IMPACT OF GLOBAL CRISIS ON FOOD COMMODITIES IN INDIA

Dr. A. Merlin Thanga Joy

Abstract

During the past few years, there was a significant increase in global food prices due to several structural and cyclical changes in many factors. The increase in food prices in India was much lower as compared to sharp increase in global prices due to various measures. Cereal prices in India increased only 23 per cent as compared to global price increase of 150 per cent during 2009 to 2012. However, the food prices in the last two years have been higher than those in the period mid-1990s to 2004. Presently, the inflation for food articles (more than 10%) is higher than the general inflation (below 6%). The volatility in food prices is likely to continue

and would harm the poor. Even before the food crisis, the poor and vulnerable were significantly left behind. Poor people spend 60 to 70 per cent of their income on food and they have little capacity to adapt as prices rise and wages may not adjust accordingly. Thus, the situation in india can still pose a threat to food security of the country.

Key Words: Inflation – Global crisis – Food price – Essential food commodities- Food security – Productivity

1.1 Introduction

During the past few years, there was a significant increase in global food prices due to several structural and cyclical changes in many factors. The increase in food prices in India was much lower as compared to sharp increase in global prices due to various measures. Cereal prices in India increased only 23 per cent as compared to global price increase of 150 per cent during 2005 to 2008. However, the food prices in the last two years have been higher than those in the period mid-1990s to 2004. Presently, the inflation for food articles (more than 10%) is higher than the general inflation (below 6%). The volatility in food prices is likely to continue and would harm the poor. Even before the food crisis, the poor and vulnerable were significantly left behind. Rising food prices would further undermine the food security and livelihoods of the most vulnerable by eroding their already limited purchasing power. Poor people spend 60 to 70 per cent of their income on food and they have little capacity to adapt as prices rise and wages may not adjust accordingly. Thus, the situation in India can still pose a threat to food security of the country.

1.2 Objectives of the Study

1. To examine the global factors that affects the rising food prices in India.



Dr. A. Merlin Thanga Joy Asst. Professor School of Management Studies, Noorul Islam Centre for Higher Education, Kumaracoil – 629180, K.K.Dist. Tamil Nadu E-Mail : merlinsn@yahoo.in

- To offer suggestions to protect the livelihood of the vulnerable community because of price rise in food commodities.
- 3. To suggest measures to control the price of essential food commodities in near future.

1.3 The global food crisis

The global financial crisis drew international attention away from the food crisis, but this continues to fester and even grow. When the global food crisis first hit international headlines in 2008, international bureaucrats referred to the current problems in the world food situation as "a silent tsunami", but the truth is that it was not a sudden and unexpected crisis: the signs have been around for some time now and it could easily have been seen to be coming. Even so, its impact has been powerful and already quite devastating, as food shortages and high prices of food have adversely affected billions of people, especially the poor in the developing world.

It is also very much a man-made crisis, resulting not so much from ineluctable forces of global supply and demand as from the marketoriented and liberalising policies adopted by choice or compulsion in almost all countries. These policies have either neglected agriculture or allowed shifts in global prices to determine both cropping patterns and the viability of farming, and also generated greater possibilities of speculative activity in food items. Cultivators in developing countries have been ravaged by the fearsome combination of exposure to import competition from highly subsidised agriculture in developed countries, removal of domestic protection of inputs and reduced access to institutional credit - to the

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point that even the global increase in agricultural prices after 2002 did not compensate sufficiently to alleviate the pervasive agrarian crisis in much of the developing world.

1.4 Major Reasons for Global Food Crisis

Two policy factors affecting global food supply require special note. The first is the biofuel factor: the impact of both oil prices and government policies in the US, Europe, Brazil and elsewhere that have promoted biofuels as an alternative to petroleum. This has led to significant shifts in acreage to the cultivation of crops that can produce biofuels, and diversion of such output to fuel production. For example, in 2007 the US diverted more than 30 per cent of its maize production, Brazil used half of its sugar cane production and the European Union used the greater part of its vegetable oil seeds production as well as imported vegetable oils, to make biofuel. In addition to diverting corn output into non-food use, this has also reduced acreage for other crops and has naturally reduced the available land for producing food.

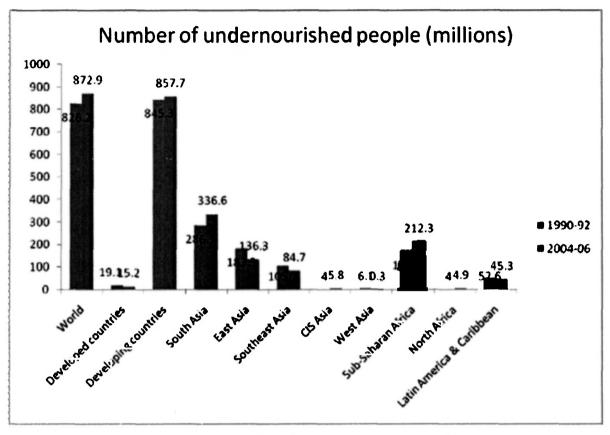
The second factor is the policy neglect of agriculture over the past two decades, the impact of which is finally being felt. The prolonged agrarian crisis in many parts of the developing world has been largely a policydetermined crisis. Inappropriate policies have several aspects, but they all result from the basic neo-liberal open market-oriented framework that has governed economic policy making in most countries over the past two decades. One major element has been the lack of public investment in agriculture and in agricultural research. This has been associated with low to poor yield increases, especially in tropical agriculture, and falling productivity of land. Greater trade openness and market orientation of farmers have led to shifts in acreage from traditional food crops that were typically better suited to the ecological conditions and the knowledge and resources of farmers, to cash crops that have increasingly relied on purchased inputs.

But at the same time, both public provision of different inputs for cultivation and government regulation of private input provision have been progressively reduced, leaving farmers to the mercy of large seed and fertiliser companies, input dealers. As a result, prices for seeds, fertilisers and pesticides have increased guite sharply. There have also been attempts in most developing countries to reduce subsidies to farmers in the form of lower power and water prices, thus adding to cultivation costs. Costs of cultivation have been further increased in most developing countries by the growing difficulties that farmers have an accessing institutional credit, because financial liberalisation has moved away from policies of directed credit and provided other more profitable (if less productive) opportunities for financial investment. So many farmers are forced to opt for much more expensive informal credit networks that have added to their costs.

The lack of attention to relevant agricultural research and extension by public bodies has denied farmers access to necessary knowledge. It has also been associated with other problems such as the excessive use of ground water in cultivation; inadequate attention to preserving or regenerating land and soil quality; the over-use of chemical inputs that have long run implications for both safety and productivity. Similarly, the ecological implications of both pollution and climate change, including desertification and loss of cultivable land, are issues that have been highlighted by analysts but largely ignored by policy makers in most countries. Reversing these processes is possible, and of course essential. But it will take time, and also will require not only substantial public investment but also major changes in the orientation and understanding of policy makers.

All this mean that the number of hungry people actually increased for the world as a whole, and particularly for certain developing regions. Far from halving, or even decreasing, the number of malnourished people globally increased by more than 50 million between the early 1990s and mid-2000s.

This was entirely because of increasing hunger in the developing world, as the numbers declined in developed countries. East and Southeast Asia also showed good performance in terms of falling numbers of malnourished people, but such numbers increased quite sharply in South Asia (by 50 million) and Sub-Saharan Africa (by 44 million). The surprise is that the growing prevalence of hunger and food insecurity was associated with relatively high GDP growth in several regions, such as India and countries in Latin America. The contrast with East and Southeast Asia is a stark one, and points to the role of public policy in ensuring that aggregate income growth translates into better provision of basic needs such as food for the general population.



Source: Report on State of Food Insecurity in the World 2009, FAO

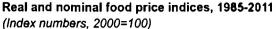
While this was the state before the global economic crisis, the crisis obviously made matters much worse. The intensity of the food crisis that hit many developing countries from 2008 was particularly on account of the very sharp global volatility in food prices. Globally, the prices of many basic food commodities had not risen faster for more than three decades. In fact, even in recent years, food prices internationally had shown only a modest increase until early 2007. But thereafter they zoomed up, with around 40 per cent increase in world food prices over 2007. This trend accelerated in the first few months of 2008, but then the subsequent period has been marked by extreme price volatility. Wheat prices increased by 46 per cent in the short period between 10 January and 26 February, fell by as much by 19 May, increased again but to a lesser extent (by only 21 per cent) until a minor peak in

early June, and then have been falling again, albeit with fluctuations. Other food grain prices have followed a similar pattern. Rice prices increased by nearly 150 per cent in the first 100 days of this year, and then fell to just above the level at the start of the year.

1.5 Poverty and Food Crisis in the world

Nearly one billion people in the world are now hungry ; an additional 115 million people are suffering from hunger as a result of the combined impacts of rising food prices and the global economic recession. Two recent prices spikes have shown the limitations of the global food provisioning system. In 2007–2008, commodity prices doubled, and the estimated number of hungry people topped one billion, while food riots spread through the developing world. In 2010–2011, food prices increased again by 21 percent.





Source: UNCTAD secretariat calculations, based on UNCTAD stat Commodity Price Statistics and UN Statistics Division, Monthly Bulletin of Statistics, various issues

Food prices have increased at an annual average rate of 12 per cent since 2002, despite the trend shift during 2009. Prices for rice, wheat and maize, traditional food staples, rose substantially during the global economic crisis. Further, climate change, leading to increasingly frequent natural disasters, the growing connections between energy and food markets as a result of the rising demand for biofuels, and the increased financialization of food and agricultural commodities seem to indicate that price volatility will remain an important problem in the near future. In addition, the fundamental causes of relatively high prices seem to persist; in particular, consumer demand in rapidly growing economies will increase, and the population continues to grow. On the supply side, challenges must be met to deal with the increasingly scarce natural resources in some regions, as well as declining rates of yield growth for some commodities.

1.6 Macro policy Issues on the Rise of Food Prices in India

There are five major drivers for rising global food prices which has an impact over India. They are: (a) long term supply problems; (b) rise in oil prices; (c) Changes in demand due to bio fuels; (d) depreciation in dollar and low interest rate in the US and speculative activities; (f) export restrictions of developing countries. Thus, surge in food prices is both a real and a monetary phenomenon and both marketdriven and policy-induced'. Various issues related to the food security in India is discussed below:

 In spite of surplus food-grains stock, it is also a reality that a vast number of people do not have enough money to feed themselves twice a day. Even in 1999-), 20% of the people of India were below the poverty line.

- (ii) Though the percentage of people below poverty line declined substantially from 36% in 1993-94 to 20% in 1999-2000, yet in absolute number it was 210 million which by no means is a small number.
- (ill) There has been a gradual shift from cultivation of food crops to cultivation of fruits, vegetables, oil seeds, and crops which act also as industrial raw materials. This had led to the reduction in net sown area under cereals, millets and pulses.
- (iv) The use of more and more land for construction of factories, ware-houses and shelters has reduced the land under cultivation and now fertile land for farming, is no longer available.
- (v) The productivity of land has started showing a declining trend. Fertilizers, pesticides and insecticides, which once showed dramatic results, are now being held responsible for reducing fertility of the soil.

1.7 Ensuring Food security in India

It is not surprising that questions of food security and the right to food have become such urgent political issues in India today. Rapid aggregate income growth over the past two decades has not addressed the basic issue of ensuring the food security of the population. Instead, nutrition indicators have stagnated and per capita calorie consumption has actually declined, suggesting that the problem of hunger may have got worse rather than better.

Consider the evidence on nutritional outcomes from the most recent National Family Health Survey (NFHS) conducted in 2005-06. According to this, 46 per cent of children below 3 years are underweight; 33 per cent of women and 28 per cent of men have Body Mass Index (BMI) below normal; 79 per cent of children aged 6-35 months have anaemia, as do 56 per cent of ever married women aged 15-49 years and 24 per cent of similar men; 58 per cent of pregnant women have anaemia. The national averages mask locational differences: all these indicators are much worse in rural India.

Further, these indicators have scarcely changed, or have changed very little, since the previous NFHS in 1998-99. In terms of calorie consumption the picture is even worse. According to the National Sample Survey Organisation (NSSO) large survey of 2004-05, the average daily intake of calories of the rural population has dropped by 106 Kcal (4.9 per cent) from 2153 Kcal to 2047 Kcal from 1993-94 to 2004-05 and by 51 Kcal (2.5 per cent) from 2071 to 2020 Kcal in urban areas. The average daily intake of protein by the Indian population decreased from 60.2 to 57 grams in rural India between 1993-94 and 2004-05 and remained stable at around 57 grams in the urban areas during the same period.

The all India averages do not capture the wide variation across states and even within states. For example the India State Hunger Index 2008 (brought out by the International Food Policy Research Institute) shows very large differences across 17 major states, ranging from 13.6 for Punjab to 30.9 for Madhya Pradesh. If these states could be compared to countries in the Global Hunger Index rankings, some states in India have index scores at the bottom: Bihar and Jharkhand rank lower than Zimbabwe and Haiti, and Madhya Pradesh falls between Ethiopia and Chad.

State	Prevalence of calorie undernourishment (%)	Proportion of underweight children < 5 years (%)	Under-five mortality rate (%)	Hunger Index Score	Hunger Index Rank
Punjab	11.1	24.6	5.2	13.63	1
Kerala	28.6	22.7	1.6	17.63	2
Andhra Pradesh	19.6	32.7	6.3	19.53	3
Assam	14.6	36.4	8.5	19.83	4
Haryana	15.1	39.7	5.2	20.00	5
Tamil Nadu	29.1	30.0	3.5	20.87	6
Rajasthan	14.0	40.4	8.5	20.97	7
West Bengal	18.5	38.5	5.9	20.97	7
Uttar Pradesh	14.5	42.3	9.6	22.13	9
Maharashtra	27.0	36.7	4.7	22.80	10
Karnataka	28.1	37.6	5.5	23.73	11
Orissa	21.4	40.9	9.1	23.80	12
Gujarat	23.3	-14 .7	6.1	24.70	13
Chhattisgarh	23.3	47.6	9.0	26.63	14
Bihar	17.3	56.1	8.5	27.30	15
Jharkhand	19.6	57.1	9.3	28.67	16
Madhya Pradesh	23.4	59.8	9.4	30.87	17
India	20.0	42.5	7.4	23.30	
China				7.1	
Vietnam				12.6	
Sri Lanka				15.0	
Nepal				20.6	
Pakistan				21.7	
Bangladesh				25.2	
Zimbabwe				23.8	

State Hunger Index, 2007

Note: The calorie undernourishment indicator is based on a very low cut-off of 1632 kcals per person per day, to allow comparison with the Global Hunger Index. By contrast, the FAO assumes 1800 kcal per person per day to be the minimum below which there is moderate or severe undernourishment.

The table gives some idea of the variation among major states and also shows how India is placed as a whole in relation to other Asian countries. It is evident that India's performance with respect to hunger is abysmal particularly in relation to other large developing countries like China, but even in comparison to the rest of South Asia, with only Bangladesh

having a higher value of the index. Indeed, India's index value is close to that of Zimbabwe, a country which is in the throes of severe hyperinflation and collapse of domestic food markets. Within India, some of the supposedly richest states with most rapid recent growth of GDP, such as Maharashtra, Karnataka and Gujarat, perform very poorly on the hunger index, clearly much worse than Kerala but even worse than Assam. West Bengal is close to the middle among the major states, and slightly below the national average in terms of the hunger index, which means that it is an important policy concern also within this state.

The recent rise in food prices in India is likely

to have made matters much worse, and the effects of the global crisis on employment and livelihoods within the country are likely to cause further deterioration in people's access to food. Clearly, therefore, food security is currently one of the most important policy areas, and demands stressing a rights-based approach to public food strategy have gained ground. This is what underlies the current discussion around the legislation on the right to food, which has been put in the 100-day agenda of this UPA government.

The most loose definition of food security is one in which the population does not live in hunger or fear of starvation. But recent definitions have been more stringent. According to the Food and Agriculture Organisation (FAO), food security in a particular society exists "when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."

To begin with, national food security requires increasing the domestic production of food, so that the country is not dependent upon imports. This is not simply a matter of preferred practice, but a policy imperative since it has huge strategic implications. India is a large country in most world food markets, in that its entry especially as an importer can dramatically affect global trade prices. (For example, India's current production of rice is more than six times the total amount of rice traded in world markets.) Even the anticipation of more imports by India can cause world trade prices to rise. When this effect is combined with that of the speculative forces described earlier, the result can be extremely adverse. In any case, the extreme volatility of global food prices noted earlier makes it difficult and undesirable to base a national food security policy on even partial

import dependence. Also, it is well known that food can be used as a strategic weapon in geopolitical terms. Therefore the first priority of a national food policy must be to increase domestic food production through improved agricultural productivity. This requires making cultivation financially viable as well as more productive, through a range of measures such as those described earlier. A policy of providing minimum support prices that reach all farmers is an essential part of this, and should be part of a voluntary rather than forced system of public procurement.

While it is important for the government to be aware of the need for a multi-pronged approach to the problem that has to extend beyond a legal promise if it is to be successful. Even so, a legal commitment to public food distribution can also play a role in extending and improving public food delivery so that it reaches all the people. Public procurement has to be combined with public distribution.

1.8 Measures to overcome Global crisis on Food commodities in India

A law that ensures universal food access and assigns responsibility and culpability would force governments at both central and state levels to take up the entire gamut of issues, which relate not just to actual food distribution but also to its production and patterns of consumption, so as to eventually ensure genuine food security. The key point here is that such a law *must guarantee universal access*. Yet the version of the proposed "Right to Food" bill that has been circulated by the central government to the states is a travesty of the original promise, and a negation of the spirit of ensuring genuine food security.

There are many reasons why targeted

schemes for BPL, and this one in particular, are unlikely to work. Most significant of all, there are the well known errors inherent in targeting, of unjustified exclusion of the genuinely poor and unwarranted inclusion of the non-poor. These are not simply mistakes that can occur in any administrative scheme, they are inbuilt into systems that try to provide scarce goods to one section of any population. In hierarchical and discriminatory societies like India, where social and economic power is unequally distributed, it requires no imagination to realise that making a scarce good (cheap food) supposedly available only to the poor is one of the easiest ways to reduce their access.

The second problem relates to the distinction between food insecurity and poverty as currently defined. It is evident from NSSO and NFHS surveys that the proportion of the population that is nutritionally deprived is significantly larger than the "poor" population, and in many states they are not completely overlapping categories either. To deal with food insecurity in an effective manner, it is counterproductive to base public food provision on a predefined group of the "poor", which would deprive a large number of others who are also food-insecure.

Part of the reason for this relates to the third problem, the absence of any notion of dynamics in a rigid law that defines "poor" and "vulnerable" households in a static sense and changes the group only at infrequent intervals. Households – and people within them – can fall in or out of poverty, however defined, because of changing material circumstances. Similarly they can also go from being food-secure to food-insecure in a short time. The reasons can vary: crop failures, sharp rises in the price of food, employment collapses, health issues that divert household spending, the accumulation of debt, and so on. Monitoring each and every household on a regular basis to check whether any of these or other features has caused it to become food-insecure is not just administratively difficult, it is actually impossible.

This is why all successful programmes of public food distribution, across societies, have been those that have gone in for universal or near universal access. This provides economies of scale; it reduces the transaction costs and administrative hassles involved in ascertaining the target group and making sure it reaches them; it allows for better public provision because even the better off groups with more political voice have a stake in making sure it works well; it generates greater stability in government plans for ensuring food production and procurement.

Even among the states of India, those states that have a better record of public food distribution are those that have gone in for near-universal access. Kerala, Tamil Nadu and Andhra Pradesh all have defined BPL in such an inclusive way that the vast majority of the population is included, which makes their schemes close to universal.

The notion that a universal scheme that provides subsidised food to all households is too expensive is not tenable either. Consider the maximal possible estimate of such spending. If all households in the country are provided 35 kg of food grain per month, that would come to around 90 million tonnes. At current levels of subsidy this would cost around Rs 120,000 crore. This may seem like a lot, but the current food subsidy already amounts to around Rs 50,000 crore, so this is an additional Rs 70,000 crore – or around 1.5 per cent of GDP. Surely this is not too much to allocate to ensure that no one goes hungry in what should be a civilised society? In any case, compare the amount of Rs 70,000 with the huge amounts (nearly Rs 300,000 crore) that have been given away as tax benefits and other concessions to corporate over the past year, and it becomes a trivial amount.

Any programme of national food security must be combined with a concentrated focus on improving food grain production in the country, so that we are not dependent upon imports in a volatile global market. This requires much more attention to the requirements of farmers, and speedy implementation of the many reforms that have already been suggested by the Farmers' Commission to improve the productivity and financial viability of farming, particularly of food crops.

Fourth, to make this successful it is also necessary to avoid instability in domestic prices of food grain and curb speculative tendencies. This does not simply mean cracking down on hoarders, which is part of the official publicity around any period of price rise. It also requires preventing speculative activity in futures markets, which means that there must be a ban on futures markets in all essential commodities. Apart from this the government can also insist on the following measures to maintain the need of food for the growing population and to meet the minimum food requirement with the use of biotechnology.

- (i) Biotechnology is used to modify different crops genetically to increase the yield per hectare.
- (ii) Genetically modified crops require less water compared to other crops.
- (iii) Biotechnology made the crops more resistant to insects' pests and diseases.

(iv) Biotechnology benefits both rich and poor farmers and make the environment safe and free from pollution.

1.9 Conclusion

Many social protection programmes are currently being implemented in India. Among these, the major schemes for the poor fall into the following four categories:

(i) food transfer like the PDS and supplementary nutrition; (ii) self-employment; (iii) wage employment; and (iv) social security programmes for unorganized workers. Many women-specific programmes are also under implementation. Some of these social protection schemes, however, need to be scaled up and made more effective in order to reduce the negative effects of the food price rise and the financial crisis. A study on East Asia and South-east Asia has shown that social protection and other intervention programmes can reduce the adverse impact of the two crises on the health and nutrition of the poor and vulnerable. These are all necessary and also eminently doable measures - but only if the central government is actually serious about ensuring real food security on the country. And such seriousness can only be brought about by mass mobilisation in favour of such demands.

References

- ADB (2008), "Food Prices and Inflation in Developing Asia: Is Poverty Reduction Coming to an End?", Asian Development Bank, Manila
- 2. Ahmed, Sadiq (2008), "Global Food Price Inflation: Implications for South Asia, Policy Reactions and Future Challenges", paper presented at the conference on "South Asia Regional Conference on Managing Food Price Inflation" organized by the World Bank, November 15-16, Dhaka

- 3. Bhutta, Z,A., F.Ahmad Bawany, A.Feroze, A.Rizvi (2008), "The Impact of the Food and Economic Crisis on Childhealth and Nutrition", Draft Working Paper prepared for UNICEF conference East Asia and the Pacific Islands, 6-7 January 2009, Singapore
- 4. Braun, Joachim von (2008), "Food and Financial Crisis: Implications for Agriculture and the Poor", IFPRI, Washington D.C.
- Bouis, Howarth (2008), "Rising Food Prices will Result in Severe Declines in Mineral and Vitamin Intakes of the Poor", Harvestplus, IFPRI, Washington, D.C.
- CENTAD (2008), "High Food Prices in India: Factors, Consequences and Mitigation", Centre for Trade & Development", Study Report, New Delhi
- Chandrasekhar, C.P. and Jayati Ghosh (2008), "India and the Global Financial Crisis", Macro Scan, Business Line, October 2008
- Dercon, Stephan (2008), Children and the Food Price Crisis", Young Lives Policy Brief 5, Department of International Development, Queen Elizabeth House, University of Oxford.
- Dreze, Jean (2006), "Universalisation with Quality: ICDS in a Rights PerspectiveD, Economic and Political weekly, Vol XLI, No.34, Aug 26-September 1.
- 10. Dev, S.Mahendra, K.subbarao, S.Galab and C.Ravi (2006) "Safety Net Programs in India: Outreach and Effectiveness: Village Level Perspectives in Three States", background paper prepared for a study on social protection by the World Bank
- Dev, S.Mahendra (2008), "Inclusive Growth in India: Agriculture, Poverty and Human Development", Oxford University Press, Delhi

- Dev, S.Mahendra (2008a), "Food Prices in India: Trends and Policy Reactions", paper presented at the conference on "South Asia Regional Conference on Managing Food Price Inflation" organized by the World Bank, November 15-16, Dhaka FAO (2008), "Financial Crisis could deepen food crisis",www.fao.org/ newsroom/news/ 2008/10000937/index.html
- IFPRI (2008), "The India State Hunger Index: Comparisons of Hunger Across States", Purnima Menon, Anil Deolalikar, Anjor Bhaskar, October 14, New Delhi
- 14. Kannan, K.P. (2008), "Dualism, Informality and Social Inequality: An informal Economy Perspective of the Challenge of Inclusive Development in India", Presidential Address, 50th Annual Conference of the Indian Society of Labour Economics, December 13-15, 2008, Giri Institute of Development Studies, Lucknow
- NCEUS (2006), "Report on Social Security for Unorganized Sector" National Commission for Enterprises in the Unorganized Sector, Delhi
- Panagariya, Arvind (2008), "What global crisis means for India?". Economic Times, 27 November, 2008
- 17. Patnaik, Prabhat (2008), "The Present Crisis and the Way Forward", The Hindu, November 14 2008
- Quisumbing, A., Ruth Meinzen-Dick, and Lucy Bassett (2008), "Helping Women Respond to the Global Food Price Crisis", IFPRI policy brief 7, Washington D.C.
- 19. Rao, CHH (2005), "Agriculture, Food security, Poverty and Environment", Oxford University Press, New Delhi.
- 20. Ravallion (2003), "The Debate on Globalization, Poverty & Inequality: Why Measurement Matters", World Bank Policy Research Working Paper 3038.