

***THEORIZING FOOD SECURITY AND POVERTY
IN THE ERA OF ECONOMIC REFORMS***

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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 two-thirds 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 indicate that the measurement of consumption of cereals can be used as a proxy for total energy intake. This observation is of considerable significance as it helps to determine rapid, though approximate, estimates of energy intake at the household level.*”¹ 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 as well as the Planning Commission 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 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 the decade of the 1990s. 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 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 grains 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 not targeted, employment guarantee scheme and through reverting to a universal, not 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 show 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 in logic and is indefensible on academic grounds. What that estimation procedure is and how it differs

¹ NNMB, *25 Years of NNMB* (Delhi 1997)

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. My lecture today 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 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 foodgrains 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 ground reality of rising nutritional deprivation and increasing depth of poverty.

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

Deflationary macroeconomic policies are beloved 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. International creditors wish to maintain high real interest rates (inflation would erode real interest rates) - 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 together to a strongly deflationary package and all three were actually implemented at the same time by four-fifths of the concerned countries, while two-thirds capped wages and over half devalued their currency.

The results of deflationary policies of the 1980s have been documented as sharp decline in rates of investment in both capital formation and in social sectors, leading to reduced or negative GDP growth and negative impact on the human development indicators. A number of studies since then have confirmed the adverse impact and have argued for expansionary policies.²

² See Cornia, Jolly and Stewart, 1987, Baker, Epstein and Pollin 1998, Halevy and Fontaine 1998.

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

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

Source: 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 average	1993-4	1995-6	1997-8	2000-2001
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: Calculated from Reserve Bank of India, *Report on Currency and Finance, 1995–6*, Statements 8 and 146; and Government of India, Ministry of Finance, *Economic Survey*, various issues 2001–02 to 2003–04. Rural development expenditures here include plan outlays on agriculture, rural development, special areas programmes, irrigation and flood control, village and small scale industry. Infrastructure includes power and transport. Calculated from current values of expenditure and NNP.

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

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

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

Table 4 : Employment Decline in Rural India

	Year 1983	Year 1993- 1994	Year 1999- 2000	Growth per Annum	
				1983 to 1993-4 %	1993-4 to 1999-00 %
<i>RURAL</i>					
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.

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 public planned development expenditures in rural areas, which has traditionally included agriculture, irrigation – vital for maintaining output – employment generation programmes, drought- prone areas and special areas programmes, village and small scale rural industry. Out of these the employment- generating programmes had assumed a special importance from the drought year 1987 onwards.

During the 7th Plan period marking the pre-reforms phase, from 1985 to 1990, Rs.51,000 crores was spent on rural development (including also village and small scale industry), amounting to almost 4 percent of Net National Product, and Rs. 91,000 crores or over 7 percent of NNP was spent on Infrastructure.³ 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 would have 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-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 loan-conditionalities of the BWI which were internalized and sought to be justified by the Indian government.

³ In Infrastructure we are including the expenditures on Energy, Transport and Communications.

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 bore-wells and submersible pumps. Other infrastructure investment such as rural power projects, roads, bridges, school buildings, clinics and so on, are never undertaken by private investors but are vital for stimulating development and providing livelihoods both directly to those employed in building them and through the important multiplier effects of the increased wage incomes being spent on simple consumer goods and services in villages.

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 foodgrains and non-foodgrains growth rates have almost halved in the nineties compared to the pre-reform eighties, and both have fallen below the population growth rate even though this too is slowing down. (Table 3). This has led to declining per capita output during the nineties, for the first time since the mid-sixties agricultural crisis which however had been short-lived, whereas per head agricultural output continues to fall today even after a decade: The Agricultural Universities had earlier played a major role in developing and helping to disseminate new crop varieties, and the cut in funding for research in these Universities by affecting the search for better rain-fed crop varieties, has also contributed to the deceleration in the growth of yields. With increasing use of land for commercial and residential purposes, the gross sown area in India has remained 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 fall in number of days employed of the work force during the economic reforms period. Even with constant labour coefficients (labour days used per unit of crop output) a near halving of employment growth was to be expected given the decline in crop output growth, but the decline in jobs has been even more as mechanization especially of harvesting has led to falling labour coefficients. Further the rural non-farm employment growth which was robust in the 1980s owing to reasonably high state RDE, had declined in the nineties. So we see not just jobless growth, but job-loss growth. 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.

Let no-one 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 manner⁴ 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 upper income urban 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 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.

2. 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***

⁴ 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.

*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.*⁵ 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 non-traded locally consumed food staples to meet export demands. (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, the cost of production of say coffee or rubber cannot even be defined in these countries, leave alone relative cost and transformation frontiers).⁶

In theory, more 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.

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 1991 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 fall in per head foodgrains output, but farmers did not benefit since their exposure to steeply falling global primary prices from mid-decade has plunged them into spiralling farm debt and insolvency. Over seven thousand farmer suicides in India since 1998 are only the tip of the iceberg – there is a pervasive agrarian crisis and foodgrains 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.⁷ India’s experience in the last fourteen years provides a good illustration of this.

India, 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 rates which were 100% for crops and 150% for

⁵ In the half –century before Indian independence, per capita foodgrains output fell by nearly 30 percent while export crops grew ten times faster than foodgrains. I have tried to document some historical and current cases of the inverse relation between primary sector exports and domestic foodgrains absorption.- see Patnaik 2003a

⁶ My paper “Ricardo’s Fallacy” is in press and a shorter version is available in Patnaik 2003a

⁷ See my discussion in Patnaik 1996, 2003c.

agricultural processed products. India's thrust for trade liberalization could not have been worse timed, since advanced country markets were in recession and global primary product prices went into a steep tailspin with 40-50 per cent decline in unit dollar prices of all crops –cereals, cotton, jute, sugar, tea, coffee – and up to 80 percent decline in some oil crops between 1995 and 2001 as Table 5 shows. With a brief spike 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 state marketing boards' activities have been replaced by private transnational companies.

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 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 percent annually). Other crucial input prices including power tariff 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 inflow of usually heavily subsidized foreign goods.

More than five 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 tariff 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, 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 an Employment Guarantee Act which has been formulated, but which has been considerably diluted already by targeting to those officially defined as 'poor' and by not setting a time-frame for implementation.

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 nearly 20 million tonnes of foodgrains during the two years 2002 and 2003, 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 foodgrains were exported by the former NDA government. Superficially it looks as though policies of trade liberalization have ‘worked.’

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 grains 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.

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

	1988	1995	1997	2000	2001 (Jan.)	Per cent 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 show that sugar , cotton and jute prices continue to remain flat around 2001 levels while the cereals show some rise.

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.	Sreeakulam	—	1	—	-	—	1
19.	Cuddapah	—	—	—	4	—	4
20.	Visakapatnam	—	—	—	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 giving the numbers of suicides up to Jan.29, 2002 given above, was supplied by Kisan Sabha on the basis of police records, 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 entire year 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.

3 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 grains availability had climbed slowly from 155 kg. to 177 kg. - the achievement not only of '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. 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 by the triennium ending in 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.⁸

Availability or absorption, is calculated from the hardest data we have, on annual net output⁹ 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. For 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.

Although grain output per head fell by about 6 kg. over the last six years ending in 2002-03, as may be checked from Table 7 the per head absorption has fallen much more, by nearly 20 kg. over the same period. The average Indian family of four members is absorbing 77 kg. less of food grains annually than a mere six years ago and since in urban India absorption has risen (calorie intake has also risen), it is the rural family which is absorbing much less. This abnormal fall is because of the loss of purchasing power for reasons already discussed, and it got 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

⁸ I have discussed this in more detail in Patnaik 2003b, 2004.

⁹ 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 output so obtained, add net imports and deduct net addition to public stocks.

normal stocks for that time of year. Rather than starting large-scale food-for-work schemes to restore lost work and incomes, over 17 million tonnes of food grains were got rid of by the NDA government by exporting out of stocks with subsidy, and it went mainly 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 effective 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.

The official position is one of wholesale denial of these obvious facts and the creation of what can only be called a fairy tale. It is argued that there is voluntary reduction in food grains intake and thus there is 'over-production' requiring a cut-back in cereals output – a position not supported by the facts. The full 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 agri-businesses.

This analysis is completely incorrect and is inconsistent with the hard facts of rising unemployment, falling output growth, immiserization 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 grains 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 grains 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 mid 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 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, to spend to begin with, at least Rs 65 to 75 thousand crores annually on rural development (this is only 2.3 percent of the 2005-06 estimated NNP), and to raise this steadily by an additional 0.5 percent annually until it reaches at least 4 percent of NNP by 2009-10. Only then would the same spending share be reached as during the 7th Plan, two decades after reforms started.

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 is a necessary, but not a sufficient index of the consumer becoming better off. The food spending share can fall when a person is getting worse off because income is falling, and some food expenditure has to be sacrificed to buy fuel (which is jointly demanded with food grains), incur transport costs in search of work, and so on. Data for sub-Saharan African countries show dietary 'diversification' i.e falling share of calories from cereals and rising share from animal products, when absolute calorie intake is declining quite steeply as per capita income declines (see Patnaik 2003b for a discussion). In effect, a Sub-Saharan Africa already exists in rural India today.

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.

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 million	Net Output per Head		Net Cereals Kg.	Availability Pulses Kg.	per Head Foodgrains	
		Cereals Kg.	Food-grains			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	478
1997-98	953.07	162.98	176.81	161.6	12.6	174.2	477
2000-01	1008.14	164.84	177.71	151.7	11.5	163.2	447
<i>Individual Year</i>							
2000-01	1027.03	157.79	167.43	141.42	9.64	151.06	414
2001-02	1046.44	165.40	177.01	146.76	11.61	158.37	434
2002-03*	1066.22	140.54	150.09	148.14	9.55	157.69	427
<i>Average of the Years 2000-01 & 2001-02</i>							
	1036.74	161.63	173.30	144.51	10.64	155.15	425
<i>Change in Per Capita Availability of Foodgrains, %</i>							
<i>Triennium ending 1991-92 to Triennium ending 1997-98</i>						- 1.6	
<i>Triennium ending 1997-98 to biennium ending 2001-02</i>						- 10.9	
<i>Total Change, 1991-92 to 2001-02.</i>						-12.3	

Source: Govt.of India, Ministry of Finance, *Economic Survey*, various years.

Note: Population growth rate calculated as 1.89% using Census population totals of 1991 and 2001. The population figure for 2001 used above, is the March 2001 Census total of 1027 million which is 6 million less than the mid-2001 figure of 1033.3 million used in the *Economic Survey, 2002-03* in its Table S-21. The 2002 and 2003 population is obtained above by applying the growth rate of 1.89% to this March 2001 Census figure. My underestimation of population is deliberate. The reader can check that actual availability per head would be lower by about 1 kg. in each year from 2001 using the official population figures. *2002-03 was a severe drought year.

4. 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 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 mislabelled 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, second and the fourth 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?

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

<i>RURAL</i>			
Monthly per capita Expenditure Rupees	Calorie Intake per diem per Capita	Per cent of Persons %	Cumulative per cent of Persons %
Below 225	1383	5.1	5.1
225- 255	1609	5.0	10.1
255- 300	1733	10.1	20.2
300- 340	1868	10.0	30.2
340- 380	1957	10.3	40.5
380- 420	2054	9.7	50.2
420- 470	2173	10.2	60.4
470- 525	2289	9.3	69.7
525- 615	2403	10.3	80.0
615- 775	2581	9.9	89.9
775- 900	2735	5.0	94.9
900 & more	3178	5.0	100

ALL	2149	99.9	

<i>SUMMARY</i>			
<i>470- 525 and less</i>	<i>2289 and less</i>	<i>69.7</i>	
<i>525- 615</i>	<i>2403</i>	<i>10.3</i>	
<i>615-775 and more</i>	<i>2581 and more</i>	<i>19.9</i>	
<i>URBAN</i>			
Monthly per capita Expenditure Rupees	Calorie Intake per diem per Capita	Per cent of Persons %	Cumulative Percent of Persons %
Below 300	1398	5.0	5.0
300- 350	1654	5.1	10.1
350- 425	1729	9.6	19.7
425- 500	1912	10.1	29.8
500- 575	1968	9.9	39.7
575- 665	2091	10.0	49.7
665- 775	2187	10.1	59.8
775-915	2297	10.0	69.8

915-1120	2467	10.0	79.8
1120-1500	2536	10.1	89.9
1500- 1925	2736	5.0	94.9
1925 & more	2938	5.0	100

ALL	2156	99.9	
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SUMMARY

500- 575 and less	1968 and less	39.7	
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575- 665	2091	10.0	
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665- 775 and more	2187 and more	50.2	
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Source: National Sample Survey Organization (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.

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-linked its poverty estimates completely from the nutrition norm. The poverty line was obtained following the norm, only in the year 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.¹⁰

For later years, strange though it may seem, no use was made of a single iota of the consumption data 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 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 were, and are 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 even lower calorie intake corresponding to their estimates (vide Deaton 2003a, 2003b) . The credibility of official and similar academic

¹⁰ 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.

poverty estimates would certainly come into question if the educated public at large was informed how far below RDA the consumption standard has been pushed by the official method.

For example the official price–index adjusted poverty line for 1999-2000 was Rs.328 only (about 6.5 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 (Required Daily Allowance) 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 low maximum calorie intake corresponding to their poverty estimates.***

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 method gave 37.3 % in poverty, which meant only those persons were considered poor whose daily calorie intake was below 1,970 (but the lowering of consumption standard to below RDA is never made clear), while the current 50th Round data showed 74.5% in poverty that is, consuming below 2400 calories.

In 1999-2000 as we have already noted the official estimate gives only 27.1 percent in poverty which, includes only the persons consuming below 1,890 calories (again the further lowering of the consumption standard is never mentioned), while the current data continue to show 74.5percent with intake below 2400 calories (but more poverty depth, with 3 percent more of the population moving below 1800 calories as compared to 1993-94). Thus in 1993-4 the official method 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.

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%) it was even lower at 1890 calories. By the 60th Round, 2005-06 it is likely to be below 1800 calories and no doubt correspond to one-fifth or less of rural population. We will once more hear spurious claims of further ‘poverty reduction’.

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, 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 him is much less than that run by others. For a valid comparison the distance run has to be the same for all, 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, are not being compared. Rather, the percentages below un-standardized and changing consumption levels are sought to be compared over time. 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 two 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.

The official rural monthly poverty line expenditure for year 2004, is Rs.344 or Rs11.3 daily, equivalent to 25 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 by some individual academics like A.Deaton (2003a, 2003b) are even lower and imply a poverty-line of 20 US cents expenditure per day, one-fifth of the World Bank's dollar-a-day measure. Obviously, it is not difficult to 'adjust' poverty figures downwards when the consumption level embodied in the poverty line, is depressed to such sub-human levels, for few people actually survive long below these levels –those who are there today are on their way to early death.

Sometimes to justify the indirect method it is argued in an illogical manner that the original consumption norm of 2400 was 'too high'. First, it is not 'too high' because the average intake of those below it works out to less than 1900 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 of all those persons below 1890 calories intake, to those below 1970 calories intake in 1993-94 and 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 a term is used with two completely different meanings in the course of the argument, so the inference is not valid. In this case, 'poverty line' was defined 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 valid.

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 cut-off varies from 1440 only in Kerala, nearly a thousand calories below RDA, to 2120 in Orissa, less than 300 calories below RDA. Officially it is inferred that poverty is much higher in Orissa than in neighbouring Andhra Pradesh.

But how can we possibly validly compare and infer that Orissa is 'poorer' than Andhra, when the 'officially poor' are all the persons with below 2120 calories intake in Orissa but the 'officially poor' are all those persons with below 1600 calories intake in Andhra? Similarly how can official poverty in Bihar, with an implicit calorie norm of 2,010 be compared to the poverty figure for Punjab where the implicit norm is only 1,710 calories? As a teacher if I were to follow the illogical procedure of saying student A is 'better' than student B by applying a 50 out of 100 marks standard to student A who has 53 percent marks and at the same time apply a different, 60 marks out of 100 standard to student B who has 59 percent marks, I would rightly face a court case. Yet our Planning Commission and individual academics are allowed to get away with making patently illogical and false claims on poverty.

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, and increasing monetization of the economy. 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).

Rohini Nayyar (1991) who had estimated poverty using both methods and stressed the divergence in the results, had taken some solace from the fact that though poverty levels estimated by the two different methods were drawing 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, 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 in opposite directions. 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.¹¹ 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.

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 is not acceptable academic procedure. Owing to this lack of transparency, to this day most economists 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 are the necessary implication of following the indirect method and arriving at low poverty estimates.

The critical voices (Suryanarayana 1996, Mehta and Venkataraman 2000, Swaminathan 1999, 2001) which continued to draw attention to the high prevalence of undernutrition and malnutrition, to the secular decline in average 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. 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* (Deaton 2003a, 2003b, Bhalla 2003, etc.).

The critical writers have given cogent and persuasive 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 over-fed who may be reducing intake, do not concern us at present). They point out that there has been substantial monetization of the economy over the last three decades. Wages which used to be paid in kind as grain or meals, valued at low farm-gate prices in earlier NSS Rounds, are now paid in cash which the labourer has to exchange for food at higher retail prices, and so can buy less 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

¹¹ "Poverty Estimates in India: A Critical Appraisal" Ramanand Ram, M.Phil Dissertation submitted in JNU, 2004.

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 and transport 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 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 thousands of 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 story which is illogical and in patent contradiction with the trends in the economy. “We must learn truth from facts, or the facts will punish us” (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.

The official refusal to recognize the seriousness of the crisis at the theoretical level, the consequent refusal to restore lost purchasing power through a universal employment guarantee, and the refusal to extend price support to food producers, bode ill for the agrarian crisis, which is not being addressed. The entire false analysis which re-invents increasing hunger as voluntary choice, is today sought to be re-inforced by bogus poverty estimates and invalid claims of decline in poverty. In such a situation it is the duty of all

academics and activists who have not lost their sanity, to critique the official analysis and prescriptions, which if carried through will worsen immeasurably the already pitiable condition of the majority of the rural population.

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

	1973-74 %	1993-94 %	1999-00 %	MPCE, Rupees 1973-74	1993 94	1999 00

Applying Official Definition (those with less than MPCE giving 2400 calories)	56.4	74.5	74.5	49	325	570
Official Estimates & Corresponding CalorieIntake	56.4 2400	37.3 1970	27.1 1890	49	206	328

Source: 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 diluted. .

Table 10 : Official Poverty Percentages for States and Corresponding Maximum Daily Calorie Intake

STATE	1993-94 <i>Official Poverty Percentage</i>	<i>Implied Calorie Norm</i>	1999-2000 <i>Official Poverty Percentage</i>	<i>Implied Calorie Norm</i>	1999-00 < 2400 cal <i>Poverty Percentage</i>
Andhra					
Pradesh	15.92	1700	11.05	1590	84.0
Assam	45.01	1960	40.04	1790	91.0
Bihar	58.21	2275	44.30	2010	77.0
Gujarat	22.18	1650	13.17	1680	83.0
Haryana	28.02	1970	8.27	1720	47.5
Karnataka	29.88	1800	17.30	1600	82.0
Kerala	25.76	1630	9.38	1440	82.5
Madhya					
Pradesh	40.64	1970	37.06	1850	78.5
Maharashtra	37.93	1780	23.72	1760	92.0
Orissa	49.72	2150	48.01	2120	79.0
Punjab	11.95	1810	6.35	1710	47.5
Rajasthan	26.46	2130	13.74	1925	53.5
Tamilnadu	32.48	1650	20.55	1510	94.5
Uttar					
Pradesh	48.28	2220	31.22	2040	61.0
West Bengal	40.80	2080	31.85	1900	81.0
ALL INDIA	37.27	1970	27.09	1890	74.5

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.

REFERENCES

- BAKER D., G.EPSTEIN and R.POLLIN Eds 1998, *Globalization and Progressive Economic Policy* Cambridge: Cambridge University Press.
- CORNIA G. A., R. JOLLY and F. STEWART Eds 1987, *Adjustment with a Human Face Vol.1*, Oxford: Clarendon Press.
- DEATON, A. 2003a "Adjusted poverty estimates for 1999-2000"
- _____ 2003b "Prices and Poverty 1987-2000". Both papers in *Economic and Political Weekly* Vol.38, January 25-31.
- KAHN, R. F., 1931 "The Relation of Home Investment to Employment", *Economic Journal* 41,2, 193-198.
- HALEVY J., and JEAN-MARC FONTAINE, Eds, 1998, *Restoring Demand in the World Economy*, Cheltenham,UK: Edward Elgar.
- KINDLEBERGER, C.P., 1987, *The World in Depression 1929-1939*, Pelican Books
- MEHTA , J., and S. VENKATARAMAN , 2000, "Poverty Statistics – Bermicide’s Feast” *Economic and Political Weekly*, Vol. 35, July 1
- NAYYAR, R., 1991, *Rural Poverty in India* (Oxford University Press).
- PATNAIK P. and C. P. CHANDRASEKHAR, 1995, "The Indian Economy under Structural Adjustment", *Economic and Political Weekly*, November 25.
- PATNAIK , P 2000, "The Humbug of Finance" *Chintan Memorial Lecture*, delivered on Jan. 8, 2000 at Chennai, India. Available on website (www.macrosan.org).
- PATNAIK, U., 1996 'Export-oriented agriculture and food security in developing countries and India' *Economic and Political Weekly* Vol.31 Nos.35-37, Sp. Number 1996, reprinted in *The Long Transition - Essays on Political Economy* (Delhi: Tulika, 1999).
- _____ 2002, "Deflation and Deja-Vu" in Madhura Swaminathan and V K Ramchandran Eds, *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 J.Ghosh and C.P. C handrasekhar, Eds. *Work and Welfare in the Age of Finance* (Delhi: Tulika)
- _____, 2003b "Food Stocks and Hunger - Causes of Agrarian Distress” *Social Scientist* Vol.31 Nos.7-8 July-August .
- _____, 2003c "Global Capitalism, Deflation and Agrarian Crisis in Developing Countries” Social Policy and Development Programme Paper Number 13, United Nations Research Institute for Social Development (UNRISD) October 2003
- _____, 2004 "The Republic of Hunger” *Social Scientist*, Vol.32, Nos.9-10, Sept.-Oct.
- ROBINSON, J. V., 1962, *Economic Philosophy*, London: C A Watts & Co.
- SWAMINATHAN, M., 2002 "Excluding the Needy - the Public Provisioning of Food in India” *Social Scientist*, Vol.30, Nos. 3-4, March-April.