced common property resources, while more recent changes after economic reforms started 15 years ago, include rapidly rising higher cost of public utilities and of health, as governments withdraw from their responsibilities and privatize essential services.

Over the last three decades there has been substantial monetization of the economy. Wages which used to be paid in kind as grain or meals, valued at low farm-gate prices in earlier NSS Rounds, are now paid in cash which the labourer has to exchange for food at higher retail prices, and so can buy less food for a given real income (Suryanarayana,

1996). Common property resources and gleaning rights for the poor have disappeared over the last three decades (Mehta and Venkataraman 2000); that part of crop-straw, fuel-wood and fodder which was earlier gleaned, gathered or accessed as common property (only partly valued in the NSS data, and valued at low farm gate prices), now have to be purchased at retail rates, restricting the ability of the poorer population, to satisfy basic food needs out of a given real income and leading to the observed energy intake decline. The staple food grains and fuel-wood or other fuels are obviously, jointly demanded since no one can eat raw grain, and with a real income which is constant or declining, a part of expenditure on grain has to be enforcedly reduced to purchase fuel. To this we have to add, owing to the neo-liberal economic reforms, the higher costs of utilities like power and water as state funding is reduced and some services are privatized, as well as, higher transport, health and education costs as 'market pricing' replaces state funding and subsidies.

These arguments receive support from the fact that while in 1993-94, at the official poverty line, 6 per cent of spending was on 'fuel and light' and 13.1 per cent was on miscellaneous goods and services (which include medical services, transport, education and rent), when we check the 60th Round, 2004 data we find that for the expenditure group Rs.340 to 380 which contains the price-index adjusted poverty line of Rs. 354, the share spent on fuel and light was substantially higher at 10.9 and the share spent on miscellaneous goods and services was also higher 15.3 per cent. Thus from 19.1 per cent, in 1993-94, within a decade as high as 26.2 per cent of spending was being allocated to these heads at the poverty line. A mere Rs.218.5 per month could be spent on food which comes to a real expenditure of Rs.126.5 at 1993-94 prices, considerably less than the Rs.143.1 spent on food at the official poverty line of 1993-94.

Further, since 1991 the Indian agricultural economy has undergone the impact of the deflationary macroeconomic policies discussed in the first section of this paper, entailing large cuts in development expenditures, reducing the level of activity and raising unemployment. Many years of mass demand deflation led to a drastic lowering of the inflation rate by the end -1990s, and even in the severe drought year 2002-03, agricultural prices hardly rose since distress sales ensured easy market supplies, and with lower output demand was further compressed. As may be checked from the line 3a of Table 7, the rise in the official poverty line which reflects the rise in the Consumer Price Index for Agricultural Labourers, was 60 per cent between 1993-94 and 1999-00 but has dropped sharply to only 8 per cent rise between 1999-00 and 2004. Neo-liberal income and employment deflation has eventually resulted in price deflation in agriculture.

The official price index adjustment method becomes even more inappropriate for assessing change in poverty in such a deflationary situation. The implicit assumption behind price-index adjustment is that price rise is bad and price fall is good for the poor. But in recent years the drastic lowering of inflation itself has been the result, of the output growth rate falling yet still staying ahead of demand, because aggregate demand itself emanating from the rural masses has fallen even faster than has output. Any benefit for the net food purchasers, is more than swamped out by fast rising unemployment. The numbers of the actually poor (below any given calorie norm) rises in such a deflationary situation.

In fact the current situation is even worse than the calorie intake data alone indicate, because the observed falling calorie intakes are *after* rising indebtedness and asset loss by the farmers and labourers, who are trying to stay alive by these means as their incomes fall; without such debt and asset changes the flow variables like energy intake would

have been even worse. The 59th and 60th Rounds of the NSS, covering 2002-03 and Jan.-June 2004, were designed to provide a quick 'situation assessment' of the condition of farming families, given the widespread and continuing problem of many thousands of farmer suicides arising from indebtedness since 1998. These surveys show a substantial rise in high-cost debt from private sources, and rise in landlessness. The official method of price-index adjustment however not only fails to capture rising poverty but shows the opposite of the real trends. The majority of our economists are still caught in the conceptual framework appropriate to the expanding real economy of the 1980s, whereas economic reforms are above all deflationary and unemployment –creating in the material productive sectors. They should study the economics of the Great Depression to see how deflation actually operates.

The solution as regards poverty measurement lies in using simple, direct and transparent indices of poverty and the minimum use of complex, indirect and opaque measures, however enamoured professional economists might be of the latter. The current cost of the current consumption basket by different expenditure fractiles, as in Table 6 will become available soon for year 2005-06 from the NSS 61st Round, and should be immediately used to calculate energy intakes for the different fractiles. Food grains absorption per head, calorie intake per head, whether the family resides in hard-roofed or thatched structures, yardage of textiles consumed, use of electric power – these are some of the indices which will give a clear idea of poverty and its trends over time.

V Concluding Remarks

When actual rural poverty is so high as nearly four-fifths of the population, and poverty depth is increasing with a higher proportion of people being pushed down into lower nutritional levels, there is no economic rationale for continuing with a targeted public distribution system. Indeed as I have long argued, apart from the deflationary policies and exposure to the falling global prices, another reason for the denial of affordable food grains to the poor has been targeting using the arbitrary official poverty estimates. The reversal to a demand driven universal PDS is essential for rectifying the initial mistake made in 1997.

But a demand driven universal PDS will work well only if mass purchasing power which has been greatly eroded over the last fifteen years, is restored through the implementation of a properly funded National Rural Employment Guarantee Act. The Act has been passed and implementation has started from Feb 1, 2006. Within a month, 4 million persons have already registered to offer themselves for work. But the scheme cannot be said to be properly funded at all. A number of economists had pointed out that between Rs. 25,000 crores to Rs.30,000 crores was the order of annual expenditure required to give a genuine boost to employment and incomes after taking all multiplier effects into account. This could have been easily undertaken since tax receipts even at unchanged tax rates, have been buoyant, owing mainly to the rich getting very considerably richer in recent years. But those controlling the government's finances have already demonstrated their lack of concern for dealing actively with the agrarian crisis. All pre-existing employment creating programmes such as, SGRY, JRY ⁵and all food – for –work programmes which together had accounted for Rs 11.7 thousand crores of the central government's expenditure in 2005-06, have been subsumed under and merged with the National Rural Employment Guarantee programme in the February 2006 budget

⁵ SGRY is Sampurna Grameen Rozgar Yojana, JRY is Jawahar Rozgar Yojana.

proposals for fiscal 2006-07, and the total allocation to this is a mere Rs12.9 thousand crores, exactly one-tenth higher than in the previous year. This is in accordance with the prevailing deflationist sentiments of those controlling the government's finances and seeking to implement the BWI directives to reduce the fiscal deficit, but this continuing deflationist stance is detrimental to the effective implementation of the Act. The prognosis therefore remains far from encouraging: the agrarian crisis is not being addressed actively and the trend of increasing poverty depth is unlikely to be reversed unless public pressure is mounted to increase the funding of the NREG substantially to implement the Act.

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