Utsa Patnaik*

Theorizing Poverty and Food Security in the Era of Economic Reforms

Introduction

The correct theorizing of the questions of food security and poverty has become particularly important at the present time, which is one of rapid changes in the economic environment in which small producers including farmers and workers are living. In a poor developing country, the incidence of poverty is very closely linked to the availability of food, in which the staple food grains still remain predominant, accounting for three-fifths of the daily energy intake of the population. The measurement of poverty in India has traditionally adopted a nutritional norm specified in terms of an average daily energy intake measured in calories. The National Nutrition Monitoring Bureau has informed us that

> the NNMB has consistently confirmed in successive surveys that the main bottleneck in the dietaries of even the poorest Indians is energy and not protein as was hitherto believed… the data also indicates that the measurement of consumption of cereals can be used as a proxy for total energy intake. This observation is of considerable signifi-

* Professor of Economics at the Centre for Economic Studies and Planning, Jawaharlal Nehru University New Delhi. She is on the Editorial Advisory Board of *Social Scientist* (Delhi) and *Journal of Agrarian Change* (London).

> cance as it helps to determine rapid, though approximate, estimates of energy intake at the household level (National Nutrition Monitoring Bureau, 1997).

It is this strong link between the staple food grains intake and poverty based on a nutritional norm, which enables us to put forward an analysis of the recent trends in food security and in poverty, in the light of the impact of changing economic policies during the last fifteen years.

The majority of academics and the Government of India today make two claims which I believe to be factually incorrect, claims which are underpinned by a wholly fallacious theoretical understanding of the current situation. They claim first, that there is 'over supply' of food grains relative to demand, (which they assume to be growing normally) and so infer that food grains production should be cut back in favour of 'diversification'; second, that poverty has been declining in India in the era of reforms, specifically in the1990s. My contention as regards both propositions is that they are incorrect, and that the correct position on theoretical and factual grounds is precisely the opposite. First, there is not over supply of food grains, but a decline in food grain supply and an even more drastic decline of effective demand for food grains especially in rural India owing to an abnormally fast loss of purchasing power during the last six years: so, far from cutting back food grain output, the correct policy is to raise purchasing power and restore effective demand as well as restore access to affordable food grains through a combination of a universal, and non targeted, employment guarantee scheme and through reverting to a universal, non targeted public distribution system.

Second, far from the percentage of population in poverty declining as claimed, the factually correct position on the basis of current data is that poverty is very high, affecting at least three-quarters of rural and over two-fifths of the urban population. Moreover the data shows that the depth of poverty has increased considerably during the fifteen years of reforms, with more people being pushed down into a poorer nutritional status than before in most of the Indian states and at the All-India level. The reason that many academics and the Planning Commission reach the conclusion that poverty is declining, is that they use an estimation procedure which has no basis on logic and is indefensible on academic grounds. What that estimation procedure is and how it differs from the correct procedure is one of the main questions I would try to explain, for I believe that it is part of the 'right to information' that the intelligent citizen should be able to independently reach a judgement about the validity of the official procedure and not simply take the truth of certain statements for granted. Thus

I will focus on the correct theorizing of these two main questions –of declining effective demand for food grains, and of the extent of poverty. This has become extremely important because the widely prevalent incorrect theorizing in academic and government circles is leading to policy formulations and measures which will only serve to worsen mass welfare and plunge even larger sections of the rural population in particular into higher unemployment and food deprivation.

The first and second sections will briefly discuss the deflationary macroeconomic policies combined with exposure to global price declines, which has led to massive loss of purchasing power in rural India in the last six years and is reflected in falling food grains absorption and falling energy intake. The third section discusses the interpretation of the decline in food grain absorption while the fourth and last section takes up the question of poverty estimation and how official and most academic estimates use a particular indirect method of estimation, which completely de-links poverty from nutrition norms by ignoring current data which show the reality of rising nutritional deprivation and increasing depth of poverty.

What Deflationary policies and Trade Liberalization have meant for the Rural Economy in India

Deflationary macroeconomic policies are strongly favoured by international and domestic financial interest groups who are quite obsessive about controlling inflation and would prefer to see even an economy with a high rate of unemployment, growing slowly and raising unemployment further, rather than risk any possibility of prices rising owing to expansionary policies reducing unemployment. International creditors wish to maintain high real values of their financial assets and high real interest rates (inflation would erode both) - and are happy with bouts of asset deflation in developing countries so that these assets can be snapped up at low prices by their corporations. Their insensate and obsessive fear of inflation can be seen in the policies advised uniformly by the International Monetary Fund to 78 developing countries in the 1980s and summarized in Table 1 from an IMF study. The first three policies –restraint on central government expenditure, limits on credit expansion, and reduction of budget deficit to GDP ratio, add up to a strongly deflationary package and all three were actually implemented at the same time by four-fifths of the countries concerned, while two-thirds capped wages and over half devalued their currency.

The results of deflationary policies of the decade up to the mid-1980s have been documented as sharp decline in rates of investment in both capital formation and in the social sectors, leading to reduced or negative GDP growth and negative impact on the human develop-

ment indicators (see in particular Cornia, Jolly and Stewart, 1987). A number of studies since then have confirmed the adverse impact and have argued for expansionary policies (Baker, Epstein and Pollin, 1998; Halevy and Fontaine, 1998; Patnaik, 2000).

Table 1
Policies Followed by 78 countries under Fund-guided Economic Reforms

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

Source: IMF study quoted in Cornia, Jolly and Stewart (eds) Adjustment with a Human Face 1987, Vol..1, p.11.

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

	1985-90	1993-4	1995-6	1997-8	2000-1
1.Rural Development Expenditures as Percent 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 NNP at factor cost.

India has been following exactly the same deflationary package of policies since 1991, whose impact has been especially severe in India's agricultural sector which saw sharp reduction in planned public development expenditures in rural areas, which has traditionally included agriculture, rural development, irrigation and flood control –all vital for maintaining output– to which we add also the outlays on special area programmes, and village and small scale industry to define overall 'Rural Development Expenditures' or RDE. The employment- generating programmes had assumed a special importance from the drought year 1987 onwards.

Table 3
Decelerating Growth rates of Agricultural Output

Period	Foodgrains	Non-Foodgrains	AllCrops	Population
1980-81 to 1989-90	2.85	3.77	3.19	2.1
1980-81 to 1989-90	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.

Table 4
Employment Decline in Rural India

	Year 1983	Year 1993-1994	Year 1999-2000	Growth per Annum 1983 to 1993-4	Growth per Annum 1993-4 to 1999-00
1.Population, mn.	546.6	658.8	727.5	1.79	1.67
2. Labour force, mn.	204.2	255.4	270.4	2.15	0.96
3. Work force mn.	187.9	241.0	250.9	2.40	0.67
4. 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.

Over the 7th Plan period marking the pre-reforms phase, from 1985 to 1990, Rs.51,000 crores was spent on rural development, amounting to almost 4 percent of Net National Product, and Rs. 91,000 crores or over 7 percent of NNP was spent on Infrastructure[1]. By the mid-1990s, annual spending on rural development was down to 2.6 percent of NNP, and after including infrastructure, less than 7 percent was being spent compared to 11 percent during the 7th Plan. Further declines took place so that by 2000-01 the share of spending under these heads was down to 5.8 percent of NNP, the rural development part halving to only 1.9 percent (see Table 2). The per capita expenditures obviously declined even more sharply. I estimate that in constant 1993-4 prices about Rs.30,000 crores less was being spent by the end-decade year 1999-2000, compared to the beginning, 1990-91. A crude point-

1 In Infrastructure we are including the expenditures on Energy and Transport.

to-point comparison would suggest an annual income loss of between 120,000 to 150,000 crores of rupees assuming a multiplier value between 4 and 5. Actual income loss would have been greater taking the cumulative losses over successive years. This harsh contractionary policy had nothing to do with any objective resource constraint but simply reflected the deflationary policies of the BWI which were internalized and sought to be justified by the Indian government.

There is no economic rationale for believing that "public investment crowds out private investment" which is the common 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 borewells 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 on employment and incomes, of the increased wage incomes being spent on simple consumer goods and services within the villages. The market for machine made textiles and other goods also thereby expands.

The net result of the unwise cut-back of public investment and in RDE has been a slowing of the rate of output growth –both food grain and non-food grain growth rates 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 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.

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 a fall in number of days employed of the work force during the economic reform 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 mechanization especially of harvesting and use of herbicides has led to falling labour coefficients. Furthermore the rural non-farm employment growth, which was robust in the 1980s owing to reasonably high state RDE, had declined in the nineties. 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% annually (Table 4). The elasticity of employment with respect to output was 0.7 during 1983 to 1993-4 but has declined to 0.01 or virtually zero, taking the reforms period 1993-4 to 1999-00.

No-one should imagine that unemployed rural workers are migrating and finding employment in industry: there have also been massive job losses in manufacturing during the reform period and the share of the secondary sector in GDP has fallen from 29 to around 22 percent during the nineties, in short India has seen de-industrialization. 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 reflecting decline in per head incomes. Thus both the material productive sectors have declined and the only sector which has ballooned in an abnormal manner[2] is the tertiary or services sector which now accounts for over half of GDP.

Only a small proportion of the services sector comprises IT-enabled high income services, business process outsourcing, domestic tourism services and the like. The major part in employment terms, is still low-productivity activities in which the rural displaced workers stagnate at low income levels, servicing the requirements of the up-

2 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% of GDP, which is now down to about one-fifth. This shift to services reflects de-industrialization and worsening income distribution.

per income elites who have been improving their real income position fast. Disposable incomes have risen even faster for this segment since a part of the neo-liberal reforms include reduction in direct tax rates. Advanced countries usually have this upper-income 10 to 15 percent minority of Indians in mind when they demand market access for their manufactures and agricultural products, and no doubt 100 to 150 million people is a large potential market. But the situation of the vast majority of the mainly rural population who do not merely stagnate at low income levels but whose position is considerably worse today than a decade earlier, cannot be ignored: a potentially highly destabilising situation is in the making.

While income and employment reduction through deflationary policies is the first main reason for loss of purchasing power in rural India, the second main reason is the unwise opening to global markets through full trade liberalization at a time from the mid-1990s, when global markets went into recession and primary product prices started falling –a fall which continues to this day.

More Trade leads to more Hunger in Developing countries under Global and local Deflationary Conditions

The land resources of India, more so than in most developing countries, have the potential for producing a highly diversified range of products –not only the crops and fruits grown in the summer season in temperate lands but also the typically tropical crops, which cannot be grown at all in advanced countries located in temperate regions. The crops of our lands have been demanded abroad in advanced countries for over three centuries for meeting their direct consumption and raw material needs. But, historically the growth of exports from tropical agriculture under free trade regimes, has always led to a fall in domestic food grains output and availability, plunging the mass of the population into deepening under-nutrition and in extreme cases into famine. In the half-century before Indian independence, per capita food grain output fell by nearly 30 percent while export crops grew ten times faster than food grains. I have earlier discussed some historical and current cases in developing countries, of the inverse relation between primary sector exports and domestic foodgrains absorption (Patnaik 1996, 2003a).

This is bound to happen since land is not a reproducible resource, and heavy external demand made on our more botanically diverse lands by advanced countries to meet their ever-rising and diversifying needs, leads to diversion of our land and resources away from locally consumed food staples to meet export demands. The position is worsened by exports out of more slowly growing food output itself. The

Ricardian theory of comparative advantage which says there is necessarily mutual gain from specialization and trade, contains a material and logical fallacy since the conclusion is based crucially on assuming that 'both countries produce both goods' which is factually untrue for agriculture. The advanced countries mainly located in cold temperate regions cannot produce tropical crops at all, so the cost of production of say coffee or rubber cannot even be defined in these countries, let alone relative cost and transformation frontiers[3] (Patnaik, 2005).

In theory, more primary exports from developing countries can accompany more food production for domestic needs, but this can only happen when there is substantial rise in investment to raise productivity, for land is a non-producible resource whose 'supply' can only increase via investment permitting one hectare to produce what two hectares did earlier. It also requires that mass domestic demand grows, and is not held in check by income-deflating policies or excessive taxation as was the case under colonial systems.

The deeply disturbing feature of the current thrust for liberalizing trade is that it has been taking place within an investment-reducing, deflationary regime. I predicted in 1992 that given the deflationary climate, food security would be undermined with trade liberalization in India and that is precisely what has happened. As soon as trade was liberalized from 1991, within a few years, 8 million hectares of food-growing land were converted to exportable crops leading to a fall in per head food grain output, but farmers did not benefit since their exposure to steeply falling global primary prices from mid-decade plunged them into spiralling farm debt and insolvency. Nearly nine thousand recorded farmer suicides in India since 1998 are only the tip of the iceberg –there is a pervasive agrarian crisis and food grain absorption in India is back to the level prevailing fifty years ago.

Trade liberalization and an export thrust makes sense when local and global markets are expanding owing to expansionary developmental policies which promote growth in the material productive sectors, rising employment and incomes. But when the opposite is the case, when both globally and in local economies the dominant policy sentiment is strongly deflationary as at present, then trade liberalization spells lowered mass welfare in developing countries[4]. India's experience in the last fourteen years provides a good illustration of this.
India, as a signatory to GATT 1994, removed all quantitative restrictions on trade and converted to tariffs by April 2001, lowering the average tariff rate at the same time to 35%, or well below the bound

3 A shorter version is available in Patnaik, U. (2003a).

4 See my discussion in Patnaik 1996, 2003c.

rates which were 100% for crops and 150% for agricultural processed products. India's thrust for trade liberalization could not have been worsely timed, since advanced country markets were in recession and global primary product prices went into a free fall with a 40%-50% decline in unit dollar prices of all crops –cereals, cotton, jute, sugar, tea, coffee– and up to an 80% decline in some oil crops between 1995 and 2001 as Table 5 shows. With a brief rise in 2002 prices have continued to fall and some prices are today lower than as far back as 1986. The price to growers is even lower than world price as the activities of the state marketing boards have been replaced by private transnational companies for many crops.

Table 5
Prices of some important traded primary products, in US dollars

	1988	1995	1997	2000	2001 (Jan.)	Percent Change 2001 over 1995
Wheat (US HW)	167	216	142	130	133	- 38.2
Wheat (US RSW)	160	198	129	102	106	- 46.5
Wheat (Argentine)	145	218	129	112	118	- 45.9
Maize (Argentine)	116	160	133	88	80	- 50.0
Maize (US)	118	159	112	97	92	- 22.0
Rice (US)	265.7	-	439.0	271	291	- 33.7
Rice (Thai)	284	336	316	207	179	- 46.7
Cotton	63.5	98.2	77.5	66	49.1	- 50.0
Groundnut Oil	590	991	1010	788*		- 20.5*
Palm Oil	437	626	93.5	74.7*		- 88.1*
Soyabean Oil	464	479	625	71.4*		- 85.1*
Soyabean Seed	297	273	262	199	178	- 34.8
Sorghum seed	110	156	111	102	99	- 36.5
Sugar	10.2	13.3	11.4	10.2	9.2	- 30.8
Jute	370	366	302	276*		- 24.6*

Source: *Food Outlook*, Various issues from 1986 to 2001; available from Global Information and Early Warning System on Agriculture, U N Food and Agriculture Organization; and *Monthly Commodity Price Bulletin*, UNCTAD 2001. For the cereals, edible oils and seeds the unit is USD per ton, for cotton and sugar, US cents per lb. and for Jute, USD per metric ton.

* Relates to 1999, and percent change is 1999 compared to 1995.
The 2004 price data shows that sugar, cotton and jute prices continue to remain flat around 2001 levels while cereals show some rise.

As prices fell for Indian producers of export crops, their access to low-cost credit was reduced under financial sector reforms. Since the nationalization of banks in 1969 agriculture and small scale industry had been treated as priority sectors and were offered bank credit at a lower than average interest rate but that ended with financial reforms, thrusting farmers into dependence on private moneylenders and high-cost credit (interest rates are usurious, ranging from 36% to 60% annually). Other crucial input prices including power tariffs were raised as part of the neo-liberal dicta on reducing subsidies (which were already meagre compared to developed countries). Reduced tariff protection meant that producers of rice, fresh fruit and dairy products faced the undermining of their incomes from an influx of usually heavily subsidized foreign goods.

Nearly six thousand indebted farmers, mainly cotton farmers, have committed suicide in Andhra Pradesh alone since 1998 as its government which had entered into a state-level Structural Adjustment Programme with the World Bank, raised power tariffs five times even as cotton price fell by half (Table 6). Over a thousand farmer suicides have also taken place in Punjab, mainly in the cotton belt, new rounds of suicides are recorded in Karanataka and Vidarbha, and in the four years from 2001, over 1,250 suicides are recorded in Wynaad in Kerala as prices to the local growers of coffee, tea and spices have nose-dived even more steeply than global prices once large companies have taken over purchase and marketing. Thus by 2003 the price of coffee to the grower was only one-quarter and that of tea and pepper only one-third of the prices prevailing in 1999.

The agrarian crisis was the main reason for the decisive mass rejection of neo-liberal policies and the May 2004 electoral defeat of the NDA coalition at the Centre as well as the TDP government in Andhra Pradesh. In recognition of the employment crisis the new United Progressive Alliance or UPA had promised to implement a National Rural Employment Guarantee Act which has been recently formulated and passed, but which has been diluted by taking the household as the unit, where only one member is entitled to work, and by setting the wage below the statutory minimum wage.

India has exported record volumes of wheat and rice during the last six years, and its share in global exports of rice and wheat has risen quite noticeably. Despite the drastic slowing down of output growth noted in Table 3, India exported 22 million tonnes of food grains during 2002 and 2003 (Bhalla 2005), and the share of grain exports in total exports has risen from under one –fifth to almost a quarter. There is higher global trade integration reflected in rising trade-GDP ratio. During the severe drought year starting from monsoon 2002, despite

grain output being 30 million tonnes lower than in the previous year, from June 2002 to November 2003, a total of 17 million tonnes of food grains were exported by the former NDA government. Superficially it looks as though policies of trade liberalization have 'worked'.

Table 6
Suicides of farmers in Andhra Pradesh by district

No.	District	1998	1999	2000	2001	2002	Total
1.	Warangal	77	7	7	28	903	1022
2.	Ananthapoor	1	1	50	50	10	112
3.	Mahaboobnagar	14	2	25	10	-	51
4.	Karimnagar	31	10	6	30	1220	1297
5.	Guntur	32	10	1	6	-	49
6.	Khammam	20	5	3	6	2	36
7.	Medak	15	3	2	8	-	28
8.	Adilabad	9	8	5	13	-	35
9.	Nalgonda	5	1	10	11	8	35
10.	Nizamabad	9	1	-	11	457	478
11.	Rangareddy	5	-	3	6	-	14
12.	Kurnool	4	4	2	4	-	14
13.	Chittoor	3	-	-	2	-	5
14.	Krishna	4	1	1	3	1	10
15.	Prakasham	1	3	-	2	-	6
16.	West Godavari	1	-	-	5	-	6
17.	East Godavari	-	-	1	2	-	3
18.	Sreekakulam	-	1	-	-	-	1
19.	Cuddapah	-	-	-	4	-	4
20.	Visakapatnm	-	-	-	1	-	1
	Unknown	2	1	-	-	-	3
Total		233	58	116	202	2601	3210

Note: The total number of suicides up to 2004 is over five thousand. Data from police records up to Jan. 27, 2002, presented by Kisan Sabha at a symposium on farmer suicides held at Hyderabad (Andhra Pradesh), 3 February 2002 and attended by the author. The Table has been partially updated by incorporating information for the whole of 2002, so far available for the three districts only (Warangal. Karimnagar and Nizamabad) as reported in *The Hindu*, Hyderabad edition, Jan.6 2003. For the other districts the figures given in the last column continue to refer to a single month, January 2002. Additional suicides numbering 1700 have taken place since then, for which the district break-up is not yet available.

However the crucial fact which is suppressed in official publications and in the writings of pro-reform economists, and this is true even

after the elections and the change in government, is that the vastly increased grain exports have been coming out of more and more empty stomachs as millions of rural labourers and farmers have suffered job loss and income decline. Food grain absorption in India today has reached a historic low as a result of the massive decline in purchasing power especially in villages owing to the combination of rising unemployment, rising input and credit costs for farmers and exposure to global price declines. Loss of purchasing power is pervasive affecting both the 158 million wage-dependent workers as well as the 120 million cultivating workers and their families. Targeting the food subsidy from 1997-8 by restricting supply of cheaper grain to only those officially identified as 'below the poverty line' has also added to the institutional denial of affordable food grains to the poor, not merely owing to mistakes of wrong exclusion from the set of the officially poor, but also owing to the gross official underestimation of the numbers in poverty, discussed at the end of the paper.

Large decline in Food grains Absorption per Head is owing to Falling Purchasing power, not 'voluntary choice'

The per capita availability or absorption of food grains in India has declined alarmingly during the decade of deflationary neo-liberal economic reforms, to only 155 kg. annually taking the three year average ending in 2002-03. This current level is the same as fifty years ago during the First Plan period, and it is also the level seen during 1937-41 under colonialism. This means that the food security gains of the four decades of protectionism up to 1991, have been totally reversed.

After Independence, from the early 1950s to four decades later, taking the 3 years ending 1991, the per capita food grain availability had climbed slowly from 155 kg. to 177 kg. -the achievement not only of a 'Green Revolution' but of expansionary policies slowly raising mass incomes and demand, without too much rise in already high inequality. While the Green Revolution had many problems, its positive achievement in raising grain availability and absorption, should not be underestimated. All this was reversed from the early 1990s. As the new regime, of deflationary economic reform policies from 1991 eroded mass employment and incomes, we find a decline of per capita absorption to 174 kg between 1995 and 1998 and a very steep fall after that to the current abysmally low 155 kg level. Forty years of successful effort to raise availability has been wiped out in a single decade, with over four-fifths of the decline coming in the last six years[5].

5 I have discussed this in more detail in Patnaik 2003b, 2004.

Availability or absorption, is calculated from the hardest data we have, on annual net output[6] adjusted only for change in public stocks and in trade, so by definition it has to cover all final uses –direct use for consumption as grain and its products, use as feed for converting to animal products (a part of this is exported), and industrial use. Per head availability/ absorption (the two are used as synonyms) is now one of the lowest in the world, with only Sub-Saharan Africa and some least developed countries registering lower absorption than India. Since urban India has been increasing average absorption and average calorie intake, it is rural India where the fall has been very steep. In comparison, China absorbed 325 kg. grains per capita (excluding tubers) in the mid-1990s compared to India's less than 200 kg. at that time, Mexico absorbed 375 kg., European countries absorbed 700 kg. or more and USA absorbed 850 kg. Except under abnormal conditions of war or famine, grain absorption is always observed to rise as a country's average income rises. This is why the fall in India is so unusual, and it is not being correctly theorized.

Although grain output per head fell by about 12 kg over the five years ending in 2002-03, as may be checked from Table 7 the per head absorption has fallen much more, by 21 kg over the same period. The average Indian family of five members is absorbing 100 kg. less of food grains annually than a mere five years ago and since in urban India absorption has risen (calorie intake has also risen), it is the rural family which is absorbing even less than the average fall indicates. This abnormal fall is because of the loss of purchasing power for reasons already discussed, and it was reflected in a massive build-up of unsold public food stocks, reaching 63 million tonnes by July 2002, nearly 40 million tonnes in excess of the normal stocks for that time of year. Rather than starting large-scale food-for work schemes to restore lost work and incomes, between June 2002 and October 2003, over 17 million tonnes of food grains were got rid of by the NDA government by exporting subsidized stocks to feed European cattle and Japanese pigs.

There can be two very different ways that such huge food stocks can build up: demand growth is normal but output increases much faster, or alternatively output increase is normal, but demand reduces very fast owing to loss of incomes, and the demand curve shifts downwards. In both cases supply exceeds demand, but for very different reasons. As already shown output growth has not been normal but has actually gone down, so the first reason does not hold. It is mass effec-

6 The official practice for 50 years, which I have followed in Table 7 is to deduct 12.5 percent from gross output in tonnes, of foodgrains (cereals plus pulses) on account of seed, feed and wastage, and to the net ouput so obtained, add net imports and deduct net addition to public stocks.

tive demand, hence absorption which has declined to a much greater extent, so it is the second reason and not the first which accounts for the present paradox of increasing rural hunger and record grain exports. If rural demand had been maintained even at the 1991 level (forget about any increase) the absorption of foodgrains today would be 26 million tonnes higher than it is, and there would be no crisis in the agriculture of Punjab and Haryana, which have lost an internal market to that extent in the last six years alone. Instead of rural per capita calorie intake declining to below the urban average, as has been the case in the nineties, energy intake would have been maintained.

Since all-India per capita income has been rising during the reform period, such a drastic fall in food grains absorption is clearly, only compatible with a drastic rise in the inequality of income distribution as we had earlier pointed out (Patnaik, 2003b). But rising inequality can also occur when all incomes are rising. Rising inequality per se is neither necessary nor sufficient for the observed drastic absolute decline in grain absorption[7]. The only scenario which is compatible with it, is a particular type of rise in inequality, namely absolute decline in real incomes and rise in absolute poverty, concentrated mainly in the rural areas, combined with a large rise in real incomes for the top fractiles of the population, concentrated mainly in urban areas. The data is partly reflecting this: one indicator is the decline in the per capita real expenditure on consumption by the lowest four-fifths of rural population during the end- 1990s and a very sharp rise by the top one-fifth of urban population, which has been noted by Sen and Himanshu (2005). But even these findings are likely to understate the true extent of income decline for the mass of the rural population (we have no direct data on incomes). This is because this mass has been obliged to lose assets to maintain consumption and stay alive, while the well-to do have been saving much more over and above their greatly enhanced real expenditure and have entered real estate and financial markets. In short, there are in addition to the changes in observed flow variables like expenditure, also stock adjustments going on, namely changes in the distribution of assets which are adverse for the poor and on which data is not available.

The official position is one of wholesale denial of these obvious facts and the creation of what can only be called a fairy tale, fit only for intellectual infants. It is argued that there is voluntary reduction in food grain intake and thus there is 'over-production' requiring a cutback in cereals output –a position not supported by the facts. The full

7 Rising inequality is not necessary because we can have fall in grain absorption when all incomes are falling and inequality is unchanged. It is not sufficient because if with increasing inequality all incomes are rising, grain absorption will not fall.

fairy tale set out in official publications goes like this: every segment of the population is reducing demand for cereals because average income is rising; (here, the increased income is assumed to be distributed in the same way as earlier, with no increase in inequality). People of all expenditure classes are voluntarily diversifying their diets away from cereals. The only reason that farmers continue to produce more cereals than demanded, and hence big stocks build up, is because too much output has been encouraged by 'too high' administered, minimum support prices of cereals. So MSP should be cut, cereals output in excess of what is demanded at present should be discouraged and the output pattern in agriculture should be diversified to more commercial export crops under the aegis of agro-businesses.

This analysis is completely incorrect and is inconsistent with the hard facts of rising unemployment, falling output growth, impoverishment of farmers in debt and land loss, and resulting deep agrarian distress. It is dangerous in reaching policy conclusions which are the opposite of those required, and which if implemented will reduce food security further and pauperize even more farmers.

To give an analogy, albeit an imperfect one, suppose that a patient has been wrongly diagnosed by a doctor and loses weight rapidly to the extent of 30 kg. The doctor then blames the tailor for making the clothes of the patient too big and advises that the old clothes should be thrown away and new ones sewn to fit his wasted body. Such advice will certainly alarm the patient for it shows that an abnormal situation is being rationalized as normal and no treatment to restore the patient to health will be followed. The official position on food grain output and food security, regrettably shared by many academics who seem not to have applied their minds to the matter, is indicative of such illogical reasoning and is alarming indeed for farmers and labourers in distress. The official prescription of reducing MSP, ending open-ended procurement and cutting back on output will worsen food deprivation and deepen poverty for the millions of farmers and labourers already in deep distress. The idea that price fall benefits 'the consumer' ignores the fact that three-fifths of consumers in a poor country are themselves rural producers or dependent for jobs on producers, and deflation harms their incomes.

It is an alarming scenario too for the farmers of Northern India who over the last four decades have been asked to specialize in food grain production, and have performed magnificently, selling their rising surpluses uncomplainingly to the Food Corporation of India even when the domestic procurement price was far below world price in the 1970s and again in the decade up to the late 1990s. They have ensured cheap food to urban areas and food deficit regions by not seeking to maximize their

own incomes. Today, as a result of the official embracing and putting into practice of mindless deflationary policies which have reduced mass purchasing power, they have lost internal grain markets to the tune of 26 million tonnes and are being given the irresponsible advice to 'diversify' and export to world markets even though these continue to be in recession, and even though all international organizations predict continuing fall in agricultural terms of trade up to 2009-10. Calculations by FAO shows that the terms of trade for agriculture globally, with 1990-91 as base year equal to 100, was about 50 by 2001, compared to over 200 in the 1970s. All projections up to 2009-10 by international bodies, show continued absolute price fall and further decline in terms of trade.

The question that is neither raised nor answered in official publications like the *Economic Survey* and the Reserve Bank of India's *Report on Currency and Finance* which articulate the fairy tale of voluntary diversification, is - How can people suffering employment loss and facing unprecedented crop price declines, be inferred to be better off and be voluntarily reducing cereals demand, and how is it that the current reduced level of total absorption of food grains per head of 155 kg per annum, is not seen in any country except the least developed and sub-Saharan African countries? The observed falling share of food expenditure in total expenditure for almost every expenditure group, is officially cited as proof of every income segment including the poorest diversifying diets and becoming better off, and seems to have persuaded some academics. No attention is paid to steadily falling average calorie intake in rural India as 'diversification' proceeds. The argument is quite fallacious and is based on a simple confusion between the necessary and sufficient conditions for improvement.

A falling share of food expenditure in total expenditure, as a well as a falling share of grain expenditure in food expenditure, are necessary, but not sufficient indices of the consumer becoming better off, particularly when we are considering, not an advanced country rich population, but a population already at a low standard of life. The food spending share of total spending can fall and is actually observed to fall, when people are getting worse off because their real income is constant or falling, since owing to greater monetization of the economy and higher cost of utilities they are forced to spend more on the bare minimum of non-food essentials. Thus even when real income is unchanged over time, some food expenditure has to be sacrificed to buy fuel (which is jointly demanded with food grains), incur higher transport costs in search of work, incur higher health costs and so on. Since the overwhelmingly large part of food expenditure itself is on staple grains, it is this which falls when food expenditure is cut. Data for sub-Saharan African countries shows dietary 'diversification' as per capita income declines. We observe a falling share

of calories from cereals and rising share from animal products, even as, with the large decline in cereal intake absolute calorie intake is seen to decline quite steeply (see Patnaik 2003b for a discussion). In effect, a Sub-Saharan Africa already exists in rural India today.

The official solution is inhumane in rationalizing increasing hunger as voluntary choice, basing its prescriptions on bad theory and fallacious reasoning. The only solution which is both humane and is based on sound economic theory, is to restore lost internal purchasing power through a universal Employment Guarantee and to revert to a universal Public Distribution System. The Finance Minister unwisely cut rural development expenditures drastically to only Rs.13.5 thousand crores last year – the same absolute sum as was spent fifteen years earlier in 1989-90. Rs. 13.5 thousand crores is an all-time low of only 0.6 percent of NNP and this gratuitous act of deflation in the face of farm crisis, has worsened the problems of unemployment and hunger. It may be compared to the Rs, 51,000 crores spent by the NDA in 2003-04 in the aftermath of drought, which sum itself was inadequate at 2.5 percent of NNP.

To meet the 10th Plan budget estimates on rural development, the government now needs to spend at least Rs. 100,000 crores during fiscal 2005-06 and 2006-07, of which up to Rs.30,000 crores should be on the national rural employment guarantee, and the remainder on the urgent and neglected needs of agriculture, rural development, irrigation and village and small scale industry. Although one lakh crores may sound a large sum it is still less than 4 percent of anticipated NNP in the next two years and inadequate for the needs of 700 million people, three fifths of the nation, whose fate depends on the government's policy.

The bizarre official efforts to re-invent increasing hunger as free choice, are buttressed by spurious estimates of the population in poverty, discussed in the last section.

Alternative Measures of Head-Count Poverty: or, How to Count the Poor Correctly versus Illogical Official Procedures

Poverty studies in India since the early 1970s, have been based on the use of a 'poverty line' expenditure level, defined as that 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. All persons spending below the poverty line expenditure are considered to be poor. The required daily allowance (RDA) of energy was specified by the Indian Council for Medical Research and recommended by the Nutrition Expert Group to the Planning Commission in 1969. This is obviously a very minimalist definition of poverty, since no norms are

Table 7
Summary of Annual per capita Foodgrains Output and Availability in India in the Nineties (Three Year Average)

Three-yr. Period Ending in	Average Population	Net Output per Head		Net	Availability	per Head	
		Cereals	Food	Cereals	Pulses	Foodgrain	
	million	Kg.	grains	Kg.	Kg.	Kg./ Year	Gms./ 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**	**476**
1997-98	953.07	162.98	176.81	161.6	12.6	**174.3**	**477**
2000-01	1008.14	164.84	177.71	151.7	11.5	**163.2**	**447**
2002-03	1050.67	153.85	164.09	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 Per Capita Availability of Foodgrains, %	
Triennium ending 1991-92 to Triennium ending 1997-98	- 1.6
Triennium ending 1997-98 to triiennium 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 % 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* have been used.

* Indicates provisional..

set for essential non-food items of spending such as on fuel for cooking and lighting, clothing, shelter, transport, medical care or education.

The data base for estimating poverty has been the National Sample Survey Rounds on Consumption Expenditure which take the household as the sampling unit. These surveys present the distribution of persons by monthly per capita expenditure groups, and since the quantities of foods consumed and their calorie equivalents are available, they also present the calorie intake per capita per diem by expenditure groups. That particular expenditure group whose food expenditure met the calorie requirement in 1973-74, was identified and the relevant expenditure was defined as the poverty line expenditure (often this is mis-labelled as poverty line income, but we have no information on income). Large sample surveys are carried out at five-yearly intervals, the latest available data being from the 55th Round relating

to 1999-2000, from which the relevant data for All-India is reproduced in Table 8 using two published Reports of the NSS.

A good idea of the current magnitude of head-count poverty can be obtained by the lay person without any calculations, simply by inspecting the data in Table 8. Looking at the first, third and fifth columns, 69.7 percent 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 (nearly the same as the 2400 norm), which was obtained only by the next higher spending group of Rs. 525-615. Since persons in the lower part of this group also obtained below 2400 calories, the poverty percentage is a bit higher than seven-tenths, and on plotting the data on a graph we obtain the more exact figure of 74.5 percent. Yet, the official Planning Commission figure of rural head-count poverty from the same data is only 27 percent! The difference between the estimate obtained by direct inspection of the latest data and the figure as given by the Planning Commission, is 47.5 percent, so nearly half of the actually poor rural population, about 350 million persons, are excluded from the set of the officially poor. Again, from direct inspection we see that about two-fifths 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. The exact percentage in urban poverty on plotting the graph, is 44 percent. The Planning Commission figure for urban poverty for the same year is only 23.5 percent. What explains this big difference? The Planning Commission has never officially given up the nutritional norm of 2400 calories. The majority of economists in India believe that this norm is still being followed. The reality is that the actual estimation procedure followed by the Planning Commission has de-inked its poverty estimates completely from the nutrition norm. The poverty line was obtained following the norm, only in 1973-74 using the 28th Round NSS data, a date three decades in the past. For that year at prices then prevailing, the rural and urban poverty lines were Rs.49.09 and Rs. 56.64 per capita per month, since at these expenditures the 2400 rural and 2100 urban calorie intake norms were satisfied. It was found that 56.4 percent of the rural and 49 percent of the urban population were below these poverty lines[8].

For later years, strange though it may seem, no use was made of a single iota of the actual consumption data and calorie equivalents, thrown up by as many as five successive large-sample surveys (in 1977-8, 1983,1988-9,1993-4, and 1999-2000). There was no official attempt to update the poverty lines on the basis of the available current

8 It is a curious matter of chance that poverty lines were Rs.49.1 and Rs 56.6 while the corresponding poverty percentages were 56.4 and 49.

information on what expenditure was actually required to meet the nutrition norm. Rather, the three decade old poverty lines (Rs 49.1 and Rs.56.6, rural and urban), were simply adjusted upwards by using a price–index, while assuming an invariant 1973-74 consumption basket. The adjusted poverty line was then applied to the cumulative distribution of persons by expenditure groups, in current NSS data to obtain the 'poverty percentage'. Thus the current data was, and is being used selectively, with only the distribution of persons by expenditure classes being used, and the associated energy intake part being ignored completely. The declining energy intake corresponding to official poverty estimates are never mentioned, nor do academics following the same method ever mention the lowered calorie intake corresponding to their estimates (vide the papers in *Economic and Political Weekly,* 2003, special number tendentiously titled 'Poverty reduction in the 1990s'). The credibility of official and similar academic poverty estimates would certainly come into question if the educated public at large was informed about how far below RDA (Required Daily Allowance) the consumption standard has been continuously pushed down, by the official method.

For example the official price-index adjusted poverty line for 1999-2000 was Rs.328 only (about 6.7 times Rs. 49) and this has been applied to the first and last columns of Table 8 to read the population below this line which came to 27%. No attention was paid to the fact that at this expenditure a person could access at most only 1890 calories, over 500 calories per day below the RDA and nor is this fact ever mentioned to the public when poverty estimates are quoted by the Planning Commission. This amounts to suppression of information and is not an academically acceptable procedure. The same applies to the academics who follow the official method and who never allude to the lower and lower calorie intake inherent in their poverty lines.

Academics writing earlier (R. Nayyar 1991) however, had estimated poverty both by direct inspection of current data and by the official method, and had explicitly noted that the official poverty estimate diverged more and more over time from the much higher poverty percentages yielded by current data. As the base year of the official method gets further back in time the divergence has assumed absurd proportions. In 1993-4 the official price index adjustment method gave a rural poverty line of only Rs.205, and 37.3 % were below it in the 50th Round distribution of persons by expenditure groups, and so deemed to be 'in poverty', but the fact that at this poverty line only 1,970 calories per diem could be accessed (over 400 calories below the RDA) was never mentioned. Inspecting the same current 50th Round data showed that 74.5% of persons had an intake below the RDA of 2400 calories, because their

monthly expenditure was below the Rs.325 at which the nutrition RDA could be accessed. Mehta and Venkataraman (2000) pointed out for the 50th Round data, this large divergence between the results of applying the official definition, and following the official price-adjustment procedure, in a short but significant paper. They do not refer to Nayyar (1991) who had already pointed out the divergence for earlier Rounds and had also analysed state-wise divergence, but unfortunately her book had not been accorded the importance it deserved.

In 1999-2000 as we already noted the official estimate gives only 27.4 percent in poverty because these are the persons spending below the price-index adjusted official poverty line of Rs.328, but again the further lowering of the associated energy intake standard to 1890 calories, over 500 calories per day below RDA, is never mentioned. The same current 55th Round data shown in Table 8 continues to give 74.5 percent of persons actually in poverty, namely with intake below 2400 calories because their expenditure was below the Rs.570 required to access the RDA. (However, greater poverty depth is seen by 1999-00, with more of the population moving below 2100 calories as compared to 1993-94, and 3 percent more being below 1800 calories). Thus in 1993-4 the official method had left out 37.2 percent of the total rural population who were actually poor, while by 1999-2000 the official method was leaving out 47.4 of the total rural population or around 350 million persons who were actually poor. Table 9 summarizes the official poverty lines, poverty percentages and the falling calorie intakes at poverty lines, and it gives the true poverty lines required to access the RDA, along with the poverty percentages.

There is no theoretically acceptable basis to the official claims of poverty reduction in the 1990s. The basic point is that the method of comparison over time is not logically valid when the consumption standard is being altered, as is being done in the indirect estimates. The consumption standard in 1973-74 was 2400 calories at which 56% was in poverty, by 1993-94 the standard implicit in the official estimate (37% in poverty) was down to 1970 calories, and in 1999-2000 for the official estimate (27.4 %) it was even lower at 1890 calories. By the 60th Round, 2004-05 it is likely to be below 1800 calories and correspond to less than one-fifth of rural population. We will once more hear spurious claims of further 'poverty reduction' without any mention of the lowering of the energy intake.

How can anyone say how 'poverty' has changed over time using the above method? To give an analogy, when a set of runners are lined up in a row on a circular race track for a long-distance race, if the person in the inner-most circle crosses the finishing rope first, it cannot be validly inferred that he has won the race: for the distance run by

Table 8
Percentage Distribution of Persons by Monthly Per Capita Expenditure (MPCE) Groups and average Calorie Intake per diem, 1999-2000, All-India

RURAL				
Monthly per capita Expenditure	**Average MPCE**	**Calorie Intake per diem**	**Percent of persons**	**Cumulative percent of Persons**
Rupees	Rupees	Per capita.	%	Kg.
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 and less	2289 and less	69.7
525-615	2403	10.3
615-775 and more	2581 and more	19.9

(continue)

(continue)

URBAN			
Monthly per capita Expenditure	**Calorie Intake per diem**	**Percent of persons**	**Cumulative percent of Persons**
Rupees	Per capita	%	Kg.
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 and less	1968 and less	39.7
575-665	2091	10.0
665-775 and more	2187 and 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.

him is much less than that run by others. For a valid comparison of the runners' performance, the distance run has to be the same standardized distance for all the runners, and this is done by staggering the runners. Similarly, in the official method the percent of persons below the same, standardized consumption level or levels, need to be compared but this is not the case in the indirect method. Rather, the method used implies that the percentages below un-standardized and changing consumption levels are sought to be compared over time (see Table 9)[9]. This is not legitimate, and any statement about decline (or change generally) is not valid. Present day heated debates between the estimators about whether poverty has 'declined' by ten points or seven points, when poverty has not declined at all, can be likened to debates over whether the inner-circle runner has 'won' by one metre or two metres, when the fact of the matter is that he has not 'won' at all, because the premise for valid comparison is violated.

Table 9
The Rural Poor as Percent of Rural Population in India

	1973 - 74	1983	1993 - 94	1999 - 00	2004	MPCE (Poverty line) Rs				
						1973 - 74	1983	1993 - 94	1999 - 00	2004
NSSRound	**28th**	**32th**	**50th**	**55th**	**60th**	**28th**	**32th**	**50th**	**55th**	**60th**
Using Official Definition (<MPCE giving 2400 cals)	**56.4**	**70.0**	**74.5**	**74.5**	**n.a**	**49**	**120**	**325**	**570**	**n.a**
Official Estimates	56.4	45.7	37.3	27.4	20.3*	49	86	206	328	354
and Implied Calorie 'Norm'	2400	2060	1970	1890	n.a	(1.0)	(1.4)	(1.6)	(1.7)	n.a

Source: First line calculated from NSS Reports on Consumer Expenditure, 50th Round 1993-4 and 55th Round 199-00.
MPCE is Monthly Per Capita Expenditure.
Note that base year 1973-74 is the only year the official definition was correctly applied.- in all later years the nutrition norm is continuously diluted. The same exercise can be carried out for urban India. (Figures in parentheses are the ratio of the expenditure actually required to access the calorie RDA, to the official poverty line).

* Provisional estimate, applying official poverty line of Rs.344 for 2004, to the ogive of persons by expenditure levels from NSS 60th Round, January – June 2004, Report No. 505 *Household Consumer Expenditure in India*, Statement 3.2 R.

9 The analogy can be carried a little further. If the race is a short one over a straight segment of the course, lining the runners up in a straight line at the starting point is okay. Similarly if the base year of the price index is very close, say two to three years, then comparison over time can be made using the official method –which ignores every non-base year actual calorie intake– without leading to too much inaccuracy. But for a long race (a base year further back in time) absence of standardization will arise and make comparison invalid.

The official rural monthly poverty line expenditure for 2004 (obtained by updating the 1999-00 poverty line of Rs.328, using the CPIAL), is Rs.354 or Rs11.8 daily, equivalent to 26 US cents at the prevailing exchange rate. This paltry amount will actually buy at most one bottle of water, but it is supposed to cover all expenditure on food, fuel, clothing, shelter, transport, health and education – in short all daily spending on goods and services for one person! Estimates of Indian poverty for 1999-00, 55th Round, by some individual academics like A.Deaton (2003b, 367) and S.Bhalla (2003) are even lower and imply a poverty-line of 20 US cents or less expenditure per day, one-fifth of the World Bank's dollar-a-day measure. There is no logic in arguing that purchasing power parity should be considered and instead of one dollar therefore around one third of that should be taken as the local poverty line, for the comparison is not between advanced and developing countries at all but between developing and other developing countries. A quarter U.S dollar in India purchases exactly as much as Rs.11 does, at the prevailing exchange rate, and a quarter US dollar purchases exactly as much as 2 yuan does in China (whose current rural poverty line is also far too low at 2.2 yuan per day). Poverty level incomes in the USA are not set three times higher than the Chinese or Indian one, but are at least thirty times higher.

Obviously, it is not difficult for either the Planning Commission or the individual academics to 'adjust' Indian poverty figures downwards when the consumption level embodied in the rural poverty line, is depressed to such sub-human levels as Rs11 or less per day. Few people can actually survive long below these levels –those who are there today are on their way to early death. The poverty estimators should try a test on themselves. Let them be handed the weekly equivalent of their own estimated monthly poverty line –they need not even exert themselves to earn it as the poor are obliged to do– and let them spend only one week in a village living on that amount, which would range from Rs.60 to Rs, 80. Since they will not be confident of drinking the local water all they would be able to buy would be a bottle of water a day and no food let alone other necessities. What they would undoubtedly gain from their one-week stay, would be weight loss. Urban poverty lines are almost equally unrealistic.

Sometimes to justify the indirect method it is argued that the original rural consumption norm of 2400 was 'too high'. First, it is not 'too high' because the average intake of those below it works out to about 1950 calories which is lower than in any other country in the world except the least developed countries. Second, even if it is accepted for the sake of argument that it was 'too high' it does not justify comparing 1999-2000 'poverty' figures which are all those persons below 1890

calories intake, to those persons below 1970 calories intake in 1993-94 and those persons below 2400 calories intake in 1973-74.

By all means, let us consider lower norms, in fact take several alternative norms including 2400, but when comparing over time, compare the proportion of population under the same norm at the two points of time –for only then will the comparison be valid. The indirect estimates fail on this simple but essential criterion of comparability over time and those who nevertheless undertake such comparison are committing a logical fallacy –*the fallacy of equivocation*. This a well known type of verbal fallacy, in which the same term is used with two completely different meanings in the course of the argument, so the inference is not true. In this case, 'poverty line' was defined and initially calculated with respect to a nutrition norm, while 'poverty line' as actually calculated is de-linked from the norm, so the inference regarding change (whether rise, fall or constancy) is not true[10].

Not only is the official comparison of poverty percentages, and claims of poverty reduction over time, quite spurious; the comparison of the poverty levels of states at a given point of time, is equally invalid. As Table 10 shows, we have a bizarre picture when we calculate the maximum calorie intake levels below which people are designated as 'poor' by the official method in the different states of India. The calorie intake corresponding to the official state-wise poverty lines, –from which the state poverty percentage have been officially derived– for the year 1999-2000, varies from 1440 only in Kerala, nearly a thousand calories below RDA, to 2120 in Orissa, less than 300 calories below RDA.

The fact is that the official method in India today adheres to no nutrition norm at all. Nutrition has dropped out of the picture completely in the indirect method, nor is there any lower bound which is set, to the extent of decline in the calorie intake corresponding to whatever the price-adjusted poverty line happens to be. That is why we find states with 1500 calories or less intake corresponding to their official poverty lines in 1999-00. In as many as 9 states, the calorie intake associated with the official poverty lines was below 1800 calories in the 55th Round, while in four states it was 1600 calories or less (see Table 10). None of this is mentioned when poverty estimates are quoted by those making them.

Not even the late P.V. Sukhatme, who was a consistent critic of the 2400 calorie RDA being too high, would have accepted 1800 calories as a reasonable norm for estimating who the poor are, –let alone 1600 calories or less. He had used a norm of 2200 calories in one of his own

10 I have discussed the fallacy of equivocation involved in the indirect estimates, in Patnaik 2005b.

estimates (Sukhatme 1977). By 2004-05 the All-India official poverty line itself will correspond to an intake of 1800 calories or less, and at least eight states will have a 1600 or less calorie intake corresponding to the state-specific official poverty lines.

The fact that comparability conditions are blatantly violated, is obvious. Officially it is inferred that poverty is much higher, for example, in Orissa at 48 percent, than in neighbouring Andhra Pradesh at only 11 percent. But how can we possibly infer that Orissa is 'poorer' than Andhra, when the 'officially poor' are those persons with below 2120 calories intake in Orissa but the 'officially poor' are those persons with below 1600 calories intake in Andhra? (As a matter of fact the below 2400 and below 2100 calories poverty percentages are both higher in Andhra than in Orissa as the same Table shows in the last two columns). Similarly, how can it be inferred that rural Gujarat with only 13 percent officially in poverty, is much better off than West Bengal with 33 percent officially poor, when the associated calorie 'norm' in Gujarat has been pushed down to only 1680 compared to 1900 in West Bengal? As a matter of fact the below 2400 calories poverty percentage is marginally lower for W.Bengal compared to Gujarat and the below 2100 calories percentage is substantially lower for W.Bengal. And so the anomalies can be multiplied. Further, how can, for each state, the official estimate in 1999-00 be compared with that in 1993-94 and inference about 'decline' be drawn, when the associated calorie intake has been lowered in each state? (Except only one, Gujarat).

As a teacher if I were to follow the illogical procedure of saying that student A who has 53 percent marks is 'better' than student B who has 59 percent marks, because I apply a 50 out of 100 marks standard to student A and apply a different, 60 marks out of 100 standard to student B, I would rightly face a court case. Yet our Planning Commission and individual academics have been allowed to get away with making patently illogical and untrue statements on poverty. The Deputy Chairman of the Planning Commission recently congratulated the Andhra Pradesh government on its success in reducing poverty. This 'reduction' was solely the effect of applying an extraordinarily low price-adjusted poverty line of Rs. 262 per month in 1999-00 at which less than 1600 calories could be accessed (See Table 10). Looking directly at nutrition poverty, we find that the proportion of persons below 1800 calories intake in that state has doubled to 40% by 1999-00 compared to 1983 (Table 11). To complete the story, the proportion below 2100 calories has risen to 62% at the later date, compared to 56 % only five years earlier in 1993-4, and 44% in 1983.

What is the reason, the reader might ask, for the official method producing consistently lower estimates than the direct method, and why

has the divergence been growing until now, the indirect estimate gives only 27 percent compared to nearly 75 percent by the direct estimate. It is not primarily a matter of the price index used: different price indices do give different results but this accounts for difference of at most 10 percent or so of population, not the difference of 48 percent of population which is actually observed. The basic reason is assuming an invariant consumption basket in the indirect method, held unchanged for three decades. Over these three decades however there has been increasing monetization of the economy and disappearance of common property resources, along with higher cost of utilities and health care. With a given real income people have to spend relatively more on essential non-food requirements, overcoming illness and earning a living. The actual current rural consumption basket which satisfies the nutrition norm, and to which the total monthly expenditure on all goods and services corresponds, costs almost double the price-adjusted poverty line (from Table 8 summarized in Table 9, at least Rs.570 is required compare to the official Rs.328). The official poverty lines are simply far too low and are getting further lowered as the base year becomes more remote.

Rohini Nayyar (1991) in her careful doctoral study, estimated poverty using both methods and noted the widening divergence in the results between 1961-2 and 1977-8. She had taken some solace from the fact that though poverty levels estimated by the two different methods were moving apart quite fast, at least they did seem to move in the same direction over time. The ranking of the states of India according to their poverty levels estimated using the two methods, was highly correlated: Nayyar found that Spearman's rank correlation coefficient worked out to 0.89 and 0.84 (using the official estimate on the one hand, and two different direct estimate norms of 2200 and 2000 calories) and was significant at the 1% level.

But in the 1990s this conclusion no longer holds. The poverty levels calculated by the two methods are moving fast in opposite directions and the rank correlation may soon become negative. Spearman's rank correlation taking the poverty ranks of the states by the official indirect method, and by the direct method for 1999-2000, 55th Round data, works out to only 0.236 and 0.075 (using the same two direct estimate norms) and neither is statistically significant at the 1% level (Ram, 2004). Inspection of Table 10 will tell the reader why this is the case: some of the states with the lowest official poverty, such as Andhra Pradesh, a by-word for agrarian distress, have some of the highest actual poverty. In general the official method produces the largest divergence from the direct method, in the case of the Southern and Eastern states.

The rot in poverty studies discussions seems to have set in with neo-liberal reforms in India, particularly in the late 1990s. The Indian Government was eager to claim success for the economic reforms and the pro-reform economists were eager to see poverty reduction in the data. In such a milieu, the inconvenient direct estimates showing high and in some states, increasing levels of poverty were swept under the carpet. Discussion of direct estimation of poverty virtually disappeared from the literature. The dominant trend of discussion focussed on the official indirect method, which, to the great satisfaction of the pro-reform and the World Bank estimators, not only showed very low 'poverty' levels but actual decline in these levels. Not one of the authors using the official indirect method, alluded to the nutritional implications of their own estimates. This meant that they were using and presenting the NSS data selectively, taking only the distribution of persons by expenditure classes to read off the poverty proportion corresponding to their indirect poverty line, while ignoring the associated energy intake figures completely. Such lack of transparency and selective use of data, is not acceptable academic procedure. Owing to this lack of transparency, to this day most economists in India not directly working with the data, and including even those examining research theses on poverty, are not aware that drastically lowered consumption levels over time and arbitrary variation of consumption levels across states, are the necessary implications of following the indirect method and arriving at low poverty estimates. They assume that the original norms are being followed when this is not true.

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 slightly 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 percent below the Rs.328 official price –adjusted poverty line, by another 2 to 3 percent (Sundaram and Tendulkar, 2003, Deaton, 2003a, Sen and Himanshu 2005). If these adjustments are correct, quite obviously, the percentage of persons below the directly observed poverty line of Rs.570 would rise to an even greater extent than 2 to 3, since a higher proportion of people than before would also come into the expenditure interval Rs.328 to Rs 570, and thus the difference between 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 more than 74.5 + 3 = 77.5 percent of rural population, which is a rise compared to 74.5 percent in the 50th

Round, 1993-94. Similarly those below 2100 calories would rise from 49.5 percent to more than 52.5 percent[11].

However we have chosen to give the direct estimate for 1999-2000 unadjusted for recall period in all our tables, since the main point being made in this section, is the type of mistake involved in the indirect method itself which is leaving out nearly half the rural 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 47 percent of the actually poor rural population from their set of 'the poor' while without the adjustment, they were leaving out exactly 47 percent of the population.

Some economists who are critical of the official price-adjustment method, have put nutrition back at the centre of their analysis, but they have followed another 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 a 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 percent 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 under alternative scenarios.

Many critical voices (Suryanarayana 1996, Mehta and Venkataraman 2000, Swaminathan 1999, 2002) which had continued to draw attention to the high prevalence of undernutrition and malnutrition, to the secular decline in average rural calorie intake, to high direct poverty estimates using reasonable calorie norms and which criticized the indirect estimates, have been sought to be silenced by the pro-reform economists, by the simple expedient of ignoring them altogether. Not one critical author is referred to in the articles by those presenting their indirect estimates at a Conference and later collecting them in a special issue of *The Economic and Political Weekly* tendentiously titled 'Poverty Reduction in the 1990s' (Deaton 2003a, and 2003bTendulkar and Sundaram 2003 etc.). The only article on energy intake

11 We could easily find out how much higher the direct estimate would be than 74.5 percent if those making the adjustment to the distribution of persons by expenditure class, had bothered to present the associated average calorie intake by expenditure class. As usual however they ignore the nutrition part completely in their papers.

Table 10
Official Poverty Percentage by States and Associated Calorie 'Norm'

STATE	Indirect estimates, 1993-4 and 1999-00				Direct Estimates, 1999-2000	
	1993-1994		1999-2000		< 2400 cal Poverty Percentage	< 2100 cal Poverty Percentage
	Official Poverty Percentage	Implied Calorie 'Norm'	Official Poverty Percentage	Implied Calorie 'Norm'		
Andhra						
Pradesh	15.92	1700	11.05	1590	84.0	62.0
Assam	45.01	1960	40.04	1790	91.0	71.0
Bihar	58.21	2275	44.30	2010	77.0	53.5
Gujarat	22.18	1650	13.17	1680	83.0	68.5
Haryana	28.02	1970	8.27	1720	47.5	30.5
Karnataka	29.88	1800	17.30	1600	82.0	50.0
Kerala	25.76	1630	9.38	1440	82.5	52.5
Madhya						
Pradesh	40.64	1970	37.06	1850	78.5	55.0
Maharashtra	37.93	1780	23.72	1760	92.0	55.0
Orissa	49.72	2150	48.01	2120	79.0	45.5
Punjab	11.95	1810	6.35	1710	47.5	36.5
Rajasthan	26.46	2130	13.74	1925	53.5	27.5
Tamilnadu	32.48	1650	20.55	1510	94.5	76.0
Uttar						
Pradesh	48.28	2220	31.22	2040	61.0	37.5
West Bengal	40.80	2080	31.85	1900	81.0	55.0
ALL INDIA	37.27	1970	27.09	1890	74.5	49.5

Source: As Table 8. From the basic data by states, the ogive or cumulative frequency distribution of persons below specified per capita expenditure levels was plotted, and on the same graph the relation of per capita expenditure and per capita calorie intake was plotted. Calorie intake corresponding to the official estimates was then obtained from the graphs. Note that 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. For 1999-2000 it was available and has been used in deriving the figures for 1999-00. We find that for several expenditure classes the mid-point value coincided with the arithmetic mean, and for the others the difference of mid-point value from mean was very small, suggesting that the same would be true for 1993-4.

while juxtaposing the official and direct estimate does so somewhat uncritically[12].

The critical writers on the other hand, have given cogent arguments to suggest why per capita calorie intake should be involuntarily declining in the lower expenditure classes over time. (It is also declining in higher expenditure classes but the problems of the initially overfed who may be reducing intake, do not concern us at present). They have pointed out that there has been substantial monetization of the economy over the last three decades. Wages which used to be paid in

Table 11

States which have seen rise in the percentage of persons with less than 1800 calories intake per day during period 1983 to 1999-2000, and states with over one-third of population below 1800 calories intake at either date

Rural	38th Round, 1983 < 1800 calories Percent of total Persons	55th Round, 1999-2000 < 1800 calories Percent of total Persons
Andhra Pradesh	19.0	40.0
Assam	28.5	41.0
Haryana	8.5	10.5
Karnataka	24.5	35.5
Kerala	50.0	41.0
Madhya Pradesh	18.5	32.5
Maharashtra	20.5	28.0
Tamilnadu	54.0	50.0
West Bengal	38.0	22.5

Source: Abstracted from estimates for all states, using NSS Reports No.471 and 454 for 55th round, and Report Nos.387 and 353 for 38th Round. Estimation method as in note to Table 10. Note that in 1983 only 3 states – Kerala, Tamilnadu and West Bengal had more than one-third of rural population below 1800 calories intake. By 1999-2000 all three states had improved, West Bengal substantially, while Andhra Pradesh, Assam, Karnataka, Madhya Pradesh and Maharashtra saw worsening. Thus by 1999-00, five states had more than one third of population below 1800 calories intake (six if we include the borderline Madhya Pradesh).

12 Meenakshi and Viswanathan 2003 present 'calorie deprivation' as though it is an independent topic, not essentially related to official poverty estimates, and although they usefully juxtapose their estimates of population below differing calorie norms, and the official estimates, they do not refer to the falling energy equivalent of the official or individual poverty lines over time which affects comparability. Their method of estimating the calorie distribution ogives using kernel density functions, gives higher estimates of population below various calorie norms, than our estimates using the grouped data and the simple method described in the note to Table 10. This is probably because their estimate includes all well-to-do persons who have lower calorie intake than RDA. There is no reason however to consider rich race jockeys, super models or anorexic people as part of the poor.

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 of it for a given real income. Common property resources have disappeared over the last three decades : fuel wood and fodder, earlier gleaned and gathered (and not fully valued in the NSS data), now have to be purchased, 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. Staple grains and fuelwood or other fuels are obviously, jointly demanded since no-one can eat raw grain, and with a given real income a part of expenditure on grain has to be enforcedly reduced to purchase fuel. To this we have to add higher medical, transport and education costs as state funding is reduced and some services are privatized. The correct thrust of these arguments is that under-nutrition and poverty is very high, affecting three-quarters of the rural population by now, and observed calorie intake decline for the lower fractiles is non-voluntary. By 1999-2000 for the first time average calorie intake in rural India has fallen below average urban calorie intake.

Concluding Remarks

This paper has embarked on a brief but sharp critique of the prevalent analysis and prescriptions regarding food security and poverty, because of two reasons. First, the agrarian crisis is serious and widespread, and has been created by public policies which have been deflationary, combined with trade liberalization when world primary prices have been declining. It is manifesting itself in slowing output growth, rising unemployment, unprecedented income deflation for the majority of cultivators and labourers, enmeshing of cultivators in unrepayable debt, and loss of assets including land, to creditors. Kidney sales and nine thousand recorded farmer suicides are only the tip of the iceberg of increasing deprivation, a crucial index of which is an unprecedented fall in foodgrains absorption to levels prevalent 50 years ago, and decline in average calorie intake in rural India.

Second, the prevalent analysis by policy makers, the Planning Commission and the government, however, can be summed up as an obdurate refusal to face the facts, and an attempt to construct a counter-factual fairy story which is illogical and in patent contradiction with the trends in the economy. "We must learn truth from facts" (Mao ZeDong) "or the facts will punish us" (added by Deng Hsiao Ping) is a dictum that our policy makers would do well to bear in mind. Their theorization interprets severe loss of purchasing power and enforced decline in effective demand for food grains, as its very opposite, as 'over-production' in relation to an allegedly voluntary reduction of

foodgrains intake by all segments of the population, and reaches the dangerous inference that foodgrains output should be cut back. It refuses to recognize that, while in developed societies, consumers can be separated from a minority who are agricultural producers, in a poor country like India the majority of consumers are themselves rural and directly involved in production as cultivators and labourers, so deflationary policies hit them hard in both these roles of producers and consumers. Price deflation does not benefit even landless labourers since it is part of a process of income deflation which raises unemployment faster than prices fall. Our economists estimating poverty by the indirect method are still caught in the old conceptual trap of equating relative food price decline with declining poverty, without understanding that the adverse unemployment effects of deflation can swamp out any benefit of food price fall: they should study the economics of the Great Depression for some insights into how deflationary processes actually operate.

As Table 11 shows, by 1999-2000 as many as five states had more than one-third of rural population below 1800 calories intake, and in another three states the percentage of persons with below 1800 calories intake, had risen between 1983 and 1999-00, though not exceeding one-third at the latter date. (Note that Meenakshi and Viswanathan, 2003, obtain a larger number than we do, eight states with more than one-third of population below 1800 calories in the 55th Round –but their use of kernel density functions to obtain the calorie distribution ogive, is perhaps overestimating the nutrition poverty figures, since their method includes all high income but calorie deficient people as well).

Despite this worsening situation at the ground level being reflected in the nutrition data, it would be very sad indeed if the present Planning Commission is tempted to make further spurious claims of 'poverty reduction' as the previous ones had done, the moment the next large-sample NSS data on consumption becomes available. Their indirect method –which selectively uses the data by ignoring the nutrition part of it– is bound to show a further steep and spurious 'decline' in rural poverty by 2005-06, to around 18-19 percent of rural population from 27.4 percent in 1999-2000.

This is because, owing to the unprecedented income deflationary situation itself, the rise in prices has been at a historic low between 2000 to date. The CPIAL actually declined in 2000-01 compared to the previous year, and rose only 1 percent the next year. With low inflation, the CPIAL adjusted official poverty lines for 2003 and 2004 works out to only Rs. 342 and Rs. 354, a mere Rs. 14 and Rs.26 more than the Rs.328 of 1999-00. The already published 58th Round NSS data relating to 2002-03 had shown that only 22 percent of all –India

rural population was below Rs. 342, a share which is falling further every year, solely because few persons can survive at such low levels of spending– it is indeed amazing that there are people surviving at all on less than Rs.11.5 per day. One can imagine how adverse their height, weight, morbidity rates and life expectancy would be relative to the average.

It is no surprise that in fact the latest 60th Round consumption data covering January-June 2004, which has been released as Report No.505 by the NSS in end November 2005, shows that now only 23 percent of all persons in rural India are below Rs. 354 monthly per capita expenditure, the poverty line for 2004 if schedule 1 is used and only 17.5 percent is below the same poverty line if schedule 2 is used. While this is a thin sample, it is adequate for the all-India estimates Of course, this will be necessarily associated with a further fall in the calorie intake level corresponding to the official poverty line, from 1890 calories to somewhere around or below 1800 calories, in short at least 600 calories below RDA. This information of declining nutrition standard associated with the official estimate is likely to be quietly suppressed as it has been in the past. The Government should bear in mind however, that any claims of 'poverty reduction' it might be misguided enough to make, will no longer carry credibility since the arbitrary and illogical nature of its method of calculation is today much better understood, and the contrast of any such claims, with all other adverse trends in the rural economy is too glaring to be ignored.

Since such a large fraction of the population is already at very low energy intake levels, they have been trying to maintain consumption by liquidating assets against debt. Thus there are not only adverse flow adjustment (lowered nutrition levels) but also stock adjustments going on, reflected in the emerging recent data on rising landlessness. We may expect to see rise in the already high concentration of assets in rural areas. In such a scenario labour bondedness against debt is also likely to be increasing.

The Tenth Plan, 1992 to 1997 sets out that Rs, 300, 000 crores are to be spent by the Centre on Rural Development Expenditures (adding up as before three items)[13]. Three years of the Plan or two-thirds of the period is over: Rs.100,000 crores or only one-third of the planned outlays have been spent, of which Rs.85,000 crores spending was during the last two years of NDA rule, mid- 2002 to mid-2004, while there was a sharp cut-back to Rs. 15,000 crores only in 2004-05. As in 1991 the first years after a general election are being used by the neo-liberal

13 Namely, agriculture and rural development, irrigation and flood control, village and small scale industry.

lobby in the new government which controls finance, to apply mindless deflation although unlike 1991 there is deep agrarian crisis today. This cynical move to cut rural development expenditures in the face of rising unemployment and agrarian distress, can only be in order to please international financial institutions and meet the arbitrary provisions of the FRBM Act.

To achieve the 10th Plan target now, at least Rs.100,000 crores must be spent both in 2005-06 and 2006-07, of which about 25 to 30 thousand crores should be on universal employment guarantee and 70 to 75 thousand crores on rural development expenditures. This level of planned spending would total only about 2.5 percent of NNP and it needs to be stepped up steadily in later years to reach the 4 percent of NNP which prevailed in the late 1980s during 7th Plan before economic reforms began.

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 Feb1. 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 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[14] and all food-for-work programmes which together had accounted for Rs 11.7 thousand crores of the central government's

14 SGRY is Sampoorna Grameen Rozgar Yojana, JRY is Jawahar Rozgar Yojana.

expenditure in 2005-06, have been subsumed under and merged with the National Rural Employment Guarantee programme in the February 2006 budget 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.

Bibliography

Baker, Dean; Epstein, Gerald and Pollin, Robert (eds) 1998 *Globalization and Progressive Economic Policy* (Cambridge: Cambridge University Press).

Coondoo, Dipankor; Majumder, Amita; Lancaster, Geoffrey and Ray, Ranjan. 2004 "Alternative Approaches to Measuring Temporal Changes in Poverty with Application to India" working paper presented at 29th General Conference of the International Association for research in Income and Wealth (Joensuu) August 20-26, 2006.

Cornia, Giovanni Andrea; Jolly, Richard and Stewart Frances (editors) 1987 *Adjustment with a Human Face* (Oxford: Clarendon Press) Vol. 1.

Deaton, Angus 2003a "Adjusted Indian poverty estimates for 1999-2000" in *Economic and Political Weekly* (Mumbai) Vol. 38, January 25-31.

Deaton Angus 2003b "Prices and Poverty 1987-2000" in *Economic and Political Weekly* (Mumbai) Vol. 38, January 25-31.

Halevy, Joseph and Fontaine Jean-Marc (editors) 1998 *Restoring Demand in the World Economy (*Cheltenham: Edward Elgar).

Kindleberger, Charles Poor 1987 *The World in Depression 1929-1939* (Harmondsworth: Pelican Books).

Meenakshi, J. V. and Viswanathan, Brinda 2003 "Calorie Deprivation in Rural India" in *Economic and Political Weekly* (Mumbai) Vol. 38, January 25-31.

Mehta, Java and Venkataraman, Shanta 2000 "Poverty Statistics - Bermicide's Feast" in *Economic and Political Weekly* Vol. 35, July 1

National Nutrition Monitoring Bureau 1997 *25 Years of NNMB* (Delhi).

Nayyar, Rohini 1991 *Rural Poverty in India* (Mumbai: Oxford University Press).

Patnaik, Prabhat 1999 "Capitalism in Asia at the end of the Millennium" in *Monthly Review* (Mumbai) Vol. 51, N°3, July-August, Special number.

Patnaik, Prabhat 2000 "The Humbug of Finance" in *Chintan Memorial Lecture* (Chennai) <http://www.macroscan.org> January 8; also included in Patnaik, Prabhat 2003 *The Retreat to Unreason* (Delhi: Tulika).

Patnaik, Prabhat and Chandrasekhar, C. P. 1995 "The Indian Economy under Structural Adjustment" in *Economic and Political Weekly* (Mumbai) November 25.

Patnaik, Utsa 1996 "Export-oriented agriculture and food security in developing countries and India" in *Economic and Political Weekly* (Mumbai) Vol. 31, N°35-37, September, Special Number; reprinted in *The Long Transition: Essays on Political Economy* (Delhi: Tulika, 1999).

_____ 2002 "Deflation and Deja-Vu" in Swaminathan, Madhura and Ramchandran (editors) *Agrarian Studies: Essays on Agrarian Relations in Less Developed Countries* (Delhi: Tulika).

_____ 2003a "On the inverse relation between primary exports and domestic food absorption under liberalized trade regimes" in Ghosh, Jayati and Chandrasekhar, C. P. (editors) *Work and Welfare in the Age of Finance* (Delhi: Tulika).

_____ 2003b "Food stocks and hunger - Causes of Agrarian Distress" in *Social Scientist* (New Delhi) Vol. 31, N°7-8, July-August.

_____ 2003c "Global Capitalism, Deflation and Agrarian Crisis in Developing Countries" Social Policy and Development Programme Paper Number 15, United Nations Research Institute for Social Development (Geneva:UNRISD).

_____ 2004a "The Republic of Hunger" in *Social Scientist* (New Delhi) Vol. 32, N°9-10, September-October.

_____ 2004b "Alternative ways of Measuring Poverty and Implications for Policy. A critical appraisal from the Indian experience" Draft paper presented at Conference on The Agrarian Constraint and Poverty Reduction: Macroeconomic Lessons for Africa organized by The Ethiopian Economic Association and International Development Economics Associates (Addis Ababa) <http://www.networkideas.org> December 17-19.

_____ 2005a "Ricardo's Fallacy" in Jomo, Kwame Sundaram (editor) *Pioneers of Development Economics* (Dehi:Tulika and London/New York: Zed).

_____ 2005b "The Nature of fallacies in Economic Theory" Satyendranath Sen Memorial Lecture delivered at The Asiatic Society (Kolkata) August 10, 2004.

Ram, Ramanand 2004 "Poverty Estimates in India: A Critical Appraisal" M. Phil Dissertation submitted to Jawaharlal Nehru University (New Delhi) July.

Ray, Rajan and Lancaster, Geoffrey 2005 "On setting the poverty line based on estimated nutrient prices: condition of socially disadvantaged groups during the reform period" in *Economic and Political Weekly* (Mumbai) Vol. 40, Nº1, January 1-7.

Sen, Abhijit and Himanshu (2004) "Poverty and inequality in India: Getting closer to the truth" in *Economic and Political Weekly* (Mumbai) January.

Subramanian, S. 2005 "Unraveling a conceptual muddle: India's poverty statistics in the light of basic demand theory" in *Economic and Political Weekly* (Mumbai) Vol. 40, Nº1, January 1-7.

Sukhatme, Pandurang Vasudeo 1977 "Incidence of Undernutrition" in *Indian Journal of Agricultural Economics* (Bombay) July-September.

Sundaram, Jomo Kwame and Tendulkar, Suresh D. 2003 "Poverty *has* declined in the 1990s: A resolution of comparability problems in NSS consumer expenditure data" in *Economic and Political Weekly* (Mumbai) Vol. 40, Nº1, January 1-7.

Swaminathan, Madhura 2002 "Excluding the Needy - the Public Provisioning of Food in India" in *Social Scientist* (New Delhi) Vol. 30, Nº3-4, March-April.

Swaminathan, Madhura 1999 *Weakening Welfare: the Public Distribution of Food in India* (Delhi: Leftword Books).