

**Vol. 42 No.1&2**

**Jan.-June - 2011  
&  
Jul. - Dec.- 2011**

**ISSN 0976-5409**

# **Orissa Economic Journal**



**ORISSA ECONOMICS ASSOCIATION  
BHUBANESWAR**

# **Orissa Economic Journal**

**Vol. 43 No. 1 & 2**

**Jan.-June & July-Dec. 2011**

**Editor :**

**Prof. Baidyanath Misra**

**17, Saheed Nagar**

**Bhubaneswar**



**ORISSA ECONOMICS ASSOCIATION**  
**BHUBANESWAR**

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## **EDITORIAL**

# **Growth and Social Structure**

**Prof. Baidyanath Misra**

Along with prolonged economic growth, there are concomitant transformation in attitudes, institutions and ideologies which include the general urbanization process and the adoption of the ideals, attitudes and institutions of what has come to be known as modernization. Gunnar Myrdal in his Asian Drama has given a detailed list of such of these modernization ideals particularly in developing countries. We will mention some of these ideals which are relevant to India. The most important one is Rationality. The first Indian Prime Minister, Jawaharlal Nehru discussing about the needs of Indian society in the 'Strategy of the Third Plan' emphasizes the importance of science and technology. What it means, 'India in its development goal should employ new techniques of production whether it is on the farm, in the factory or in transport. Modern technique is not a matter of just getting a tool and using it. Modern technique follows modern thinking. You cannot get hold of a modern tool and have an ancient mind. It won't work'. This means the quest for rationality implies that opinions about economic strategies and policies should be logically valid inferences rooted as deeply as possible in knowledge and relevant facts.

In analyzing the problem of technological change, it has been said that the new way of life is only possible through a deliberate cultivation of scientific attitude that removes the dead wood of superstition, kills the fanaticism of the mind and kindles a new spirit of enquiry, analysis and objectivity. A mental revolution is necessary. All this implies we have to change old age practices, ways of thought, ways of action. We have got to get out of many of these traditional ways of thinking, traditional ways of acting or traditional way of distinguishing different groups of people on the basis of distinct occupations. Jawaharlal Nehru has further pointed out, 'We have 400 million people in India (it was so in 1960s), very fine people, very capable people, very intelligent people, but people who have functioned for ages in certain ruts of thought and action'. The desire for development and planning flows directly from

the quest for rationality and represents in the economic and social field the all-embracing and comprehensive expression of modernization ideals. We mention social change because any society which is concerned itself with growth and do not think of social justice or graciousness of living or playing its proper part in the world would not be worth living in.

The second change which we emphasise is freedom. We consider freedom in a comprehensive sense - not confined to laissez-faire or socialism, nor between parliamentary democracy or dictatorship of the proletariat. This freedom is the freedom of everybody to develop themselves to the full, not by ignorance, inequality or custom, but by the need to respect the right of others and duty to make some reasonable contribution to society (Amartya Sen, Development as Freedom). Freedom is always necessary both for the individual and to society as whole. If the individual does not have any freedom to express his views freely, he cannot have any initiative to think and evolve any new idea for change. Innovation is possible when the individual has got the right to think and express his views openly without any restriction. This free thinking does not mean that he will prevent others to express their views. Japan is a clear case where individual freedom enabled the people to contribute significantly to improve the economy. For example, Meiji Restoration which began the rapid growth in Japan was brought about by people in revolt, clans which had been kept out of power, warriors who had lost their function in the long Tokugawa peace, merchants whom Japanese society had always treated with contempt. Once they had succeeded in their revolution, they not only contributed to economic change, but they also encouraged others to change (Maurice - Zinkin, Growth, Change and Planning'). But freedom does not mean anything one likes. It means the absence of restraints upon the fundamental conditions of well being. It means from limitations in respect of those opportunities which are recognized to be essential to the development of personality. We consider the positive aspect of freedom. It means the existence of those opportunities which improve common well being. Laski says, 'By liberty I mean the eager maintenance of that atmosphere in which men have the opportunity to be their best selves'. Liberty does not sacrifice rule of law. It only emphasizes the exercise of initiative for creating conditions for social development. So it is not negation of law. In such an environment, both individual and society can simultaneously improve.

Another important change which helps individual to think, take initiative and make certain amount of innovation is proper type of education. Education itself is important. It entitles one to think new things. It creates consciousness among the people to find out what is good and what is bad. It can certainly help educated people to evolve new ideas. Once Aristotle was asked how much educated men are superior to the uneducated. 'As much', said he, 'as the living are to the dead'. This is the importance of education for human beings. While considering economics of education, we try to make a distinction between classical and technical education. The training in classics which made Confucian scholar normally made a gentleman and often made an administrator. It did not make an innovator and certainly not an economic innovator. We do not belittle classical education. These are certainly desirable. In the context of growth, the capacity to think is especially valuable because there goes with it the capacity to ask question, why? Why changes not only the nature of society, but the nature of development. Whether there should be large scale industry or small scale industry, how much collaboration should there be between agriculture and industry or whether growth should have the priority of economic development or human development - all these depend on why? But when you want to participate in the process of development, we must have some vocational training. When the level of development improves inputs required for accelerating change become different. When you ask a question to Adam what he requires for sustaining his livelihood, he would like to have a power spray for apple trees and a short gun for serpents. Even today we need them. But at the same time we need more engineers, doctors, agricultural scientists, accountants, economists, managers and so on -all of them will contribute to the process of development. Let us not forget that we require both general and technical education. General education to develop the human resources which constitute the ultimate basis for the wealth of nations and technical education which is the institutional mechanism for developing human skill and knowledge considered as a type of formal education. Both ultimately determine the character and pace of its economic and social development.

Another worry which dominates Indian social system is the caste system, that is a living reality in politics and administration. Neither Gandhi nor Periyar nor Ambedkar could abolish it. Even after sixty

years of planned economic development and parliamentary democracy, there is any change in the rigidity of social structure. Even now a man born in a particular caste lives and dies in that caste. During the Mahabharat era, a great Luminary like Karna was denounced at every stage as the son of a charioteer. We have not yet crossed the Mahabharat era. It is surprising that in 2011 census counting of persons is being done on the basis of caste. The old law givers of India repeatedly said that social institutions were not ends in themselves, but only to the social good, and might be reconstituted or even discarded to suit the changing conditions of each age. Due to historical circumstances, the classes became castes with numerous sub divisions, and a cold rigidity made them freeze. The four classes were designed as professional groups based on the principle of division of labour. They were meant to be complementary classes, each fulfilling certain specific social needs. It is the principle of integration and coordination then, that must have weighed with the builders of the class' system. According to Mahatma Gandhi, "It is a law of spiritual economics. It has nothing to do with superiority or inferiority".

It is unfortunate that even with modernization and industrialization, caste system has not been eroded. On the other hand the caste system in modern India has become an important factor in politics. Any important politician will tell you that the working of the entire political selection process is based on castes. In essence, the government and legislatures have become caste federations. Again once in government, the ruling caste combination determines the composition of the other parts of the political structure, including High Court judges and makes nominations to various discretionary appointments like Chairmen, members of various Commissions, Boards and Corporations. We can call it an unethical culture. Such traditional and rigid social and political system not only discourages full and effective utilization of human resources, but also perpetuates inefficiency and very often leads to blatant corruption. A time has come when we should take some drastic step or some revolutionary measure which would change the political, social and economic landscape and create a society, based not only on democracy but equity and justice. No modern economy can thrive on such a backward, traditional and inequitable system.

We may also mention here that one of the major difficulties in India is the governance challenge. This is the general characteristic of

most of the developing countries. That is why it is said by Gunnar Myrdal that India is a soft state. Even though there has been a lot of progress in different fields, Prem Shankar Jha sees the governance crisis as the ungovernability of India. There is a lot of economic growth and improvement in foreign investment. But we cannot do a business within a specified period of time. It has been calculated that India takes almost 89 days to clear a business by clearing eleven procedures (inspite of liberalisation) as against on average of 46 days in South Asia as a whole. And for closing a business the Government also takes 10 years on average while enforcing a contract can take as long as 425 days. In case of long term projects like irrigation dams, mega industries or railways construction time specified in initial stages exceeds 10 to 15 times along with abnormal increase in allotted funds. The government has initiated several measures to increase the level of employment and reduce the extent of poverty. The government of India subsidies in different fields come to almost one trillion rupees. Yet poverty looms large in the country, almost one third of people are still below the poverty line. The Constitution has enshrined several measures to control corruption and ensure integrity in the public field like independent judiciary, independent election commission, central vigilance commission and the Parliament have enacted several measures to empower civil society to control the discretionary powers of the political authority like Public Interest Litigation or Right to Information. Yet why the level of corruption has increased to more than half of GDP and regulatory power has increased in the administrative field. The basic foundation of democratic government is Rule of Law, but why some are more equal than others. The question which is often asked, why something works and some others do not work. That is why it is said, India is doing better, but feeling worse.

All these imply poor governance. And this imposes a huge cost on the economy and society. The poor suffer most, because they are powerless to resist requests for bribes, depend heavily on public goods and face daily humiliation from officers in charge of such public goods and police force who are insensitive to the plight of the poor. And the biggest cost of poor governance is that it destroys the credibility and legitimacy of the state in the eyes of the citizens. This is something India can ill afford. Something should be done to prevent it (K. Sarwar Lateef- The Governance of Challenge in 'Tomorrows India' ed. E.G.



Verghese). We have now come to a position where we can take some effective action to prevent such deterioration in administration since the civil society is being gradually organized to prevent some of the misdeeds that destroy the social fabric. We mention a few important ones for illustration.

1. many institutions have been created to cater to the needs of the people. But these institutions do not see citizens as their clients but rather as supplicants. Since politicians have a lot of discretionary power, they use their power and influence the officers to provide some special favour for their chosen clients. As a result of this many poor and deserving candidates are deprived of their legitimate benefit of public services. If the discretionary power of the politicians can some how be restricted and the right to information can be strengthened, we can eliminate many such malpractices. Representatives of Parliament or Legislative Assemblies are not accountable to the electorate, they are accountable to the party leadership. Political parties lack inner democracy. That is one of the major failures of the political system which perpetuates deception.

since election expenditures are now colossal, many representatives depend on commercial elements to raise funds for their election. Once they get assistance from them, they are compelled to help them in their business interests. As a matter of fact, politics in India depends on patronage. Further, since in many cases, muscle and money power decide the election result of candidates, criminals some how manage to get themselves elected to Parliament and Legislative Assemblies. In the absence of effective local government, voters are too distant from their elected representation. Since there is no control on them and the Election Commission does not have much authority to change the system, the democratic system leads to, as pointed out by Jayaprakash Narayan, (Governance and Growth in India, 'Some Aspects of Economic and Social Development' edited by S.Mahendra Dev & K.S. Babu) politics of plunder and rent seeking. We have both criminalisation of politics and politicization of crime. Criminals harass innocent people and you cannot do anything as litigation takes decades. As Yeats said, 'The best lack conviction and the worst are full of passionate intensity'.

In such cases common people are bound to suffer. Democracy cannot help them.

You cannot also expect any remedy from the civil service. Many of them are highly qualified and are capable to meet emergencies. But they are insensitive to the needs of common man. Their culture is different. The system in which they are working is colonial in nature. The administrative procedure is so dilatory that one cannot move speedily to solve any problem. The legal system is not so effective to check such dilatory process. It is also seen that bureaucrats are often politicized. The politicians use them to serve their own interests and they support such interests since their promotion and posting depend on them. In such an environment how can you expect justice. Secrecy is a fundamental attribute of administrative procedure. Anything can be done in secret and you cannot know what is happening, to economic programmes 'which are meant to help the poor. We remember what Coleridge said in his immortal poem, 'Water, Water every where, but not a drop to drink'. There is huge expenditure for the benefit of the poor, but they are deprived of all such benefits.

If the civil society can be alert and watchful, probably many of these impediments in administration and political system can be changed. The civil society now lacks awareness, awareness of what is happening in the government or in the political field. The middle class which can take a leading role in changing the social structure is still inactive. They have not yet been fully imbued with any philosophy of change. The economy is changing, but there has been no change in their thought process. Static symbols still dominate the society. Probably if we can improve education and health, there might be some change in the social environment. High income countries spend about 5.6 per cent of GDP on education and 6.5 per cent of GDP on health. In medium income countries, the expenditure on education is about 4.6 per cent of GDP and the expenditure on health is about 3.2 per cent. In India, we have been able to increase the number of educated people, but not their quality. Public expenditure on health is negligible. What is worse, the delivery system is far from satisfactory. In emphasising the need for improving education, Todaro in his 'Economics for a Developing Country' points out 'that the role of education in a developing nation provides ideas, man power, service for the furtherance of human equality, human dignity and human development'. We should therefore, emphasize

quality of education which will change the nature of the society. Similarly improved health conditions do have many desirable effects like raising labour input and efficiency, thereby increasing income per head and providing stimulus for active life. Human resources are the critical variable for effective provision of health care which enables human beings not only to resist diseases but also injustices meted out to them. We should therefore, try to strengthen both education and health system to make a healthy change in the social system which can resist injustices that are more or less inherent in a backward economy.



## **SECRETARY'S REPORT**

### **43rd Annual Conference, 2011**

Mr. President Prof. Panda; Revered Chief Guest Prof. D.C. Misra; Guest of Honour Prof. Baidyanath Misra; Chief Patron of the Conference and President of Governing Body of the College, S.J. Kanungo; Principal of the College, Prof. Singh; Local Secretary, Prof. Mishra; Organizing Secretary, Dr. Pradhan; respected Former Presidents and Secretaries of the Association; members of the Organizing Committee of the Conference; distinguished invitees; members of the media, Fellow Delegates, ladies and gentlemen.

It gives me immense pleasure to welcome you all to the 43<sup>rd</sup> Annual Conference of the Orissa Economics Association. We feel privileged to have with us our most revered teacher Prof. Devendra Chandra Misra to inaugurate the Conference. We are grateful to you Sir, for your kind gesture. We are fortunate to have in our midst Prof. Baidyanath Misra as the Guest of Honour for the Conference. We are thankful to you Sir, for your august presence.

I feel uniquely privileged to present before you a brief profile of our Association. Established in 1968, the Orissa Economics Association is one of the oldest registered regional academic associations in the country working for the promotion of the study and improving the methods of teaching in economics on the one and stimulating research on contemporary economic issues on the other. The membership of the Association is open to teachers in Economics, policy makers, professionals and research organizations. At the present the Association has 03 institutional members, 415 individual life members and annual members.

The Association has the distinction of organizing a two-day annual conference regularly since its inception with the healthy tradition of discussing two topics, one of which concerns with the Indian economy at large and the other, with the economy of the state of Orissa. The two topics chosen for this year's Conference are:

1. Food Security in India
2. Orissa State Finances

We are fortunate that Shri Sanjeeb Chandra Hota, Former Agriculture Production Commissioner of Government of Orissa has agreed to deliver the key note address on Food security in India and Shri Jugal K. Mohapatra, IAS, Principal Secretary to Government of Orissa in the Finance Department has agreed to deliver the keynote address on Orissa State Finances in this Conference.

Since 2009 we have been organizing a lecture in honour of Prof. Baidyanath Misra, an illustrious teacher, a noted economist and a prolific writer. Prof. Manoj

Panda, Director, Centre for Economic and Social Studies, Hyderabad has given his kind consent to deliver the third Prof. B. Misra lecture this year on the theme "Growth-Poverty Linkage in Orissa: A Reassessment." I express my sincere gratitude to Prof. Panda for having agreed to deliver the lecture.

The Association has been publishing its mouthpiece, the Orissa Economic Journal regularly since 1968. The journal has been accredited with an ISSN and has reached new heights in its standard under the stewardship of its editor, Prof. Baidyanath Misra. The association and the Journal have become an important part of the academic firmament of the state.

The Association is more than four decades old and it does not have a permanent source of finance and an office of its own. The Association is receiving publication grant from NABARD. It has also received a grant of one lakh of rupees in 2010 and 2011 from the Finance Department, Government of Orissa because of the sincere efforts of Shri Jugal Kishore Mohapatra, Principal Secretary of the Department. We are thankful to him for his kind help. We have received an amount of ten thousand rupees from the North Orissa University out of the surplus from the funds raised for the 42<sup>nd</sup> Annual Conference. We express our gratitude to the organizing committee for the 42<sup>nd</sup> Annual Conference and particularly to Prof. S.P. Rath, Vice-Chancellor of North Orissa University for their generosity.

I take this opportunity to express our deep sense of gratitude to our Chief Guest Prof D. C. Misra for having accepted our invitation at very short notice and inaugurating the Conference. We are equally grateful to our Guest of Honour Prof. Baidyanath Misra for his kind presence in the Conference. We are greatly indebted to Shri Trilochan Kanungo, Chief Patron for the Conference for his unstinted financial and infrastructural support for organising the conference. We are thankful to the members of the local organising committee and more particularly to Prof. Daitary Sahoo, Prof. Lingaraj Mishra and Dr. Krupasindhu Pradhan for the pains they have taken in organising the conference in a grand way.

I owe a great deal to the members of the Executive Body of the Association, especially to our President Prof. Sudhakar Panda, for their kind co-operation in conducting the business of the Association. My special debt of gratitude is due to Prof. Baidyanath Mishra, Prof. Bhabani Prasad Dash and Prof. Adwait Mohanty for their keen involvement, guidance and supervision in the functioning of the Association.

My debt of gratitude is due to the dignitaries, invitees, delegates and paper writers for their help in making this conference a grand success.

**Dr. Rabi N. Patra**  
Secretary



**PRESIDENTIAL ADDRESS**

**Bigger Growth or Better Growth?  
Taming the Rising Anger  
And Raising the Withering Hopes\***

**Sudhakar Panda\*\***

Esteemed Chief Guest, Prof. Devendra Chandra Misra, Esteemed Prof. Baidyanath Misra, Dr. Patra, Secretary of the Association, Sjt. Trilochan Kanungo, Patron of the Conference, distinguished economists of the state, invited guests, colleagues from the colleges and friends from the Reserve Bank, NABARD and the media. I feel privileged to have this opportunity on the occasion of the Annual Conference of the Orissa Economics Association to share my thoughts on a topic which is sensitive enough and has assumed increasing importance in the context of India's sustained efforts to achieve higher and bigger economic growth and global competitiveness. I know I have all the limitations and few strengths to speak on a theme which is very relevant for the development of the poorer sections of the society and particularly for the development of the disadvantaged sections of the community comprising the Scheduled Castes and Scheduled Tribes and other vulnerable groups who have been living in chronic poverty and have been agitating for their inalienable rights to live a life of their own with dignity and honour. I am sure this conference provides us with a rare opportunity for sharing our thoughts on growth, inclusive growth, social justice and equity for the backward classes and castes of the society who, instead of becoming the beneficiary of development, have been bearing the real costs of growth.

I would like to make my presentation brief. Since 1991, we have been focusing on growth. We have achieved, on an average, an annual growth rate of a little more than 6 per cent. We attained a growth rate of 8.9 per cent in the second quarter of 2010-11 and it is expected that

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\* Presidential address delivered in the inaugural session of 43rd Annual Conference of Orissa Economics Association, in February, 2011

\*\* Former Professor of Economics, Utkal University, Vanivihar, Bhubaneswar



our GDP may grow at a little more than 8 per cent per cent in 2010. We have successfully overcome the impact of the crisis caused due to the meltdown of the world financial system. We are recognized as a fast growing nation only next to China. Appropriate changes in India's monetary, taxation and public spending and trade and investment policies from time to time keeping pace and consistency with the developments at the international level created new sources of growth and dynamism for India's corporate sector and stimulated India's economic growth. You can say that India enjoyed a growth miracle over the last twenty years and it may soon turn out to be a powerhouse of the world economy.

Based on Washington Consensus, Government of India introduced wide ranging economic reforms in industry, trade, commerce, banking and finance. Corresponding policy reforms were also introduced in taxation, monetary policies and banking regulations. Each announcement of reform measures was expected to further contribute to the development of the economy and remove the constraints and imbalances that the country suffered from. All these policy and institutional changes were, in fact, initiated to create a market friendly environment that would facilitate growth, deregulate the economy and dismantle the plethora of rules and procedures that restricted business initiatives and closed the economy for investments from Indian industry and Multi National Companies. Each step was in the direction of reducing the dominant role of the state in economic development and leaving more and more space for private capital and investment. There was a tremendous sense of relief in important quarters that growth potentialities of the Indian industries will be fully exploited and the nation would be driven by great ambitions. With reasonably high and sustained growth, the problem of regional disparities can be addressed and the incidence of poverty can be expected to be significantly reduced. And the threat of things falling apart in India because of severe underdevelopment and 'chronic poverty' would disappear as there would be increased opportunities to mainstream the poor and underprivileged by generating and reshaping the possibilities of their development. That would be sharing the benefits of higher growth and this, in turn, can be expected to create greater integration and social harmony.

We managed our economic policies efficiently. Our economic fundamentals became stronger. The subprime global crisis which affected the economies of the world so badly could be so successfully

handled by us. Our economic strengths could withstand it. The economy appeared to be in better shape than at any other time before as it generated higher income, created an expanding market not only for ordinary goods and services, but also for tourism, housing and apartments, brand luxury cars and luxury goods like high cost sophisticated home appliances, gems, diamonds and gold jewellery. Because of higher disposable income and increasing spending capacity of the people, these sectors flourished. Department stores, stuffed with things, glittered. Our performance in the external sector was encouraging. The strength of the Indian Rupee was also managed well. Foreign exchange reserves got accumulated and our outstanding reserves in April-June 2010-11, as per the preliminary estimate, stood at \$275.7 billion compared to \$265.1 billion (partially revised) in April-June 2009-10 (RBI Bulletin, Oct, 2010). Foreign investors found it attractive to invest in Indian equities. Indian share market boomed. Initial Public Offerings of private and public sector companies could get over subscribed, the recent example being Coal India, a state run company, which offered 10% of its shares in the market and the shares were oversubscribed on its second day and the GOI raised around Rs.150 billion. This was a part of the disinvestment process of the public sector enterprises to raise funds for the government. Our core infrastructure industries have been performing better than before. India, it appears, is firmly set on a long journey of faster growth and stability due to her sound economic policies that include more responsive and responsible fiscal and monetary policies. It also indicates a sound macro policy regime and India's resilience that attracts increasing investments from outside. Indian industrialists have been alert enough to identify business opportunities abroad and invest in equities there in manufacturing, financial, and real estate business. Not only that. Indian industrialists went for Acquisitions and Mergers. We received international appreciation and have been bracketed with Russia, China and Brazil as one of the BRICS that would play a dominating role in world development. In fact, we never had it so good and possibly could not have done better. It may, however, be remembered that strong and secure foundations for the development of our economy were laid in the fifties and sixties with the emphasis on the development of industrial infrastructure the benefits of which could accrue to the economy in subsequent years.

What then is wrong with our development? Why is it under attack from many quarters? Why then the discontent and extremism in India and particularly in those regions which have started their development process? We may have to find the reasons in the very process and pattern of development, in the flourishing development of some regions and in the extreme backwardness of other regions as in the large parts of Bihar, Jharkhand, Chattishgarh and in the southern districts of Odisha. We may look at the persistently growing inequalities in the Indian society, the rising affluence of the urban rich vis-a-vis the increasing risks and dangers of the people living in the country side and depending on agriculture. Policy failures, administrative deficiencies, institutional failures and lack of reasonably satisfactory social services in spite of high economic growth may have contributed to continuing poverty and therefore to the anger and disillusionment of the people.

It may be mentioned that the incidence of poverty among the disadvantaged groups like the STs and the SCs has always been high in states like Bihar, Jharkhand, Odisha, Chattishgarh and Madhya Pradesh notwithstanding the higher rates of growth achieved by these states in recent years. There is increasing stress on growth with the hope that growth and more growth and growth alone holds the key to eliminate poverty, unemployment and deprivation as that would enable us to create expanding avenues for jobs and give a larger slice of a bigger cake to the poor people living in poverty. It may however, be observed that with a reasonably, high rate of growth and substantial expansion in all the branches of the Indian economy, the poverty scenario in the country has not changed significantly. A study in India relating to the change in the incidence of poverty between 1983-2000 finds that the rate of decline in the poverty of all social groups stood at 3.2 per cent per annum compared to 2.9 per cent and 2.0 per cent for the SC and ST households respectively. The rate of decline of poverty among the SCs in U.P., Odisha, M.P., Bihar and Assam during the period varied between 1.7 per cent in UP to 2.3 per cent in Odisha vis-a-vis the rate of decline of poverty among the ST households which varied between 0.9 and 1.4 per cent for MP, Odisha, Bihar and Assam. While states like Kerala, Gujarat, Andhra Pradesh and J&K did better in their attempts to reduce poverty among the SC households, Gujarat, Karnatakaa, Rajasthan, Mizoram and Manipur did relatively better in reducing poverty among the ST households. Incidence of poverty (2004-05) among the STs is

the highest in Odisha(76 per cent), followed by MP(58.4 per cent) Chattishgarh(55 per cent) and Jharkhand(54 per cent) compared to the incidence of poverty for the SC households which stands at (64.2 per cent) in Bihar followed by Jharkhand (58 per cent) and Odisha (50 per cent). Not only that. Odisha has also the highest poverty at 47 per cent of its population followed by Jharkhand, Bihar and Chattishgarh where the incidence of poverty stands at 40 per cent. (Thorat:2010). Because of the pattern of growth we have been following by prioritizing the development of large industries, along with a decline in capital investment in agriculture, employment opportunities remain limited. Location of large steel plants, aluminum projects, ports and power projects, which use the state-of-art-technology to have their competitive edge in the national and international markets, no doubt, create a favourable industrial climate, but the spread effects of such industrial growth can hardly be observed beyond the immediate regions.

It is these poor households including the poor from the UBL and general categories who suffer the worst in terms of unemployment, food security, lack of productive assets including land, lack of access to health and education and remain marginalized. It is revealing to note that because of poverty and lack of income and low expenditure coupled with the lack of access to public health services, children, women and men coming from the poorer families and particularly from the socially excluded families remain malnourished. It is in this context that the mid-day meal scheme for school going children becomes necessary to provide the children with additional nutrition. What we find in case of health and nutrition is equally relevant in case of education for the children coming from the poor households. High rates of growth do not, however, reveal these gloomy areas of our development and the inner contradictions of the growth process.

How do we then form a unified and integrated approach to development and poverty reduction goals and provide opportunities for overcoming the discrepancies in health, education and nutrition among the social groups? The present growth process has its faults. Some of its deficiencies could be corrected. To begin with, we can start with governance which is grossly inadequate and inefficient in many of the Indian districts and therefore has been a major impediment in bringing the benefits of the welfare policies of the states. We need a corruption free and responsive administration which has to play a hugely enlarged

role to ensure improved delivery of services to the poor and get the things done for the poor and vulnerable sections of society who may not, failing such interventions, receive the beneficial effects of pro-poor policies. Similarly the mechanism for redressing public grievances should not only be made available at the official levels, lokadalats may be institutionalized at the district levels for review of people's grievances. Needless to say that the presence of good governance creates a countervailing power to manipulations by the vested interests.

Education, particularly primary education, continues to remain in a poor state in many of the Indian states even though universalisation of elementary education has been made a fundamental right of children in India by incorporating Article-21A into the Indian Constitution in 2001. We have been missing opportunities to ensure universalisation of education and realize the objective that no child is left behind from the schooling system. Particular attention needs to be paid to children's access to the system, their uninterrupted attendance in the schools, teachers' presence and their imparting quality education to the students. Since the provision of free and compulsory elementary education to the children is the responsibility of the state, special care has to be taken of the government schools where the children of the poor read but where the quality of education has been deteriorating vis-a-vis the private and public schools.

Like education, the objective of universal health care through public health system right from the provision of primary health care facilities and above to cater to the health problems of the people and particularly to take care of infant mortality has yet to be realized. Infant Mortality Rate in Odisha stood at 75 per one thousand live births compared to 10 in Andhra Pradesh, 14 in Kerala and 58 at the all India level(2005). Maternal Mortality Ratio for Odisha stood at 367 compared to 4 in Andhra Pradesh, 28 in Karnataka and 407 at the national level(1998). The poorer states in India including Orissa experience disturbing deficits in basic facilities, health infrastructure, shortage of doctors and other health personnel like trained nurses and paramedical personnel. It has become necessary to raise public health expenditure to strengthen the public health system in the remote areas of the country. One has to take a holistic approach to the problem of poverty by ensuring universal education, dependable health facilities, clean drinking water, transport networks and social safety measures along with the implementation of poverty alleviation and income augmenting schemes.



The link between the development of agriculture and allied activities and the development of the economy and particularly the development of the people in the farm sector through increased-employment, higher productivity, higher income, better nutrition and higher wages is well established. We can therefore think of a positive relationship between a developed agriculture and access to better health care and education as farm households with higher income can spend more on education and health.

How do we then provide for more spending and investment in agriculture when the farm households in a state like Odisha where we find both policy failure and institutional failure and where the farmers are passing through a difficult period and may not have the zeal nor the money to invest in agriculture for reasons best known to all of us. Progressive and enterprising farmers who borrowed from banks/money lenders to invest in technology and diversify to new areas of farm production became the victims either of crop failure or price failure and took the drastic step of ending their lives. Declining investments in agriculture by the state coupled with weaker or no investments by the farm households give us much less space to boost farm productivity and the result has been a disappointing trend of growth rates in agriculture over the past decade. Productivity growth of rice (total) which is the principal cereal crop produced in the state has virtually been stagnating since 2003-04 at around 15.39 qtls./ hectare as against the rising cost of production. Production scenario is no different for pulses and oilseeds (Economic Survey, 2009-10; p-109). This may account not only for stagnation in production but also for declining income of the farm households in the state. This may further explain the reasons for the farmers to shy away from agriculture and look elsewhere for employment and living. With lower income and purchasing power as against consumer inflation the standard of living of the rural people suffer a real decline.

The state to-day has a bigger stake in the development of agriculture than ever before. Broad-based agricultural growth can contribute not only to higher overall growth but also to reduction in poverty and food insecurity. The government have to identify the priority areas for the purpose keeping in view the emerging pattern of demand for food and different crops including the development of horticulture and floriculture. I would advocate for state intervention for the



development of infrastructure, irrigation and water harvesting, input provisions, market and storage, education and training facilities for the farmers.

Decade ago we squandered away opportunities for the development of agriculture and the farm sector. The vision of a flourishing society that mainstreams the poor and the marginalised sections of our society is as much impacted by the development of agriculture as by the development of industry. The political economy of development and poverty reduction is much more complicated than what the economists thought about it.

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Professor Baidyanath Misra Endowment Lecture

## **Growth-Poverty Linkage in Orissa : A Reassessment\***

**Manoj Panda\*\***

### **1. Introduction**

Economic growth and poverty reduction have been the two primary objectives of economic policy formulation in India. This has been stated in various forms such as 'growth with redistribution', 'growth with social justice' and, more recently, 'inclusive growth'. A wide body of international evidence has pointed out the critical role of economic growth in attaining the poverty reduction objective. The linkage between economic growth and poverty reduction is normally supposed to be strong. Hence, economic reform measures were advocated on the grounds that it would lead to higher growth and faster poverty reduction. This paper deals with the linkage between economic growth and poverty reduction in Orissa.

Judged by aggregate per capita income, Orissa lagged behind the national level by several decades. The gross domestic product of the state grew by a considerable lower rate than many other states for a long time despite its high growth potential in several sectors. Its per capita income was about 10 per cent below the national average in 1950-51. The difference widened over the years to reach about 40 per cent by the turn of the century. There has been a turning point on the growth front recently. The gross state domestic product (GSDP) of Orissa, a measure of aggregate income generation in the state, has witnessed acceleration since 2003-04. There is now clear evidence that the economy of Orissa has moved to a higher growth phase over the medium run similar to that at the national level.

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\* Third Professor Baidyanath Misra Endowment Lecture delivered at the 43rd Annual conference of Orissa Economics Association in February, 2011.

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On the poverty front, the developments till recently was not promising. The National Sample Survey Organisation (NSSO) consumption expenditure data, a standard source for analysis of level of living in India, showed very little change in poverty estimates during 1993-94 and 2004-05. It seemed for some time that Orissa provided support to the hypothesis of growth without inclusion (Panda, 2009). Based on more recent evidence, this paper argues for a re-examination of this hypothesis.

To recapitulate the national level experience, low per capita income growth along with near invariance of the distribution parameter led to little improvement in level of living of the poor in India for about three decades after independence. Incidence of poverty started to fall after mid-1970s at the all-India level when the economy moved to a high growth phase of above 5 per cent per annum. Examining the India data over several decades, Ravallion and Datt (1996) showed that growth in mean consumption accounted for as much as 80 per cent of the cumulative decline in poverty in India.<sup>1</sup> After the reforms process started in 1991, India has of course witnessed higher economic growth but poverty reduction has not been faster. The income elasticity of poverty in India seems to have reduced to 0.4 between 1993-94 and 2004-05 (Panda, 2008). In this context, this paper examines the income-poverty linkage in Orissa using the National Sample Survey Organisation data for 2007-08 and 2009-10.

Section 2 provides the evidence on acceleration of the growth in the state income. Section 3 examines movement in incidence of poverty at the aggregate level for rural and urban Orissa followed by disaggregated level analysis by social groups and by regions. Finally, section 4 makes some concluding remarks.

## 2. Faster Economic Growth

Orissa's real GSDP grew at an average rate of about 3 per cent per annum during 1950-51 and 1980-81. It picked up during 1980s and 1990s and varied between 4.0 and 4.5 per cent which was substantially lower than the national average growth rate during that period. There has been a remarkable jump in the growth rate in state income during

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<sup>1</sup> For a review of international experience, see the Special Chapter in Asian Development Bank (2004).

the first decade of this century. GSDP grew at 9 per cent per annum on an average during 2001-2010.

The GSDP growth series is marked by large annual fluctuations partly driven by natural calamities and it is necessary to understand the underlying trends. Figure 1 plots the 5-year moving average series of the annual growth rates in GSDP, the averages being shown against the end years. This figure clearly reveals a rising trend in GSDP growth since 2003-04. The 5-year moving average growth rate series has consistently remained above 8 per cent since 2005-06 despite the global recession since 2008. There thus seems to be an upturn to a high growth phase in Orissa's economy in recent years. An above 7 per cent growth on a 5-year average basis had been achieved earlier during early 1960s and during the 5-year period ending 1989-90. The 1990s clearly was a 'lost decade' for Orissa from economic growth point of view when it could not utilise the opportunities thrown up by the reform process. Yet, it is a matter of some satisfaction that the economy of Orissa has grown at a higher growth rate during 2000-2010 than the national average rate, though a lot remains to catch up and bridge the historical gap in per capita income.

**TABLE-1**

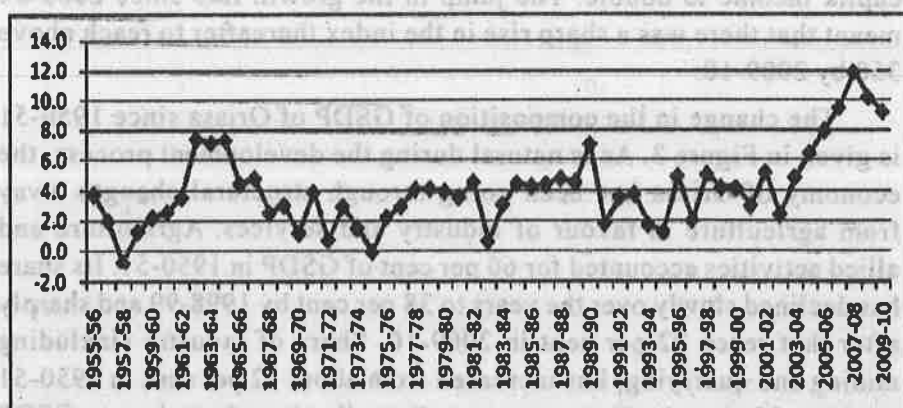
**Trend growth rates in GSDP of Orissa 1951-2010**

Period	Agriculture & Allied	Industry	Services	Total GSDP	Per Capita GSDP
1	2	3	4	5	6
1951-1980	2.90	5.28	2.67	2.93	0.84
1981-1990	2.53	6.99	6.18	4.45	2.61
1991-2000	1.53	4.05	6.24	4.00	2.45
2001-2010	3.59	12.67	9.75	9.05	7.95

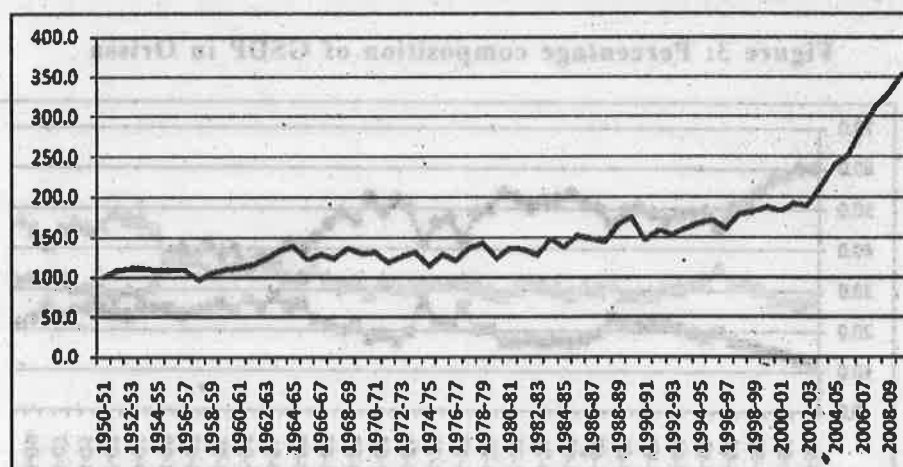
*Notes: 1. Figures refer to exponential growth rates (per cent per annum) derived from a semi-log trend equation;*

*2. Industry includes mining and quarrying.*

*Source: Based on data presented in Economic Survey of Orissa 2009-10.*

**Figure 1: GSDP growth in Orissa on 5-year moving average basis**

*Note : Data for 1955-56 refers to average of annual growth rates of 5-years ending with 1955-56 and so on.*

**Figure 2: Index of per capita real GSDP**

*Source: Computed using data in Economic Survey 2009-10, Government of Orissa.*

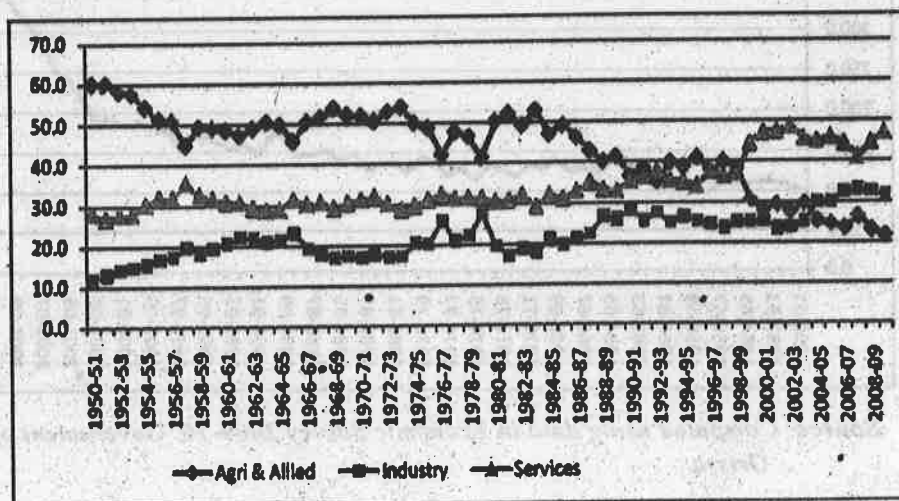
The index number of real per capita GSDP (with 1950-51 = 100.0) shown in Figure 2. Per capita income of the state grew by only 50 per cent over a 35-year period during 1950-51 to 1985-86. The index crossed



200 in 2003-04. Thus it took as long as 53 years for the state's per capita income to double. The jump in the growth rate since 2003-04 meant that there was a sharp rise in the index thereafter to reach above 350 by 2009-10.

The change in the composition of GSDP of Orissa since 1950-51 is given in Figure 3. As is natural during the development process, the economy of Orissa has been going through structural changes away from agriculture in favour of industry and services. Agriculture and allied activities accounted for 60 per cent of GSDP in 1950-51. Its share has declined slowly over the years to 38 per cent by 1998-99 and sharply after that reach 22 per cent in 2009-10. Share of industry (including mining and quarrying) has increased from about 12 per cent in 1950-51 to above 30 per cent in recent years. Contribution of services to GSDP has been rising and stood at 47 per cent in 2009-10.<sup>2</sup> Agriculture has lost its dominant position since late 1990s. In fact, share of industry crossed over that of agriculture since 2004-05. Also, note that, as Table 1 indicates, GSDP growth in the last decade is driven by 12.7 per cent per annum growth in industry (including mining and quarrying) and not by services as in most other states in India.

Figure 3: Percentage composition of GSDP in Orissa



Source: Computed using data in Economic Survey 2009-10, Government of Orissa.

<sup>2</sup> Services account for more than 50% of GDP at the national for a long time.

**TABLE-2**

**Growth rates by sectors and significance test for acceleration since 2003-04**

	Sector	Growth rates	
		1990-2002	2003-10
1	Agriculture and Allied	0.4	2.5
2	Agriculture	0.1	2.4
3	Forest and Logging	1.1	3.2
4	Fishing	5.6	3.8
5	Industry	3.5	13*
6	Mining and Quarrying	10.3	9.8
7	Manufacturing: Registered	3.9	18.3*
8	Manufacturing: Unregistered	2.9	7.7*
9	Electricity, Water and Gas	-0.9	7.7*
10	Construction	1.7	12.3*
11	Service	6.3	10.6*
12	Trade	5.2	13.0*
13	Railways	4.0	8.7*
14	Storage	9.4	10.3
15	Communications	10.5	19.6*
16	Banking	9.3	12.8*
17	Real Estate	3.1	6.4*
18	Public Administration and Community Services	5.3	6.3
19	GSDP total	3.6	9.4*

*Note: \* indicates growth rate significantly different during 2003-10 from the earlier period.*

*Source: Own computations using data in Economic Survey 2009-10*

Next, we explore the sectors where a statistically significant higher growth in GSDP has occurred in the recent period compared to the earlier period. We examine this question by carrying out semi-log regression on a time trend and a dummy variable<sup>3</sup> using GSDP data for 1990-91 to 2009-10. Table 2 reports the regression results for GSDP originating from various sectors. The results do confirm a significant acceleration in the overall GSDP growth rate since 2003-04. At the sectoral level, significant acceleration can be noticed for manufacturing, electricity, construction, and services such as trade, transport, communication, banking and real estate. A notable exception has been agriculture where growth rate is higher during 2003-2010, but it is not significantly different from that during 1990-2002 possibly due to large fluctuations. Two other sectors mining-quarrying and storage do not indicate any significant acceleration, but they have recorded high growth rate during both the periods. On the whole, the GSDP acceleration story is broad based and not confined to a couple of sectors.

### 3. CHANGES IN POVERTY

We now turn to estimates of poverty in Orissa. While poverty has been viewed in recent literature as a multidimensional concept,<sup>4</sup> this paper is confined to income poverty which is strongly linked to economic growth. Poverty line refers to a normative income level needed to meet the basic essentials of life. Reduction of the proportion of population below the poverty line has been an important objective of the government. We use below the poverty line recently suggested by the Tendulkar Committee and a brief diversion to their recommendations might be in order.

#### Revised Methodology Suggested by Tendulkar Committee

The Planning Commission recently set up an expert group under the chairmanship of Professor Suresh Tendulkar to examine the existing methodology and suggest necessary revisions. The revised methodology suggested by the expert group (Planning Commission, 2009) departs from the earlier methodology suggested by the Lakdawala Committee (Planning Commission, 1993) in several ways.

<sup>3</sup> Dummy variable has been introduced for the intercept as well as the slope.

<sup>4</sup> The Human Development Index promoted by the United Nations Development Programme emphasizes on education and health as much as income.

First, the Tendulkar Committee recommends switching from the use of uniform reference period (URP) consumption data to mixed reference period (MRP) consumption data since the recall error is less in MRP data and hence it captures the true consumption levels better than the URP data. Second, the Committee advises a single minimum consumption basket for the poverty line for all states of India - rural as well as urban areas. The earlier methodology used separate consumption baskets for rural and urban areas. Third, the Committee recommends that price data implicit in the quantity and value figures in the NSS consumption survey might be used. In the earlier methodology, all price adjustments were carried out using consumer price index for agricultural labor (CPIAL) and consumer price index for industrial workers (CPIIW) for rural and urban areas respectively. Fourth, it prefers spatial and temporal price adjustments for deriving poverty lines in base year and all subsequent years. In the earlier methodology the poverty lines were adjusted for spatial price differentials only in the base year.

The poverty line suggested by the Tendulkar Committee is anchored to a normative consumption basket, but not to any specific calorie norm. Under the new methodology, the consumption basket underlying the MRP equivalent poverty line of the official urban ratio for 2004-05 is taken as the norm uniformly for all rural and urban areas of all the States. This normative consumption basket is evaluated at state specific urban prices to arrive at state specific urban poverty lines. The state specific rural poverty lines are obtained by adjusting for the state specific urban-rural price differentials.

### Poverty Estimates

The poverty lines used by the Planning Commission for the official poverty estimates using the Lakdawala Committee report for various years during 1973-74 to 2004-05 are given in Table 3. It also gives the estimates of poverty line for 2007-08 and 2009-10 made by us following the new Tendulkar Committee methodology except for price updating. We use CPIAL and CPIIW to update the poverty lines for 2007-08 and 2009-0 instead of obtaining implicit price deflators based on value and quantity data from unit level observations through elaborate calculations. The estimated poverty lines thus obtained for 2009-10 are Rs. 632 and 756 per capita per month for Orissa compared to Rs. 692 and 857 at the all-India level.

**TABLE-3**

**Poverty Lines (Per Capita Consumption Expenditure per month in Rupees) for Orissa and India**

Year	Reference Period	Orissa		All-India	
		Rural	Urban	Rural	Urban
1	2	3	4	6	7
<b>Lakdawala Committee Methodology</b>					
1973-74	URP	46.87	59.34	49.63	56.76
1977-78	URP	58.89	72.41	56.84	70.33
1983	URP	106.28	124.81	89.5	115.65
1987-88	URP	121.42	165.40	115.2	162.16
1993-94	URP	194.03	298.22	205.84	281.35
1999-2000	MRP	323.9	473.12	327.56	454.11
2004-05	URP	325.79	528.49	356.30	538.60
<b>Tendulkar Committee</b>					
1993-94	MRP	224	279	333	383
2004-05	MRP	408	497	447	579
2007-08	MRP	510	598	545	689
2009-10	MRP	632	756	692	857

**Note:** URP – Usual Reference Period; MRP – Mixed Reference Period.

**Source:** 1. Planning Commission of India;

2. Poverty lines for 2007-08 and 2009-10 are updated based on consumer price index for agricultural labourers for rural areas and consumer price index for industrial workers for urban areas.



**TABLE-4****Head Count Ratio (HCR) of Poverty Ratios in Orissa and India**

Year	Reference Period	Orissa			All-India		
		Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8
<b>Lakdawala Committee Methodology</b>							
1973-74	URP	67.3	55.6	66.2	56.4	49.0	54.9
1977-78	URP	72.4	50.9	70.1	53.1	45.2	51.3
1983	URP	67.5	49.2	65.3	45.7	40.8	44.5
1987-88	URP	57.6	41.5	55.6	39.1	38.2	38.9
1993-94	URP	49.7	41.6	48.6	37.3	32.4	36
1999-2000	MRP	48.0	42.8	47.2	27.1	23.6	26.1
2004-05	URP	46.8	44.3	46.4	28.3	25.7	27.5
<b>Tendulkar Committee Methodology</b>							
1993-94	MRP	63.0	34.5	59.1	50.1	30.8	45.3
2004-05	MRP	60.8	37.6	57.2	41.8	25.7	37.2
2007-08	MRP	53.8	16.4	48.8	33.0	18.2	29.1
2009-10	MRP	50.5	28.5	47.3	36.4	21.5	32.0

*Note: URP – Usual Reference Period; MRP – Mixed Reference Period.*

*Source: Planning Commission of India. Own estimates for 2007-08 and 2009-10.*

Table- 4 presents the percentage of people below poverty line for Orissa and India for various years based on NSSO data for uniform recall period (URP) and mixed recall period (MRP). The figures till 2004-05 are estimates made by the Planning Commission and the Tendulkar Committee while those for 2007-08 and 2009-10 are obtained using the 64<sup>th</sup> and 66<sup>th</sup> Round unit record data. The 2009-10 dataset is from a large scale quinquennial Round survey comparable to 2004-05 and earlier years referred to in Table 4. The 64<sup>th</sup> Round dataset for



2007-09 is not strictly comparable to other years in terms of sample size<sup>5</sup> and may be considered as indicative of the underlying trend.

Based on uniform recall period (URP) in earlier rounds of survey by the NSSO, poverty in Orissa seemed to be nearly stagnant during 1993-94 and 2004-05 (Table 4). While there were clear signs of a significant acceleration in GSDP a few years ago, incidence of poverty seemed to change very little. Orissa showed the highest head count ratio (HCR) of poverty in 2004-05 among the major states in the country based on URP data. The overall incidence of poverty has dropped by merely 2 percentage points over a decade from 48.6 per cent 1993-94 to 46.6 per cent in 2004-05 by earlier Lakdawala Committee methodology and from 59.1 per cent to 57.2 per cent by Tendulkar Committee methodology during the same period.

Moving to the estimates for recent years, Table 4 shows a welcome sign of drop in poverty incidence during 2004-05 and 2009-10. The percentage of poor in the state, which stood at 57.2 per cent in 2004-05, has fallen to 47.3 per cent in 2009-10 as per the new Tendulkar Committee poverty line.<sup>6</sup> This fall of 9.9 percentage points – consisting of 10.3 and 9.1 percentage points for rural and urban areas respectively – is undoubtedly a remarkable achievement against the backdrop of stagnancy in poverty ratio in the earlier decade. In fact, as may be seen from Table-4, the fall in Orissa's poverty ratio has been almost twice as fast as that observed at the all-India level. Note that the falling trends were visible in 2007-08 dataset too, but urban sample showed a very large fall in view of the small sample size.

The sharp drop in poverty ratio has an impact on absolute number of people below poverty line. The number of poor fell by 2.4 millions in rural areas and another 0.4 millions in urban areas in 2009-10 compared to 2004-05 (Table -5). The number of people moving above the poverty line represents 12.5 per cent of the total poor in 2004-05. Thus, going by the recent NSSO data, economic growth as measured by per capita

<sup>5</sup> The sample size in the 64th Round is smaller compared to other years. The number of villages and urban blocks covered in 64th Round is similar to 61st Round. Thus, the sample in 64th Round is widespread across the state, but number of households selected per village/block is small; 4 in 64th Round and 10 in 61st Round. Nevertheless, the 64th Round was the first major data source that indicated the underlying change in trend in Orissa's poverty situation forming the basis of the endowment lecture and has been retained here.

<sup>6</sup> This is in line with estimates provided by Ahluwalia (2011).

real GSDP seems to be having a favourable effect on incidence of poverty in Orissa in recent years.

**TABLE-5**

**Number of Persons below Poverty Line in Orissa and at all-India Level (in millions)**

Year	Reference Period	Orissa			All-India		
		Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8
<b>Lakdawala Committee Methodology</b>							
1973-74	URP	15.0	1.2	16.2	255.9	57.3	313.3
1977-78	URP	16.5	1.3	17.9	263.6	64.0	327.6
1983	URP	16.4	1.6	18.0	250.4	70.0	320.4
1987-88	URP	15.0	1.6	16.6	232.2	75.4	307.6
1993-94	URP	14.2	1.9	16.1	245.8	76.3	322.0
1999-2000	MRP	14.8	2.3	17.1	197.2	65.6	262.7
2004-05	URP	15.2	2.7	17.8	220.7	80.5	301.2
<b>Tendulkar Committee Methodology</b>							
1993-94	MRP	17.9	1.6	19.5	330.1	72.5	402.6
2004-05	MRP	19.9	2.3	22.1	326.0	80.5	406.5
2007-08	MRP	18.2	1.1	19.2	266.4	60.9	327.3
2009-10	MRP	17.4	1.9	19.4	293.3	74.8	368.1

*Source: Computed on the basis of information in earlier table and interpolated census population.*

### **Poverty by Social Group and Region**

Poverty in Orissa varies widely across social groups and regions. Table 6 presents the percentage of poor by social groups. The scheduled tribes are the poorest among the social groups in the table. The proportion of poor among STs and SCs is higher than the state average. The head count ratio is as high as 70 per cent among the ST population

and 60 per cent among the SC population compared to 37 per cent for OBC group and 30 per cent for 'Others' in 2009-10. Although the proportion of poor among STs and SCs has fallen in recent years, most of them remained below the poverty line in 2009-10.

**TABLE-6**

**Poverty Ratio (based on Tendulkar Committee Poverty Line)  
by Social Group (Caste) in Orissa**

Year	ST			SC			OBC			Others		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1993-94	82.1	56.6	80.4	62.8	39	60.6	-	-	-	54.6	34.6	59.4
2004-05	84.4	53.4	82.8	67.9	63.7	67.4	52.6	42.4	51.5	37.1 (47.9)	23.8 (31.1)	33.1 (44.9)
2009-10	74.5	35.1	70.4	61.3	47.2	59.6	37.8	28.3	36.8	34.4	18.3	30.3

*Note: 1. Mixed Reference Period (MRP) consumption expenditure data;*

*2. '-' Not Available;*

*3. Figures in the parentheses represent the combined category of OBCs and Others so that they are comparable with 1993-94 figures.*

*Source: Own estimates based on NSS Consumer Expenditure Survey (CES) unit record data.*

The NSSO data permit poverty estimates by three agro-climatic zones (i.e. NSS regions) in Orissa. Table- 7 reveals percentage of poor population in the three regions. The Southern region has the highest poverty ratio followed by the Northern region. The Coastal region has the lowest poverty ratio; about 35 per cent of its population is in the poor category compared to the state average of 47 per cent in 2009-10. Looking at percentage of poor over time, incidence of poverty rose in Northern and Southern regions during 1993-94 and 2004-05. The effect of growth has been more wide spread across the regions recently and all the three regions have witnessed substantial fall during 2004-05 and 2009-10.

**TABLE-7****Poverty Ratio (based on Tendulkar Committee Poverty Line)  
by Region in Orissa**

Year	Coastal			Southern			Northern		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8	9	10
1993-94	60.0	42.8	57.9	80.5	40.8	76.5	57.9	22.7	52.8
2004-05	44.6	37.0	43.5	80.7	46.4	78.0	71.6	36.1	66.1
2009-10	37.9	22.0	35.2	61.1	37.8	58.7	54.2	31.1	50.7

*Note: Mixed Reference Period (MRP) consumption expenditure data.*

*Source: Own estimates based on NSS Consumer Expenditure Survey (CES) unit record data.*

Lastly, we address the question of quantitative response of the head count ratio to GSDP growth in the state. The elasticity of HCR with respect to per capita real income is presented in Table-8. The elasticity was as low as -0.08 during 1993-94 and 2004-05 indicating very little percolation of growth to the poor during this period. As expected from above discussion, the elasticity improved to -0.46 during 2004-05 and 2009-10. This compares favourably with those observed elsewhere.

**TABLE-8****Income Elasticity of HCR**

Year	PC GSDP (Rs.)	Poverty (HCR)	Growth (% per annum)		
			PC GSDP	HCR	Elasticity
1	2	3	4	5	6
1993-94	10182	59.1			
2004-05	15180	57.2	3.7	-0.3	-0.08
2009-10	22287	47.3	8.0	-3.7	-0.46

*Source: Own computation.*

#### 4. Concluding Remarks

Economic growth has been advocated as a precondition for poverty reduction. If the benefits of the growth process are widespread across different socio-economic groups in the society, it is expected that high income growth would help in reducing poverty. While Orissa substantially improved its growth rate to a commendable level, there was very little change in incidence of poverty during the decade 1993-2004 calling for more policy attention to make the growth process broad based so that large sections of the population are not left behind.<sup>7</sup> Happily, more recent evidence does not support the 'growth without inclusion' hypothesis in the post-2004 period. As elsewhere in the country, growth had a favourable effect on incidence of poverty in Orissa too, possibly with a longer lag. But substantial regional and social group variations in poverty ratio persist. The realization of high growth no doubt provides the capability to intervene effectively in the poverty reduction process.

(The author is thankful to Mr. M. Venkatanarayana for help in estimation from 2007-08 and 2009-10 data used in this paper).

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<sup>7</sup> Mahendra Dev et. al. (2004) advocates several such policies including more attention to agriculture, agro-based and labour intensive manufacturing.

## **FOOD SECURITY IN INDIA**



## FOOD SECURITY IN INDIA

## Food Security in India

Sanjib Chandra Hota\*

While discussing on food security in India, we have to take into account the present conundrum of Indian economy which is moving on a high growth trajectory even beating the years of gloom in world economy. India for the last few years is registering a phenomenal growth of GDP @ 8-9 per cent per annum. In the year of economic gloom of 2008-09, growth rate of GDP did not fall below 6.7 per cent. In spite of growth, the rich-poor divide has increased and poverty reduction figures in India are lower than those of Bangladesh. More than 300 million people in India still live in deep poverty on less than one U.S. dollar income a day calculated at PPP (Purchasing Power Parity), while another 350 million live on less than two dollars a day. One child in India dies in every 15 seconds, 4000 new born die in 24 hours as has been found in a study "Save the Children". This report further says that 20 per cent of the world's child death occurs in India, 20 lakh children die before reaching the fifth birth day. One in three malnourished children in the world lives in India and around 46 per cent of Indian children under 3 years are under weight. India's record of child mortality is worse than that of Bangladesh and Sri Lanka. The other ailing symptom of Indian economy is current food inflation. Due to change in food habit as more people register increase in money income; they switch preferences to costlier food which they earlier could not afford like changing from millet to cereal, reducing consumption of cereal in favor of protein food like egg, milk, meat and fish etc.. Vagaries of weather have caused unstable growth in food production. Such high food inflation has a tendency to feed into general inflation throwing challenges to macro economic management.

I felt it necessary to depict this conundrum before coming to the main theme of food security, because one cannot insulate food security from the chronic feature of malnutrition, child mortality and sanitation. Because by food security, we do not mean only guaranteed access to food by all individuals of the country irrespective of gender and age,

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but also to be assured of a minimum nutritional standard to lead a healthy life with a basic minimum of sanitation and health care so that they can develop their skill of productivity with a higher longevity to participate in nation building.

U.N. defines food security as "all people at all time have both physical and economic access to the basic food they need. Similarly, food security to a household means all members of the house have guaranteed access to the basic quantity of food throughout the year". For approximately a billion of people in the world, food security is anything but guaranteed. Food security cannot be insulated from health security and job security because people must have adequate purchasing power to have economic access to basic minimum quantity of food throughout the year. Similarly, unless food intake by people has desired nutrient content, their health standard will not be as desirable as required to lead a healthy life. Even if government in a country will provide free food to a certain segment of population who are chronically weak, poor and unhealthy and can not have economic access to buy required quantity of food, yet it should be the conscious goal of the government to reduce the number of such people; otherwise to maintain a sizeable population in a country with food dole is associated with moral hazard.

The first issue in food security in the context of India is Hunger Index released by International Food Policy Research Institute (IFPRI) which places India 67<sup>th</sup> in the ranking with a score of 24.1 far below China, even below Sri Lanka, Pakistan & Nepal. The global Hunger Index of IFPRI is calculated as an average of (i) proportion of population that is under nourished in %, (ii) prevalence of under weight in children, under five years in term of percentage, (iii) proportion of children dying before the age of five in %. For India, the respective numbers are 22, 43.5 and 6.9. Some people question such assumption and methodology. But the short point is that number and proportion of undernourished people in India are unacceptably high. Malnutrition is a state of existence where people even though having access to minimum food keep their body and soul together and subsist on minimum diet mostly cereal or millet that has poor nutrient as compared to medically prescribed norms, yet they do not lead a healthy life, says a report of the World Food Programme. You may stop death due to starvation by providing food through Government administered Public Distribution System both through sale and dole, but denying a sizeable population in the bottom below poverty line not having access to desired nutrient intake keeps

them languish in malnutrition negatively affecting their physical ability, mental alertness and longevity. Therefore, "Food Security" in India's context should be appreciated with a wider connotation.

India's economy is not insular to global economic activity, thus, we cannot discuss India's problem of food security in isolation of global economic events. Since the time of Thomas Malthus, there are two different views in matter of food supply vis-a-vis the demand for food. Some have argued that Mother Nature rules with her bounty which is limited; the counter view is that human effort is the key and can augment food supply. Between 1965 and 1998, global population rose from 3.3 billion to 5.9 billion; but real food prices actually fell. One group of economists holds that world supply of food is constrained, another school holds that the new speculative money moving into commodity futures (\$ 60 billion in 2010) has created market distortion. We have to integrate the views of both schools of economists i.e. to build up a world food stock as a buffer to meet the demand shock from certain countries in years of scarcity, at the same time regulation in speculative money entering to food commodity futures. In the absence of an internationally agreed monetary system, second option does not look feasible in near future even though under the aegis of F.A.O. efforts can be made for the world buffer stock of food. Emerging economies like India have to deal with a predicament not of their creation i.e. a toxic combination of ultra speculative policy in the developed world and return seeking global investors (20% of commodity trade in 2010 were by hedge funds compared to only 3% in 2009) pushing up the global food prices. In such a scenario, it is difficult to think of a world buffer stock to be managed by a U.N. agency like F.A.O. to meet the emergent demand of a country where domestic supply of food constantly lags behind increasing demand. It is not only to build a world buffer stock, but to maintain stability in global food price which is a difficult proposition. A country like India has its own share of concern of the uncertainties of world economy particularly of advanced countries where both asset price as well as commodity (including food) prices continue to remain at a high level. The high and persisting international prices of food commodities do not give any room for comfort to India in tackling food inflation.

While discussing about food security, we look upon Indian agriculture for providing increasing supply of food grains and other food items to provide nutrient food security to every Indian particularly to

meet the chronic need of vulnerable section. Share of agriculture in India's GDP has shrunk below 20 per cent whereas 58 per cent of the total labour force, approximately 235 million people is employed in agriculture in India (2001 census report). About 60 per cent of population are dependent on agriculture.

In the period between 1990-2007, grain yields in India grew at an average rate of 1.7 per cent, lower than 1.9 per cent rate of population growth per annum. Lack of desired quantum of public and private investment in agriculture coupled with an irrational subsidy pattern (particularly fertilizer subsidy encouraging big land holders to excessively use fertilizer), slow or virtually non-implementation of land reforms in most parts of the country ensuring land to actual tiller, continuous successive years of uncertain weather have factored into such poor productivity growth. According to the Government's State of Environment Report, about 15 per cent of agricultural land has been degraded through excessive application of chemical fertilizer. About a third of India's ground water aquifer is critical or semi-critical. The country is facing shortage of south-western monsoon rainfall that will affect agricultural production and food prices in future. In addition to this, there is continuous diversion of farm land for non-farming purposes, mostly to mining and industry. Coming up of new urban conglomerates has taken away many farm lands for residential, commercial and infrastructural development as well. From a shrinking area of farming, if we look for production of more food both in shape of food grain (cereal, millet, pulses oil seeds) as well as produce from live stock (milk, poultry products, mutton not to speak of fish from culture fishery which will need conversion of crop land to fish ponds), the objective would be to increase productivity per hectare by adopting latest technology and farm practices. It is time now to seriously develop an approach of conservation of natural resources like land, soil nutrient, ground water and surface water instead of continuously exploiting these resources which we have been doing since the days of green revolution.

The pace of agricultural growth decelerated in the second half of nineties from 3.4 per cent during 1985-86 – 1994-95 to 1.8 per cent in 1995-96 – 2002-03 with largest decline in green revolution States. Weather shocks, particularly extensive droughts in many States due to poor monsoon, erratic distribution of rain fall and flood in different States contributed to recent slow down in agricultural growth, but do not fully explain the continuous lag in agricultural productivity. Even under better

circumstances, it is unclear whether India could regain its past agricultural growth performance to move to a higher growth path. Mr. Swapan Kumar Dutta, the Deputy Director General of ICAR at the India International Crops Summit 2011, at Bhubaneswar stated "India needs to prepare itself in advance as food grain scarcity is likely by 2020. Though the country produced 100 MT of rice in 2009, it would require about 130 MT of rice in 2020 while requirement of wheat would reach 110 MT in 2020 against production of only 80 MT in 2009", he said. A report of the ICAR says, the country would also face acute shortage of pulses and oilseeds in 2020 and it says that demand for oilseeds and pulses would increase by 243 per cent and 140 per cent respectively. As more people join the middle class with increasing money income, their demand for pulses and oil seeds will grow. Prof. Kausik Basu, Chief Economist in the Ministry of Finance, Government of India has termed such type of switching of demand to a certain type of food items leading to rise in prices of those food commodities as 'Skewflation'. The report of ICAR also says that while there would be demand for more food grains by 2020 rice yield could fall by 15 per cent to 42 per cent, wheat by 34 per cent due to possible drought, salinity and submergence if temperature rises by 2 degree Celsius and rainfall decreases by 7 per cent. I.C.A.R.'s report even though need not be deemed to cast a spell of doom on country's production of food supply at the decade of twenties, nevertheless gives a note of caution to be taken seriously to develop a strategy to avert a possible crisis on food front.

Against this background, Government of India have made aggressive intervention. National Development Council in its 53<sup>rd</sup> meeting held on 29<sup>th</sup> May 2007 adopted a resolution to enhance the production of rice, wheat, pulses by 10, 8 and 2 million tons by 2011. A centrally sponsored scheme "National Food Security Mission" is to operationalise the resolution of NDC and enhance the production of rice, wheat and pulses. It is to be implemented in a mission mode through farmer centric approach involving all stake holders at the district level. There would be a Food Security Mission at the State and district level. The scheme aims to target selected districts to make available the improved technology through a series of planned intervention. Its aim is to increase the production of food crops both through area expansion (bringing fallow and waste land to agricultural operation) and enhancing productivity through improved technology and agricultural practices.



Strategy of the Mission is to

- (a) bridge the gap between potential and actual productivity through accelerated seed production, integrated nutrient management and pest management,
- (b) there will be Food Security Mission at the State and district level
- (c) various interventions proposed would be integrated with the district plan and targets for each identified district would be fixed,
- (d) flow of funds would be closely monitored so that it reaches the intended beneficiaries,
- (e) promotion and extension of improved technology i.e. seed, integrated nutrient management including micro nutrient, soil amendment, resource conservation along with capacity building of the farmers,
- (f) concurrent evaluation every year, mid term evaluation after three years and impact evaluation study after five years through an independent agency.

In matter of food security, not only production of food grains, but a sound Public Distribution System is equally important, so also reforms in agriculture marketing. Agriculture, particularly production of food grains, of late has become a losing economic activity because of high input cost not commensurate with market price. Gap between the farm gate price and retail price is substantially high much to the detriment of the farmer and consumer. Difference between these two prices are appropriated by a host of middle men as a result of which both grain producers i.e. farmers and consumers suffer. This happens because of the fact that farmers in rural India do not have storage place to keep the harvested stock, nor they do have financial ability to wait for a better price in the market, as an average farmer needs money immediately after harvest to repay crop loan and to meet other domestic needs. Because of these two reasons, farmers are forced to make distress sale unless there is a well administered grain procurement by Government appointed agencies at a minimum procurement price remunerative to the farmers. Answer to this problem to reduce the big gap between grain price at the farm gate and at the retail point, lies in substantial public and private investment in construction of a large

number of warehouses for storage of harvested grains and the warehouse receipt to be issued by the warehouse owners to the farmers should be a negotiable instrument to avail loan from commercial banks by pledging the stock of grain so stored in the warehouses. This will meet the monetary needs of the farmers and temporary withholding of grains to the market will automatically push up the price to the advantage of the farmers and the farmers once satisfied that a certain prevailing price will yield him reasonable return over and above meeting the cost of production of grains will decide to release the stock from the warehouses. Similarly, for perishable food products like fruits and vegetable, there must be a network of cold storage and cold transport chain where these food products can be stored. Investment on setting up of a number of food processing units particularly in rural and semi urban areas will result in value addition. Surplus labour to be released from agriculture can as well be absorbed in the food processing industry after upgrading their skill. Often such food processing industry enters into agreement with farmers to produce a certain type of crop with certain standard and sell their produce at a price to the industry. The industry also supplies them inputs on loan. Food processing industry is also bound to buy the crop at the pre agreed price after adjusting the value of inputs. Unless government appoint a statutory regulator under an Act to fix the price of the produce payable to farmers they will be at the mercy of the industry. In such context, organizing the farmers into producer cooperatives adopting AMUL model would be most appropriate. Construction of warehouses, cold storage, cold transport chain and ensuring connectivity of road to farmers' villages will go a long way in preventing huge amount of wastage of food grains in the face of teeming million of hungry people not getting the minimum requirement of food. Immediately investment from private sector will not be forthcoming and therefore, Government will have to pioneer this investment. So far as connectivity to villages of farmers is concerned, there cannot be any type of private investment and Government shall alone invest. Unless this happens, we will be confronted with a paradox of huge stock of food grains rotting in FCI warehouses or even in open dump yards of FCI, and getting damaged when large section of hungry people in the country do not get food to eat.

There should be reform in agricultural market management. Instead of being restricted to a number of licensed traders to trade grains in notified market yard who invariably form a cartel, it should be made

more open to competition. More number of market yards should be constructed so that farmers will not be required to carry their grain stock to a longer distance.

Prof. Jean Dreze and his team have conceived the draft "Right to Food Act" which was released on 24 June, 2009. It proposes to consolidate in law entitlements that are currently in place through eight food and nutrition related schemes. Most of these entitlements are already justifiable based on Supreme Court orders in the "Right to Food" case. Key features of the proposed "Right to Food Act" drafted by Prof. Jean Dreze and his team covers the following points:

- Entitlement of BPL households to 35 Kg. of food grains each month at Rs.3/- per Kg for rice and for rice Rs.2/- per Kg for wheat under Public Distribution System (PDS) treating each nuclear family as a separate household.
- A new methodology for BPL Census proposed based on simple, transparent and verifiable criteria.
- Existing food related Schemes such as ICDS, Mid-Day-Meal Programme, Antodaya, National Maternity Benefit Scheme, Janani Surakshya Yojana, Old Age Pension Scheme including Widows' Pension etc. will continue.
- Severe penalty against individual and organizations/companies found responsible for violation of food safety norms and standards.
- Envisage safeguards against encroachment by corporate lobbies and private contractors in food and nutrition Scheme.
- Government accountable to ensure that no man, woman or child sleeps hungry or malnourished.
- Women to be regarded as head of household for food related Government Programme.
- Cash transfer must not replace food transfer under any nutrition related Scheme.
- PDS and other food related Government Programme must have inbuilt transparency mechanism and monetary requirement of social audit.
- The right to food to children in the age group of 0 to 6 months must be ensured through services to mother, including support

at birth; skilled counseling especially to promote breast feeding; maternity entitlements

The Act must create provision for government to deal adequately with human made disasters by doubling all food entitlements to the affected persons for one year.

- The Act must not abridge but expand other entitlements such as old age pension, maternity benefit and work entitlements under MNRGEA.

Many questions have been raised and apprehensions made about the National Food Security Act after a Group of Ministers (GOM) have cleared the proposed Draft Bill with many corrections and dilution. Centre for Contemporary Studies and Research has written a letter to the Prime Minister questioning some of the aspects of the proposed National Food Security Act, 2010. The points of reservations are as follows:

The Draft Bill does not address the nutritional needs of the people. The Group of Ministers reduces the entitlement from 35 Kg. to 25 Kg. per household against the current entitlement of 35 Kg. which has been mandated by Supreme Court order. Therefore, a proposed legislation which promises a right but in reality reduces the existing entitlement is an affront to dignity of citizen. As against the original Draft prepared by Prof. Jean Dreze and his team, the Group of Ministers restricts it to entitlement of only BPL families. The letter to the Prime Minister further says as the child mal-nutrition rate in India is 46 per cent being the highest in the world and twice the rate of child malnutrition of Sub-Saharan Africa, the proposed Act should have addressed to the nutrition problems which it has not. In the letter, it is suggested to have a universal entitlement of PDS to every adult resident of the country with entitlement of 14 Kg. of cereals including nutritious millets per month at Rs.2/- per Kg., 1.5 Kg. of pulses at Rs.20/- per Kg. and 800 grams of cooking oil at Rs.35/- per Kg. with the children getting half entitlement. In fact, the letter insists for universal entitlement of food.

My personal opinion in this regard would be to restrict the entitlement under Food Security to people below poverty line as people above poverty line are capable of buying it from the open market out of their own resources. Fiscal pressure to the government will be quite big if it covers the entire population under the Food Security Act. The recent food inflation in our country has adversely affected the poor

including the lower middle class as they spend about 60 per cent of their income on food leaving very little to meet other needs of the family. The present PDS does not take into account the actual cost of transport and storage and fix the commission in shape of a subsidy to the storage and transport agents and retailers at such a low rate that the cost of transport and storage is not met and there is an inbuilt tendency with the retailers, transport and storage agents to do black marketing and when the process of black marketing begins it does not stop at covering the loss in transport and storage but more than that to satisfy their uncontrollable greed. This calls for higher food subsidy taking into account the actual cost of transport and storage. Similarly, in the rural India large number of Service Cooperative Societies, Gram Panchayats and women self help groups can be appointed as retail agents in food grains so as to avoid prevalent black marketing and other malpractices in the PDS.

Last but not the least, in the matter of food security, I would suggest for well functioning of grain banks in the rural areas particularly in the tribal belt where grains are given as loan to the individual farmers during the period of scarcity and loans are recovered in shape of grains with an additional quantity towards interest. Such grain banks are managed by Self Help Groups of tribals where it has been found that willful default is almost nil. This provides a good food security to the poor people in tribal belt particularly during lean season i.e. August to January.

I would conclude by drawing attention to the present food inflation which is extremely regressive in nature. Poor men spend about 60 per cent of their income on food and food inflation very much hard hit them. A wide discrepancy between WPI and CPI makes the statistics illusory. W.P.I. is expressed in terms of whole sale price, not in terms of retail price paid by the consumers. A poor man's food security is at jeopardy in a state of creeping food inflation which presently is due to both demand and supply shocks. Governance deficit in public distribution system makes the problem more critical. Jasmine revolution (bloodless coup) which originated in the capital city of Tunisia spread to other Arab countries since autocratic rule has its origin in non availability of food at reasonable price to common man. This sends a message to all countries in the world irrespective of political regime.



## Slutsky Curvature And Nutrition Policy : The Case of Orissa

Parshuram Samal\*

Orissa is the poorest state of India and calorie deficiencies are most widespread among the people with lower incomes. The study analyses the changes in consumption pattern of the consumers of Orissa taking into consideration seven quinquennial round data during 1972-73 to 2004-05. Data were analysed by rural and urban areas and also by income groups. To investigate into the response of the poor to food price changes, the demand elasticities for various income groups were computed and analysed.

In rural areas, the proportion spent on food decreased from 75 to 62 per cent and urban areas from 65 to 50 per cent during 1972-73 to 2004-05. The expenditure share on rice has reduced by 21 per cent in rural and 11 per cent in urban areas. The food groups with marginal increase in expenditure share were pulses, milk, vegetables, meat-fish-eggs and other food groups in both areas. Rice is the dominant cereal among all the energy producing foods, which accounted for more than 87 and 81 per cent in rural and urban areas respectively. But, the consumption of rice has decreased significantly over years in the two non-poor groups in rural areas and highest income group in urban areas due to diversification of their food basket. However, the very poor group of people have increased their rice consumption in both rural and urban areas, thus improving their calorie intake.

It was observed from the demand elasticity matrix of rice that in most of the cases, the own and cross price elasticities declined as income increased, which indicates that low income households were more responsive to food price changes than high income households. The curvature in the Slutsky substitution elasticity matrix for rice was found to be statistically significant, which implies that poor substitute more flexibly than the rich. The policy implication of this finding is that the coarse variety rice, the cheapest among all the rice varieties,

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should be subsidised to increase the calorie intake of the poor in the state. This will also help in subsidy planning for rice in the state of Orissa.

### Introduction

Although sufficient food is available at national level, food insecurity and poverty are widely prevalent in Orissa. Calorie deficiencies are thought to be the most basic and first-order problem, and are the measures used to characterise widespread malnutrition (Reutlinger and Selowsky, 1976; World Bank, 1981), though other nutrient inadequacies are also claimed to be widespread. The report of the Government of India (2006) records that the average per capita per diem calorie intake of rural people in Orissa is about 2023 calories, which is 377 calories less than the desired. People living below poverty line is 40 per cent in the state (Government of Orissa, 2010). Therefore, the households below subsistence calorie intake levels are the targets of obvious policy importance. In developing countries national goals are set in terms of calorie intake and there is heavy intervention in the markets for cereals. However, little is known about the manner in which various income groups behave to food price changes among cereals.

The design of efficient programs to aid calorie deficient households in attaining minimum levels of calorie intake requires information on all own and cross price elasticities for both target and non-target groups. The demand elasticities available at national level (Swamy and Binswanger, 1983; Majumdar, 1986; Jain et al, 1992; Radhakrishna and Ravi, 1992; Kumar, 1998) are not useful for analysing consumption pattern of a region as considerable regional variations exist in a country like India with wide variety of climatic conditions, natural calamities, tastes, customs and traditions etc. Therefore, in this paper the consumption pattern of different income groups of consumers of Orissa were analysed over years and the elasticities were estimated and used for policy analysis.

Alderman (1986) from the review of food price and income elasticities across the globe concluded that although consumers readily substitute other foods for a food item, when that item's price changes, the poor are more likely to make such substitutions than the rich. Timmer (1981) was the first to propose such a relation that the terms of the Slutsky substitution matrix curve smoothly from poor households to rich

households. Behrman and Deolalikar (1989) found that food indifference curves become more sharply curved as food expenditures increase, with the implication that price responses are lower at higher incomes. The proposition of Timmer i.e. lower income households are more responsive to food price changes than high income households is investigated in this study, which has a implication for policy makers to design the policy of subsidies for cereals to target for the poor.

### Data and Methodology

The data for this study were collected from various publications and reports of National Sample Survey Organisation (NSSO). The NSSO conducts quinquennial surveys on consumption expenditure, the sample size of which are relatively large. For this study data of the quinquennial rounds were collected for Orissa state from various publications of NSSO. The period, number of households, and number of expenditure classes in the selected rounds are presented in Table-1.

The prices of rice, wheat and other cereals are available in the NSSO publications, which are directly used in this study. But, the prices of milk, oil, meat, sugar, pulses, fruits, vegetable and other food are not available in the NSSO publications. Therefore, these prices were collected from various issues of the Indian Labour Journal and the monthly bulletins of National Horticultural Board for the reference period and used in the study.

**TABLE-1**

**Selected Number of NSS Rounds, Period, Sample size and Number of Expenditure classes for Orissa state**

Round Number	Period	No. of Sample households		No. of expenditure classes
		Rural	Urban	
27	Oct 72 to Sept 73	3312	1861	14
32	July 77 to June 78	4286	1708	14
38	Jan 83 to Dec 83	3056	914	13
43	July 87 to June 88	1769	594	12
50	July 93 to June 94	3338	1037	12
55	July 99 to June 2000	3477	1050	12
61	July 2004 to June 2005	3836	1187	12

The quantities consumed of rice, wheat and other cereals are available in the NSSO publications, which were directly used for this study. The quantities of pulses are available only for 4 years (1987-88, 1993-94, 1999-2000 and 2004-05). Therefore, the quantities consumed of other rounds for pulses and for all the rounds for other food items were derived implicitly by dividing the expenditure on that item by the price of that item. The expenditure groups listed in the NSSO publications were divided into 4 broad expenditure groups on the basis of poverty line definition of the Planning Commission of Government of India (Table-2). Expenditure classes of NSS below 75 per cent of the poverty line are defined as very poor, expenditure classes above 75 per cent and poverty line as moderately poor, expenditure classes between poverty line and 150 per cent of the poverty line as non-poor lower and expenditure classes above 150 per cent of poverty line as non-poor higher.

**TABLE-2**

**Poverty Line Demarcation by the Planning Commission,  
Government of India for Orissa consumers**

Period	Rs. per capita per month	
	Rural	Urban
1972-73	41.00	47.00
1973-74	49.10	56.60
1977-78	60.00	69.90
1983	101.80	117.50
1987-88	131.80	152.10
1993-94	229.00	264.00
1999-00	323.92	473.12
2004-05	325.79	528.49

The Food Characteristic Demand Model developed by Bouis (1990) has several advantages over other models like Normalised Quadratic,

Generalised Leontief and Transcendental Logarithmic. This model requires only one year data set of food and nonfood items to yield the complete set of price and income elasticities. This model is found to be less data intensive and labour intensive to find out the demand elasticities. The model was employed to 7 rounds of NSS data to compute the demand elasticities. To measure the curvature, the Slutsky substitution elasticities were regressed on the income of the household. The relation may be written mathematically as:

$$e_{ij}^h = f(I^h)$$

where,

$e_{ij}^h$  = the Slutsky substitution elasticity for household  $h$  for commodity  $i$

when commodity  $j$ 's price changes,

And  $I^h$  = income of the household at constant prices

The functional form used to test this relation is semi-log form i.e.  
 $|e_{ij}^h| = a_{ij} + b \log(I^h)$

The observations each from the rural and urban areas covering seven rounds of NSS data, four income strata, and three commodities i.e. rice, wheat and other cereals (as cereals are the major source of calories) were used to estimate the model by pooling cross section cum time series data (elasticities and income) to test the hypothesis that 'b' would be significantly negative.

### Results and Discussion

The changes in consumption pattern of food are influenced by consumers' income, prices of food items, easy access to new food items and urbanisation. Availability of new food items in the market has a long-term effect of changes in tastes and preferences of consumers for those items. This also has the effect of adding variety to the diet of consumers, thus increasing consumers' satisfaction. Increase in income has the influence of shifting the consumption from cereals to high value commodities like fruits, vegetables and livestock products like milk, meat, fish, eggs and other new food items available in the markets. The price of different food items helps to substitute different food items among themselves depending on the total resource available with the consumers. Urbanisation has the effect of consumption of less cereals (as majority of urban people take sedentary jobs) and more of other

food items including fast foods due to easy availability and higher purchasing power than their rural counter parts. The above 4 factors have influenced the Orissa consumers and the changes occurred in the food basket of Orissa consumers are presented in Tables-3 and -4.

**TABLE-3**

**Changes in the Share of Expenditure on  
Different Consumption Items over Years in Rural Orissa**

Commodities	1972-73	1977-78	1983	1987-88	1993-94	1999-00	2004-05
Rice	0.47	0.46	0.46	0.39	0.37	0.31	0.26
Wheat	0.03	0.02	0.03	0.01	0.01	0.02	0.02
Other Cereals*	0.02	0.02	0.01	0.01	0.01	0.01	0
Total Cereals	0.52	0.5	0.5	0.41	0.39	0.34	0.28
Pulses	0.02	0.02	0.02	0.03	0.03	0.03	0.03
Milk	0.01	0.02	0.02	0.02	0.02	0.03	0.03
Oil	0.03	0.03	0.03	0.04	0.03	0.03	0.04
Vegetables	0.06	0.05	0.06	0.07	0.09	0.08	0.09
Fruits	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Meat-fish-egg	0.03	0.03	0.03	0.04	0.04	0.04	0.04
Sugar	0.02	0.01	0.02	0.02	0.02	0.02	0.02
Other Food	0.05	0.04	0.05	0.05	0.05	0.08	0.08
Food	0.75	0.71	0.74	0.69	0.68	0.66	0.62
Non-Food	0.25	0.29	0.26	0.31	0.32	0.34	0.38
Total	100.00 (34.96)	100.00 (52.47)	100.00 (98.75)	100.00 (127.51)	100.00 (219.80)	100.00 (410.41)	100.00 (398.89)

\* Other Cereals include Ragi, small millets, jowar, Bajra and Barley  
Figures in parentheses indicate total expenditure per capita per month in rupees.

**TABLE-4**

**Changes in the Share of Expenditure on  
Different Consumption Items over Years in Urban Orissa**

Commodities	1972-73	1977-78	1983	1987-88	1993-94	1999-00	2004-05
Rice	0.25	0.25	0.27	0.19	0.17	0.17	0.14
Wheat	0.04	0.04	0.04	0.03	0.03	0.04	0.03
Other Cereals*	0	0	0	0	0	0	0
Total Cereals	0.29	0.29	0.31	0.22	0.2	0.21	0.17
Pulses	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Milk	0.05	0.06	0.04	0.06	0.05	0.05	0.05
Oil	0.04	0.04	0.04	0.05	0.03	0.03	0.03
Vegetables	0.06	0.07	0.07	0.07	0.08	0.07	0.06
Fruits	0.01	0.01	0.01	0.02	0.02	0.02	0.02
Meat-fish-egg	0.04	0.04	0.05	0.05	0.05	0.04	0.04
Sugar	0.03	0.02	0.02	0.02	0.02	0.02	0.01
Other Food	0.11	0.09	0.09	0.09	0.1	0.09	0.09
Food	0.65	0.66	0.65	0.61	0.58	0.56	0.5
Non-Food	0.35	0.34	0.35	0.39	0.42	0.44	0.50
Total	100.00 (62.35)	100.00 (86.99)	100.00 (151.42)	100.00 (225.20)	100.00 (402.54)	100.00 (700.82)	100.00 (757.31)

\* Other Cereals include Ragi, small millets jowar, Bajra and Barley.

Figures in parentheses indicate total expenditure per capita per month in rupees.

**Changes in consumption pattern in Orissa**

The trend in both rural and urban areas revealed that the proportion spent on food item decreased and that on non-food increased during the period 1972-73 to 2004-05. In rural areas, the proportion spent on food decreased from 75 per cent to 62 per cent whereas in urban areas the proportion decreased from 65 per cent to 50 per cent during 1972-73 to 2004-05. Among food items, there was a significant reduction in the proportional expenditure spent on rice. During 1972-73, rice accounted for 47 per cent of the total expenditure, which has reduced to 26 per cent during 2004-05 in rural areas. The share of wheat has reduced from 3 to 2 per cent and that of other cereals from 2 to



negligible per cent during the same period. The food groups with increase in expenditure share were pulses, milk, vegetables, meat-fish-egg and other food groups. The expenditure on other food items (which are ready to eat and now-a-days available in rural areas) has increased by 3 per cent between 1972-73 and 2004-05. The share of vegetables has increased from 6 to 9 per cent, while the shares of pulses and meat-fish-egg have gained 1 per cent each in rural areas. Similar trends were observed in urban areas. The expenditure share of rice has decreased from 25 to 14 per cent, while that of fruits increased by 1 per cent during 1972-73 to 2004-05 (Table-4). Foods which lost 1 per cent were sugar and oils. These results confirmed the observation of different researchers (Kumar, 1998; Pingali, 2004 and Minten, 2009) that there is a shift in consumption from cereals to high value commodities.

#### **Consumption pattern of Rice, Wheat and other cereals**

Rice is the dominant cereal among all the energy producing foods, which accounted for more than 87 per cent of total cereals consumption in rural areas and more than 81 per cent in urban areas over the years under study (Tables 5 and 6). On the average, rice consumption has increased from 160 kg per capita per year to 183 kg in rural areas (where 85 per cent of the total population live) during 1972-73 to 1993-94 and thereafter has decreased to 160 kg (2004-05), whereas in urban areas it has increased from 136 kg (1972-73) to 143 kg (1999-2000) and decreased thereafter. Wheat is also a preferred cereal in urban areas whose consumption varies from 25 to 30 kg per capita per year. The consumption of coarse cereals was reduced drastically in the recent period (2004-05) in comparison to the consumption level of 1970s. This consumption shift has been due to technological and policy support favouring rice and wheat and also preferences for those cereals in the diet in comparison to coarse cereals.

Analysis of consumption of cereals across income groups yields different results. Over the period of observation, the consumption of cereals by all the income groups has declined. The decline was more prominent in the two non-poor groups and more so in rural areas. This may be due to the fact that consumers have diversified their consumption basket of food and preferred other foods than cereals, which are more expensive source of calories, but adds taste and variety to the diet. This observation confirms the findings of Radhakrishna (1991) and Behrman and Deolaliker (1989) that consumers prefer better

quality foods and give weightage to taste as their income increases. During the period under investigation, the very poor group of consumers increased their cereal consumption from 135 kg to 142 kg in rural areas and 142 to 146 kg in urban areas, thus improving the amount of calorie intake.

**TABLE-5**

**Changes in Quantity of Consumption of Cereals over Years  
across Different Expenditure Groups (Rural Orissa)**

Expenditure Class	1972-73	1977-78	1983	1987-88	1993-94	1999-00	2004-05
<b>CEREALS</b>							
Very poor	134.9	156.8	139.9	154	159	147.6	142.1
Moderately poor	202.8	214.9	185.4	191.5	193.1	172.3	169.3
Non-poor lower	240.5	249.2	220.2	209.6	211.8	191.6	181.6
Non-poor higher	300.6	292	255.5	241.7	223.3	204.7	190.7
Average	182.6	191.6	187.4	188.5	191.3	182.6	167.8
<b>RICE</b>							
Very poor	113.9	138.6	120.1	136.8	152	137.2	136.9
Moderately poor	179.5	194.4	165.5	179.9	186.6	165.2	164.9
Non-poor lower	217.8	229	196.1	195.5	203.2	182.3	173.6
Non-poor higher	270.5	268.9	228.7	214.8	210.2	180.7	171.7
Average	160.3	172.2	165.6	172.3	182.9	169.9	159.5
<b>WHEAT</b>							
Very poor	5.3	3.7	6.1	2.3	1.2	1	0.8
Moderately poor	11.4	8.6	13.7	5.8	3.5	2.9	3.2
Non-poor lower	13.9	10.6	16.3	9.6	5.6	7.2	7.3
Non-poor higher	16.8	15.6	22.3	21.6	21.8	22.2	18.6
Average	9.2	6.5	13	7.6	4.6	8.8	6.4
<b>OTHER CEREALS*</b>							
Very poor	15.7	14.5	13.7	14.9	5.8	9.5	4.3
Moderately poor	11.9	11.9	6.2	5.9	3	42	1.2
Non-poor lower	8.8	9.7	7.8	4.6	3	2.2	0.6
Non-poor higher	13.3	7.4	4.4	5.3	0.8	1.8	0.1
Average	13.1	13	8.9	8.6	3.8	3.8	1.9

\* Other cereals include Ragi, small millets, Jowar, Bajra, Maize and Barley  
Figures are in kgs. per capita per year.

**TABLE-6**

**Changes in Quantity of Consumption of Cereals over Years  
across Different Expenditure Groups (Urban Orissa)**

Expenditure Class	1972-73	1977-78	1983	1987-88	1993-94	1999-00	2004-05
<b>CEREALS</b>							
Very poor	141.7	142.8	150.8	147.8	142.4	161.4	146.0
Moderately poor	172.2	175.2	177.5	163.1	165.1	189.6	161.5
Non-poor lower	182.9	177.1	179.3	169.8	170.2	173.9	159.0
Non-poor higher	167.0	176.0	180.8	170.9	153.5	170.4	162.7
Average	165.2	167.5	170.0	164.9	160.4	173.4	157.3
<b>RICE</b>							
Very poor	124.7	125.3	132.0	131.9	133.0	148.0	137.4
Moderately poor	144.8	150.5	148.7	146.0	148.6	169.1	141.0
Non-poor lower	145.2	145.4	136.6	141.1	147.2	145.3	131.5
Non-poor higher	127.9	128.3	135.8	118.2	115.4	124.1	121.4
Average	136.0	136.1	139.2	134.6	135.1	143.2	132.6
<b>WHEAT</b>							
Very poor	12.7	12.1	15.4	15.7	6.5	9.7	8.0
Moderately poor	23.8	19.1	26.6	16.7	15.4	19.7	19.9
Non-poor lower	35.2	28.4	41.4	28.3	22.4	28.3	27.4
Non-poor higher	37.9	46.6	44.3	52.4	38.0	45.4	41.2
Average	26.3	27.8	28.8	29.9	24.5	29.0	24.4
<b>OTHER CEREALS*</b>							
Very poor	4.3	5.4	3.5	0.2	3.0	3.8	0.7
Moderately poor	3.6	5.6	2.2	0.4	1.2	0.8	0.6
Non-poor lower	2.5	3.2	1.3	0.4	0.5	0.1	0.1
Non-poor higher	1.2	1.2	0.7	0.2	0	0.8	0.1
Average	3.0	3.6	2.0	0.4	0.8	1.2	0.4

\* Other cereals include Ragi, small millets, Jowar, Bajra, Maize and Barley  
 Figures in kg per capita per year

Rice is the major source of calories in the food basket of the consumers of Orissa. The consumption of rice has decreased over years in all the income groups in rural and urban areas. It has decreased from 271 kg per capita per month to 172 kg in rural areas and from 128 kg to 121 kg in urban areas for the highest income bracket. This may be due to the availability and consumption of a much wider variety of food in the recent years in both rural and urban areas. In contrast to the behaviour of higher income groups, the poor groups constrained by income are compelled to increase their calorie intake by consuming more rice or other cereals on which they are still deficient. In rural areas, the very poor group of people have increased their rice consumption from 114 to 137 kg during 1972-73 to 2004-05. The very poor groups in urban areas have increased their rice consumption from 125 kg to 137 kg during the period 1972-73 to 2004-05, thus improving their calorie intake. However, even in the poorest group, there are signs of decline in rice consumption when the last two rounds of consumer survey were considered both in rural and urban areas.

#### **Own and cross price elasticities**

The elasticities obtained using the Food Characteristic Demand Model is presented in Tables 7 and 8. The price elasticities for the latest available year (2004-05) were discussed in the paper due to lack of space and indicate the present trends among the people in rural and urban Orissa. As expected, the own price elasticities of rice were negative in all the cases in both rural and urban areas, implying that as the price of rice increased, the demand for it decreased and vice versa. The cross elasticities of rice with wheat and other cereals were positive implying that they are substitutes to rice. The sign of the elasticities of all other commodities were negative except oil and sugar implying that they were complements to rice consumption. In case of oil and sugar, the signs were positive because these commodities also supply a sizeable amount of energy like rice to our body. The own price elasticities of rice were found to be -0.30 and -0.26 for rural and urban areas respectively. Across income groups the own price elasticities were -0.58, -0.36, -0.19, -0.15 for rural areas and -0.39, -0.32, -0.25, -0.19 for urban areas for very poor, moderately poor, non-poor lower and non-poor higher income group respectively. A 10 per cent increase in price of rice will decrease the consumption of rice by 5.8 per cent for

very poor and 1.5 per cent for non-poor higher income groups respectively in rural areas. At the same time, the same amount of price increase in rice will increase the consumption of other cereals by 5.5 per cent and 3.6 per cent for lowest and highest income group of consumers respectively in rural Orissa.

It was observed that in most of the cases the own and cross price elasticities of all foods declined as income increased in both rural and urban areas. The implication of this observation is that low income households were more responsive to food price changes than high income households i.e. demand for food by richer consumers are relatively more inelastic than the poorer consumers. This observation was statistically established in the following-section.

**TABLE-7**

**Own and Cross Price Elasticities of Rice by Income Groups of Rural Orissa**

Food groups	Income class				Average
	Very Poor	Moderately Poor	Non-poor Lower	Non-poor Higher	
Rice	-0.58	-0.36	-0.19	-0.15	-0.30
Wheat	0.14	0.29	0.29	0.21	0.24
Other cereals	0.55	0.61	0.46	0.36	0.49
Milk	-0.27	-0.06	-0.15	-0.01	-0.12
Oil	-0.01	0.11	0.12	0.13	0.09
Meat	-0.40	-0.38	-0.25	-0.10	-0.28
Sugar	0.08	0.16	0.19	0.17	0.16
Pulses	-0.14	-0.10	0.01	0.07	-0.03
Fruits	-0.26	-0.25	-0.16	-0.04	-0.18
Vegetables	-0.15	-0.08	0.00	0.07	-0.03
Other food	-0.46	-0.46	-0.34	-0.14	-0.35

**TABLE-8**

**Own and Cross Price Elasticities of  
Rice by Income Groups of Urban Orissa**

Food groups	Income class				Average
	Very Poor	Moderately Poor	Non-poor Lower	Non-poor Higher	
Rice	-0.39	-0.32	-0.25	-0.19	-0.26
Wheat	0.29	0.33	0.28	0.14	0.24
Othercereals	0.83	0.68	0.43	0.17	0.44
Milk	-0.25	-0.12	-0.04	0.03	-0.06
Oil	0.07	0.13	0.16	0.11	0.12
Meat	-0.32	-0.24	-0.13	-0.03	-0.14
Sugar	0.19	0.24	0.22	0.13	0.19
Pulses	-0.08	-0.01	0.06	0.07	0.03
Fruits	-0.24	-0.16	-0.05	0.01	-0.08
Vegetables	-0.06	-0.01	0.05	0.06	0.03
Other food	-0.37	-0.30	-0.16	-0.04	-0.17

**Measurement of Curvature**

The estimates of the curvature for rice, wheat and other cereals for rural and urban areas are presented in Table 9. Out of the three regressions run for rural and urban areas each for rice, wheat and coarse cereals, the regression of rice was significant. The coefficients (curvatures) were found significant in all the cases except other cereals in rural areas. The expected negative sign was observed in all the cases. The curvature for rice was found to be -0.137 and -0.157 for rural and urban areas respectively. From the standard coefficients it is observed that the magnitudes of rice curvatures are 2.5 to 4.5 times more than wheat and other cereals in both rural and urban areas. This means that rice is more sensitive to substitution than wheat and other cereals. This is so because over years the people of Orissa have developed the taste and preferences for rice consumption over wheat and other cereals. Rice is produced by every farmer in Orissa due to typical agro-climatic conditions prevailing in this part of the country, for which rice accounts



for 93 per cent of the total production of cereals and are consumed widely by people of all income classes. As a result, the expenditure share of rice in comparison to other cereals including wheat is more than 10 times in rural Orissa and more than 4 times in urban Orissa.

When price of rice increases, the real income of consumer decreases. The price elasticities were more negative for poor consumers in comparison to richer consumers meaning thereby that, in case of price increase the demand for rice decreases more by the poor groups and thus the calorie intake also decreases. This leads to more hunger and aggravates poverty situation. The regression results of seven rounds of NSS data confirmed that poor responds more to food price changes than the richer consumers. The implication of this finding is that poor will substitute more flexibly than the rich, when compensated for the income effect of the price change.

**TABLE-9**

**Pool Estimates of the Curvature in the Slutsky Substitution Matrix (Rural and Urban Orissa )**

Commodities	Co-efficient 'b'	t-value	R <sup>2</sup>	Standardized Coefficient
<b>RURAL</b>				
Rice	-0.1369 (0.026)	5.26	0.51	-0.4767
Wheat	-0.0882 (0.026)	3.38	0.15	-0.1814
Other cereals	-0.0506 (0.030)	1.67	0.03	-0.1246
<b>URBAN</b>				
Rice	-0.1567 (0.022)	7.07	0.76	-0.6229
Wheat	-0.0987 (0.022)	4.48	0.20	-0.2632
Other cereals	-0.0508 (0.025)	2.03	0.03	-0.1437

*Figures in parentheses indicate standard errors of the estimates*

In this situation, i.e. where a sizeable per cent of the population are calorie deficient or when there is increase in price of rice, the poor need to be supported by increase in their income. This can be done in various ways either directly by increasing their income or indirectly through subsidising the food items, which the poor exclusively consume. The direct increase in income can be done through increase in non-farm incomes, off-farm incomes or through diversification of the enterprises, which the poor are currently undertaking. In Orissa, poor people consume coarse varieties of rice, while the richer groups consume fine varieties because the coarse varieties are relatively cheaper. Therefore, the coarse varieties of rice can be subsidised by which the purchasing power of the poor can be increased and thus the calorie intake of the poor section of the population can be increased and pilferage in the Public Distribution System will be decreased.

### Conclusion and Policy Implications

The analysis of food consumption in Orissa revealed that the proportion spent on food decreased in both rural and urban areas. Rice is the dominant cereal among all energy giving foods and the expenditure share on rice has decreased in all the groups. The very poor group of people have increased their volume of rice consumption. The food groups with marginal increase in expenditure share were pulses, milk, vegetables, meat-fish-eggs and other food groups in both areas.

A number of lessons emerge for policy makers while designing target group oriented food programs. Disaggregation by commodity and income class is essential because the poor respond very differently to changes in prices of commodities than the rich. It is these differences in response which suggest that it may be possible to target interventions including subsidies for cereals towards poor households. The subsidies for cereals should be selected in such a way that they are not consumed widely by the richer section of the society. As rice is the staple food of the poor people in Orissa and a number of varieties (coarse, fine and superfine) within the commodity are available, the coarse variety is being consumed widely by the poor people and the cheapest should be subsidised to increase their calorie intake. This will help in better targeting the poor households in the state and also reduce the total subsidy burden on the exchequer.

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# **Achieving Food Security through PDS in India (With Special Reference to Orissa)**

**Swetalina Das<sup>1</sup>  
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## **1. INTRODUCTION**

Food security stands as a fundamental need, basic to all human needs and the organization of social life. It is the assurance of access to adequate nutrition, either through direct effort or exchange at acceptable prices. Access to necessary nutrients is fundamental not only to life per se, but also to stable and enduring social order. Therefore, there is a need for evolving an operational conceptualization of food security and mechanism to attain and maintain food security. Food security or rather insecurity, is at the heart of food crises and food related emergencies. It is an underlying cause of malnutrition and mortality, and a significant factor in long term livelihood security.

The concept of food security has been evolving over the last few decades with academics, policy makers and NGO activists contributing substantially to the debate on what constitutes food security, determinants of food security and how it can be ensured at global, regional, national, state, household and individual levels. The definition of food security varied depending on the unit of analysis.

The World Food Conference, convened by FAO in 1974, drew the attention of the world community, for the first time to the urgent need of devising ways and means to ensure food security for the hungry millions of the world in general and South Asia in particular. The World Food Summit (WFS) in Rome in Nov 1996 invited the world's attention towards the chronic problem of hunger and malnutrition and the problem of increasing food shortages in South Asia. These historic events prompted the academic world to research on food security, which is an important aspect of human life.

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The definition of food security as endorsed by the FAO/WHO International conference on nutrition held in Rome in Dec 1992, reads as "access for all people at all times to enough food for an active healthy life."

The WFS broadened this definition by stating "food security as a situation in which "all people at all times have physical and economic access to sufficient safe and nutritious food to meet their dietary needs, and food preferences for an active and healthy life."

In 1981, Amartya Sen in his work 'Poverty and Famines: An Essay on Entitlement and Deprivation' brought forward a new understanding of the problem of hunger or food security. Rather than just the 'availability' of food, Sen emphasized 'access' to food and 'entitlement'- a combination of what one can produce, exchange in the market plus state or other socially provided supplies.

A more elaborate alternative definition is provided by M.S. Swaminathan in terms of "Providing physical and economic access to balanced diets and safe drinking water to all people at all times."

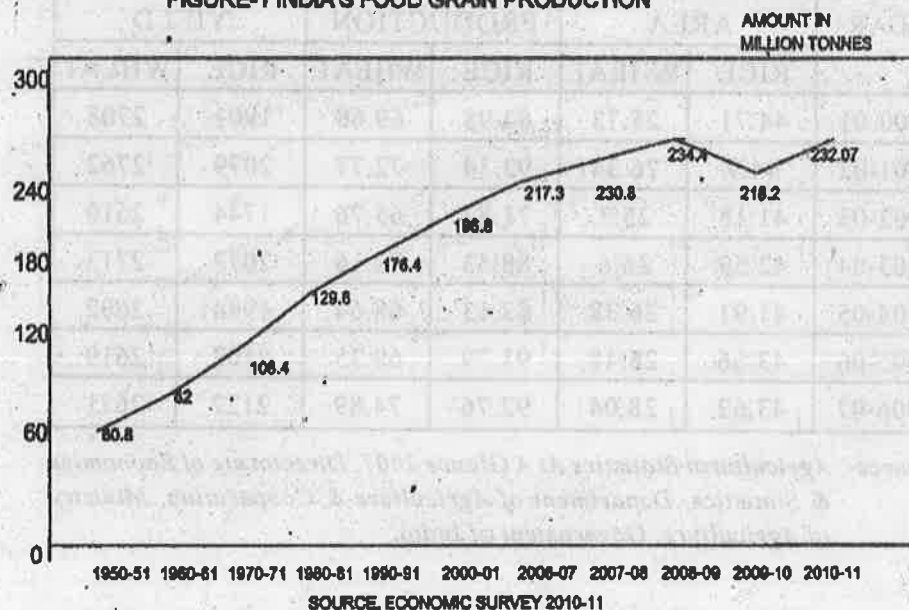
Food security was formerly considered essentially a problem of food production. In seventies it became clear that availability in the market alone doesn't lead to food security. Lack of purchasing power deprives a person from access to food even though food is available, similarly poor absorption of food in the human body even after consumption also leads to nutritional deficiency which is the ultimate goal of food security. Therefore food security comprises three basic aspects of food availability, food access and food absorption. These three ingredients of food security have an intricate relationship among themselves and any mismatch between these three basic links results in a situation of food insecurity.

## 2. FOOD SECURITY SITUATION IN INDIA:

India has faced situations of famines and chronic food shortages in the historical times. The growth in food grain production has stagnated while the consumption need of the growing population is increasing. A paradox of endemic mass-hunger coexisting with mounting food grain stocks exists. Following independence, the focus of the country's food policy has been to achieve self sufficiency in food production. The period after the Third Plan has been marked by rapid strides in food grains production. This has enabled the country to overcome the problems of food grains shortages and to build up large stocks of food grains to

counter any scarcity conditions. India achieved self sufficiency in food grains in 1970s and has sustained it since then. For achieving self sufficiency in food grains growth in production plays an important role. And the growth rate of production depends on area, production and yield of food grains. Food grain production in India has shown a long term increasing trend but with minor fluctuations. The following chart shows the trend for the period 1950-51 to 2010-11.

FIGURE-1 INDIA'S FOOD GRAIN PRODUCTION



From 2005-06 to 2008-09, India's food grain production has registered a rising trend and touched a record level of 234.47 million tonnes in 2008-09 but declined to 218.11 million tonnes during 2009-10. This was solely due to the long spells of one of the worst droughts in various parts of the country in 2009. During this period, the productivity of almost all the crops suffered considerably. As per the second advance estimates released by Ministry of Agriculture on Feb 9, 2010 production of food grains during 2010-11 is estimated at 232.07 million tonnes compared to 218.11 million tonnes last year. This is a good rebound in the food grain production but still below the record production of 234.47 million tonnes of food grains in 2008-09.

The following table shows the movement in area, production and yield of two major food crops i.e. rice and wheat for the current decade.



**TABLE-1****ALL INDIA AREA, PRODUCTION AND YIELD OF RICE  
AND WHEAT FROM 2000-01 TO 2006-07**

Area-Million Hectares  
Production-Million Tonnes  
Yield-Kg/Hectare

YEAR	AREA		PRODUCTION		YIELD .	
	RICE	WHEAT	RICE	WHEAT	RICE	WHEAT
2000-01	44.71	25.73	84.98	69.68	1901	2708
2001-02	44.9	26.34	93.34	72.77	2079	2762
2002-03	41.18	25.2	71.82	65.76	1744	2610
2003-04	42.59	26.6	88.53	72.16	2077	2713
2004-05	41.91	26.38	83.13	68.64	1984	2602
2005-06	43.66	26.48	91.79	69.35	2102	2619
2006-07	43.62	28.04	92.76	74.89	2127	2671

Source- *Agricultural Statistics At A Glance 2007, Directorate of Economics & Statistics, Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India.*

From Table-1 it is evident that the area under production of rice in the year 2000-01 was 44.71 million hectars which decreased to 43.62 million hectars in the year 2006-07. But the production of rice increased from 84.98 million tonnes to 92.76 million tonnes during that period. Yield rate of rice also increased from 1901 kg/hectare in 2000-01 to 2127 kg/hectare in 2006-07. But during the years 2002-03 and 2004-05 area, production and yield of rice declined.

The area under wheat production increased from 25.73 million hectars in the year 2000-01 to 28.04 in the year 2006-07. The production of wheat shows a fluctuating picture. It was 69.68 million tonnes in the year 2000-01 and became 74.89 million tonnes in 2006-07. Similarly the yield of wheat (kg/hectare) is also fluctuating. This was 2708 kg/hectare for the year 2000-01 and came down to 2671 kg/hectare in the year 2006-07.

In order to meet the year to year fluctuation in food grain production Government of India started building up large buffer stock through the FCI (Food Corporation of India) to meet the need of the people in the areas of scarcity and emergencies through various programmes.

The stock of food grains in the central pool as on 01.01.2010 was 476.95 lakh tonnes which comprised 243.53 lakh tonnes of rice and 230.92 lakh tonnes wheat and 2.50 lakh tonnes of coarse cereals. The table-2, contains the information related to buffer stock position of food grains in India since 2003 to 2010 and it shows that the buffer stock position of the country is sufficient to meet the need of the people, when compared to the minimum buffer norms. The government has not changed the buffer stock norm, for both rice and wheat since April 2005. According to the norm, the minimum rice in the central pool should be 118 lakh tonnes on July 1st and 52 lakh tonnes on October 1st. Similarly the quantity of wheat should be 82 lakh tonnes on January 1st, 40 lakh tonnes on April 1st, 171 lakh tonnes on July 1st and 110 lakh tonnes on October 1st.)

**TABLE-2**

**STOCK POSITION OF WHEAT AND RICE IN THE CENTRAL POOL VIS -A-VIS MINIMUM BUFFER NORMS.**

As on	Wheat Actual Stock	Wheat Minimum Buffer Norms	Rice Actual Stock	Rice Minimum buffer norms	Total Actual Stock	Total Minimum Buffer Norms
2003	870.96	383	527.44	367	1398.4	750
2004	529.93	383	416.51	367	946.44	750
2005	377.41	405	410.24	356	787.65	761
2006	228.16	403	434.29	390	662.45	793
2007	331.78	403	416.15	390	747.93	793
2008	604.52	403	444.22	390	1048.74	793
2009	930.2	403	741.45	390	1671.65	793
1.1.2010	230.92	82	243.53	118	474.45	200

Source-Annual Report 2009-10, Department of food and public distribution, Ministry of Consumer Affairs, Food and Public Distribution.

In spite of enough food production and buffer stocks, India is the home to the largest number of hungry people in the world. Worldwide 852 million people are hungry due to extreme poverty and 2 billion people lack food security intermittently due to varying degree of poverty (Sources FAO, 2003). 600 million children die of hunger every year and 17000 everyday. International Food Policy Research Institute sheds renewed light on the acute Indian hunger situation.

The Global Hunger Index 2009 ranks India at the bottom with 65<sup>th</sup> position (out of 84 countries) with a GHI of 23.90 percent, which the index characterized as 'alarming' food security situation. Over 200 million people are food insecure in India.

About half of India's population is struggling to find food on their plate, coping with stern starvation and droughts with on the flipper side; In India, 30 million people have been added to the rank of hungry. Since the mid 1990s 40 percent children are underweight. Orissa being one of the backward states in India is experiencing severe food insecurity.

### 3. FOOD SECURITY AND HUNGER IN ORISSA

Orissa, with a population of 36.7 million (2001) and the third lowest population density among the major states of India, is among the poorest of India's states. About 87 per cent of the population lives in rural areas and annual per capita income is estimated to be approximately US \$250. The Human Development Index for the major states of India has ranked Orissa among the bottom five since 1981. (Government of India, 2001) Agriculture employs about 80 per cent of the population, but its contribution to the Gross State Domestic Product (GSDP) is only one third. Small and marginal holdings predominate. The share of those employed as cultivators fell from 45 per cent in 1993-94 to 30 per cent in 1999-2000. Poverty in Orissa is an overwhelmingly rural phenomenon. Inequalities are sharpest between the relatively better off coastal areas and the more remote and inaccessible inland areas. Coastal areas have a poverty ratio of 32 per cent showing a decline during the 1990s while in the inland southern region (where almost 75 per cent of the state's poor live) the poverty ratio is 87 per cent, an increase from 69 per cent in 1992-94 (NSS data). Over all the rural poverty ratio is 48 per cent compared to urban poverty ratio of 43 per cent.

Agriculture plays a dominant role in the state of Orissa and provides direct and indirect employment to around 65 percent of the total work

force as per 2001 census. Paddy is the principal food crop of the state. The crop distribution as percentage of gross cropped areas are paddy (76.4 per cent), pulses (12.2 per cent), oil seeds (5.2 per cent), cash crops like sugarcane, potato, chilly (2.0 per cent) and others (4.2 per cent). The agriculture in Orissa is characterized by low productivity due to traditional agricultural practices, inadequate irrigation infrastructure, small size of holding, and low investment. Nearly 60 percent of the cultivable land is rain fed and exposed to the vagaries of monsoons.

The principal source of food supplies in Orissa is food grain production with intra state imports of food grains (commercial and public distribution) constituting a marginal proportion of total consumption.

Food grain production has been fluctuating over the years showing either stagnation or decline. Infact, production of food grains has not yet exceeded the level achieved during 2008-09. Food grain production growth has been negative in the nineties. Let's have a look on the area, production and yield of rice in Orissa over the years:

**TABLE-3**

**AREA, PRODUCTION AND PRODUCTIVITY OF KHARIF AND RABI RICE IN ORISSA**

YEAR	KHARIF	RABI	TOTAL	KHARIF	RABI	TOTAL	KHARIF	RABI	TOTAL
2002-03	4.09	0.18	4.27	2.82	0.42	3.24	690	2352	759
2003-04	4.25	0.25	4.50	6.20	0.53	6.73	1549	2112	1496
2004-05	4.20	0.29	4.49	5.88	0.65	6.53	1401	2230	1455
2005-06	4.15	0.33	4.48	6.25	0.71	6.96	1504	2193	1554
2006-07	4.18	0.30	4.48	6.24	0.75	6.99	1491	2500	1559

*SOURCE- DIRECTORATE OF AGRICULTURE AND FOOD PRODUCTION, GOVT. OF ORISSA*

AREA IN MILLION HECTOR	PRODUCTION IN MILLION TONNES	PRODUCTIVITY IN TONNES PER HECTOR
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From the above table-3, it is clear that the area under rice production in Orissa remains almost unchanged. Production of rice in the year 2002-03 was 3.24 million tones which increased to 6.99 million tons in

2006-07. And the productivity of rice is 759 million tones per hector in 2002-03 which increased to 1559 million tones per hector in 2006-07. There are various reasons for the low agricultural productivity in Orissa.

A large proportion of Orissa's population doesn't have regular and assured access to adequate quantities of food. Hunger and malnutrition are quite widespread and chronic. Freedom from hunger seems to be a distant dream. Though government measures have succeeded to a large extent in preventing large scale famines, the problem of mass poverty and undernourishment still persists. Starvation deaths in the KBK region of Orissa catch the headlines of many newspapers at frequent intervals. It is therefore stressed to have a well managed food security system to provide food at reasonable price to consumers, ensuring remunerative price to producers through dual price system and to stabilize food prices in spite of variations in production

In the "Food Insecurity Atlas of Rural India", Orissa is categorized as a 'SEVERELY FOOD INSECURE' and Status of Districts of Orissa in terms of food security index is shown in Table-4 given below.

**TABLE-4**

**STATUS OF DISTRICTS IN TERMS OF FOOD SECURITY INDEX**

EXTREMELY INSECURE	SEVERELY INSECURE	MODERATELY INSECURE	MODERATELY SECURE	SECURE.
Kandhamal	Koraput	Dhenkanal	Kendrapara	Bhadrak
Gajapati	Sundargarh	Jharsuguda	Jajpur	Puri
Rayagada	Mayurbhanj	Ganjam	Balasore	Jagatsinghpur
Nabarangpur	Malkangiri	Sonepur	Bargarh	
	Sambalpur	Nayagarh	Khordha	
	Deogarh		Cuttack	
	Baudh			
	Keonjhar			
	Angul			
	Kalahandi			
	Balangir			

Source- "Food Security Atlas of Rural Orissa" 2008, p92 table no 56.

Food Security Index is a composite index of availability, accessibility and absorption index. These three indices are calculated by a number of indicators. For measuring availability index the indicators are per capita agricultural output, share of forest area, irrigation extent, rural connectivity; for measuring absorption index, they are access to safe drinking water, access to primary health center and for accessibility index the indicators are average per capita expenditure, agricultural laborers, real wages, proportion of SC and ST, ratio of working population rural female literacy.

The Food security atlas of rural Orissa classified the districts in five different categories: as extremely insecure, severely insecure, moderately insecure and secure. There are various reasons why these districts are food insecure but one of the important aspects is distribution of food grains across regions and sections of people.

Efficient domestic production as well as internal trade are two essential requirements to make enough food available for entire population. Not only in Orissa but also in other states distribution of food grains plays an important aspect of food insecurity. The two important primary dimensions of food security i.e. availability and access can be ensured through proper distribution. Proper distribution includes making food grains available at all places at reasonable price to all people.

#### **4. PUBLIC DISTRIBUTION SYSTEM (PDS) IN INDIA**

Keeping in view the importance of distributional aspect of food insecurity situation, Government of India started the programme of Public Distribution of Food grains in India.

Overtime, The Public Distribution System (PDS), which is the largest of its kind in the world, evolved into a national social safety system. It became an alternative and parallel market that made food grains available at a 'fair price', thus protecting consumers from high prices generated by the free market mechanism. The PDS was started in 1939 as a war time rationing measure. The drought and food shortages in the mid sixties necessitated the Government of India to continue the PDS.

PDS is operated under the joint responsibility of the central and state governments, with the former responsible for procurement, storage, transportation (upto the district head quarters) and bulk allocation of



food grains. The state governments are responsible for distributing these food grains to the consumers through a network of fair price shops. This responsibility includes identification of families Below Poverty Line (BPL), issue of BPL cards, and supervision and monitoring of the functioning of the fair price shops. State governments are also responsible for movement of food grains from the district head quarters to the PDS shop, which requires storage at the sub-district level.

Until 1992, the PDS had universal targeting, being available to all consumers. Government of India introduced the Revamped Public Distribution System (RPDS) in 1992 in limited areas, primarily drought prone, tribal and hilly and remotely located. The RPDS was a purely location targeted scheme, being available to all in the selected areas. This has been substituted in 1997 by the Targeted PDS (TPDS), specifically aimed at BPL people in all parts of the country. State-wise BPL quota is fixed on the basis of the adjusted poverty share determined by Planning Commission. To focus the TPDS further, Antodaya Anna Yojana (AAY) was launched in 2000 to identify 10 million of the poorest BPL families to provide food grains at subsidized rates.

The PDS in India has a network of over 4, 00,000 fair price shops and serves about 160 million families, and it is probably the largest of its kind in the world. Many commentators, including Sen, maintain that India could avoid large scale famines and save millions of lives because of the PDS.

In Orissa, the Food supplies and consumer welfare department is entrusted with the responsibility of ensuring availability of essential commodities to the people at reasonable prices. To achieve this objective the department maintains a buffer stock of food grains through procurement at minimum support prices, monitors the price of commodities of common consumption and enforces various control orders under the Essential Commodities Act, 1955 and is acting as a catalyst to strengthen the consumer protection movement in the state. For the distribution of essential commodities through PDS, the Orissa State Civil Supplies Corporation Limited has been established on 3<sup>rd</sup> September 1980 as a fully state government owned undertaking. The authorized share capital of the corporation is Rs.15 crore out of which the paid up share capital is Rs 9.78 crores totally funded by the state government. The present policy of the state government of Orissa is to ensure availability of adequate quantities of essential commodities to

the consumers by adopting a three prolonged strategy of price stability, availability of food grains and special programmes for drought prone and tribal dominated areas.

### **5. FUNCTIONING AND COVERAGE OF PUBLIC DISTRIBUTION SYSTEM IN ORISSA**

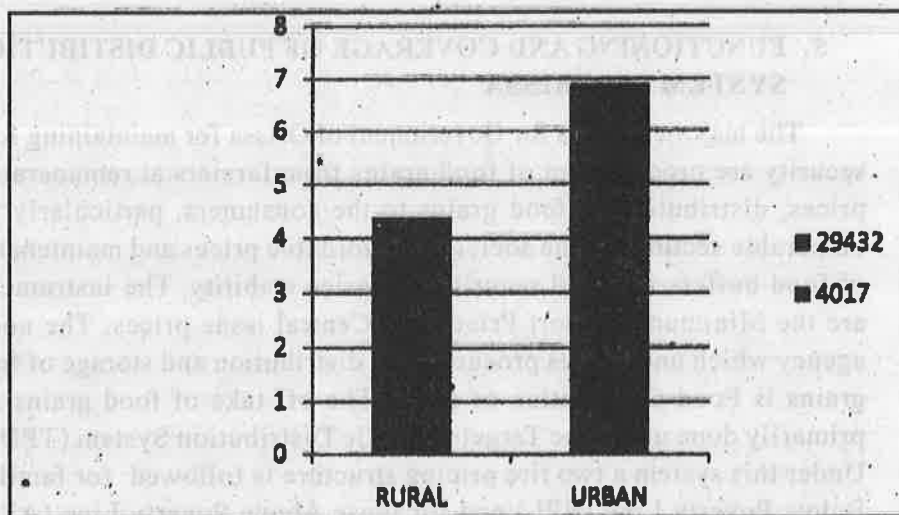
The major channels for Government of Orissa for maintaining food security are procurement of food grains from farmers at remunerative prices, distribution of food grains to the consumers, particularly the vulnerable sections of the society, at affordable prices and maintenance of food buffers for food security and price stability. The instruments are the Minimum Support Prices and Central issue prices. The nodal agency which undertakes procurement, distribution and storage of food grains is Food Corporation of India. The off take of food grains are primarily done under the Targeted Public Distribution System (TPDS). Under this system a two tier pricing structure is followed: for families Below Poverty Line (BPL) and for those Above Poverty Line (APL). Today TPDS covers more than 8 crore of poor families across India for distribution of food grains and kerosene.

In Orissa TPDS has come into force since 1.6.1997. In 143 ITDP (INTEGRATED TRIBAL DEVELOPMENT PROGRAMME) and DPAP (DROUGHT AREA DEVELOPMENT PROGRAMME) blocks BPL families are getting 16 kg of rice at Rs. 4.75 per kg and 9 kg of rice at Rs 6.30 per kg respectively. In 171 non-ITDP/non DPAP blocks BPL families in urban areas are getting 25 kg of rice at Rs 6.30 per kg. In undivided districts of Kalahandi, Bolangir and Koraput APL families are getting 25 kg of rice per month at Rs 6.30 per kg.

However, its effectiveness as well as efficiency in identification and targeting the poor and distribution of entitled quantities of food grains is still under question. In Orissa, the degree of utilization of PDS depends on several factors: the extent of PDS off take relative to allocation, how well the fair price shops are functioning, the extent to which a state is food deficit, and above all, distance between the issue prices and open market price, adjusted for quality differences.

Let us look into the operation of PDS through fair price shops. The number of fair price shop shows the smooth working of PDS. No of Fair Price Shops functioning in Orissa as on 31.3.2010 is 29432 out of which 4017 are operating in the urban areas and 25415 are operating

in the rural areas. The figure-2 cited below is showing the no of fair price shops in Orissa.



As per the "Evaluation Study of TPDS and Antyodaya Anna Yojana", 61.4 per cent of ration card holders in the rural Orissa had a ration shop within their village and another 30.3 per cent within a distance of 2-k.m. Government issues different types of ration cards to the people depending on the categories to which they belong. And accordingly fixes the price and quantity they will receive from the fair price shops. Till March 2010 the numbers of BPL card holders in Orissa are 3713756, APL card holders are 3584713, AYY card holders are 1253590 and AY card holders are 64800.

The food management system in Orissa is highly criticized on the ground that the pattern of distribution of food grains does not seem to be related to the incidence of poverty. States like Bihar, Madhya Pradesh, Orissa and Rajasthan, where rural poverty is pervasive, get very small distribution through Public Distribution System. The Commission for Agricultural Costs and Prices has been repeatedly pointing out in its reports of instances of price support mechanism remaining inactive in backward areas, which do not contribute much to procurement. Bhalla (1994, p.156) has determined the rank correlation between percentage of population below poverty line and distribution through PDS, which is found to be -0.24 showing a reverse relationship.

## 6. CONCLUSION

Food security of a nation is achieved not only through the increase in food production but also through its equitable distribution in which all areas, groups and sectors participate. Effective mechanism should be applied to provide food security to the poor specifically in backward areas. PDS has great relevance in the field of food security to the poor and marginalized. The government has taken a number of initiatives to make the system pro poor by different rules, regulations, schemes and provisions. It is suggested that instead of providing subsidies to food grains, financial assistance should be provided to the state governments to enable them to procure and distribute food grains. In recent times advisors to the Government of India and the World Bank have suggested a shift from rations to a system of food stamps or coupons. It may be suggested that for improving efficiency of PDS, bringing changes in the area of targeting, commodity targeting, self targeting and food stamps, their applicability and efficacy are specific to local needs, preferences, knowledge base, infrastructural facilities and circumstances. Government of Orissa may subsidise coarse cereals which are mainly consumed by-poor, use food stamps in urban areas, allow universal access in poverty stricken areas, and temporarily increase the subsidy rate in regions that are adversely affected by flood, drought, cyclone and other natural calamities. (Ramaswami, 2002:1134-35).

PDS is essentially a supply side management intervention in the food market. PDS alone will not solve the problem of food security. Along with PDS, demand side management i.e., creation of effective demand for food is necessary. Therefore, proper implementation of poverty alleviation programmes, generation of employment, controlling rise in food prices, nutrition education and health care are highly essential for increasing food security in Orissa.

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## **Economic Viability of Fair Price Shops in Orissa - A Case Study**

**Jnana Ranjan Mohanty\***

Public Distribution System (PDS) is a rationing mechanism that entitles households to specified quantities of selected commodities at subsidized prices. Eligible households are given a ration card that allow them to buy a fixed rations of selected commodities from a Fair Price Shop (FPS) under the Public Distribution System. PDS of India, the biggest food security network in the world, was first started in the year 1939 as a war-time rationing measure. The British government introduced it in Bombay, and later extended it to six other cities along with few other regions. The drought and food shortage of the mid-sixties highlighted the need for strengthening and continuing with a system of food distribution and then PDS was converted to a universal programme in the year 1970.

There have been four phases in the history of PDS in India. The first phase was from its origin to 1960, a period when the system was expanded to other cities. The second phase, from 1960-1978, was one which saw major organizational changes where government of India took a holistic approach to food security and set up FCI in order to strengthen domestic procurement and storage. The third phase, from 1978 to 1991, was marked by large scale expansion of the PDS. In the fourth phase, from 1991 to the present, the policy of universal PDS has been converted to a targeted policy in line with the objective to reach the needy people. In this targeted era the division of entire population in to different categories like APL, BPL, Antodaya and Annapurna are made and multiple pricing systems was introduced. Selected commodities are distributed through fair price shops managed by different types of retail agencies i.e. private dealers, Cooperatives, Municipal authorities, SCSC, Gramapanchayats, etc.

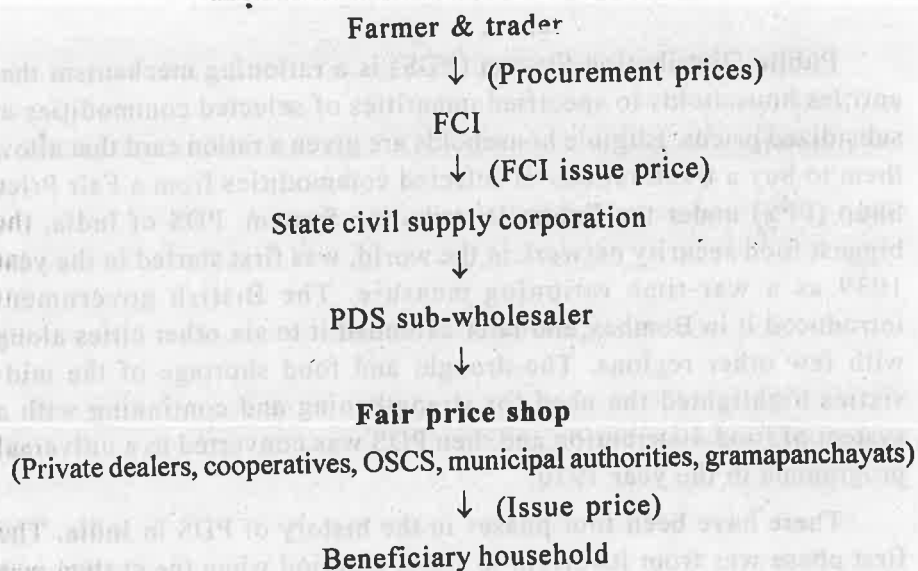
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The schematic out line of PDS is presented below which shows that commodities are procured by FCI from farmers at procurement price and reach the beneficiaries through State Civil Supply Corporation via PDS sub-wholesaler and retailers.

### **SCHEMATIC OUT LINE OF PDS**



From the above out line it is revealed that success of PDS depends on the collective effort of all the stakeholders attached to it. PDS retailer (FPS) being the closest institutional agency to the beneficiary household plays a crucial role in the channels of distribution of making the commodities reach to the target groups.

After 70 years of its inception, still PDS is a subject of debate and discussion. Different study reports show that PDS is pro-rich, urban biased, and supply through PDS is inadequate. Study made by M. Swaminathan says that PDS suffers from problems like less quantity, poor quality, leakages and regional disparity. Swaminathan found that economic viability of Fair Price Shop, closest agent to the beneficiary of the system is doubtful. The important concern of the economic viability of FPS has been badly affected by the factors like exclusion of APL population, increase in transport cost, supply of some item to beneficiary

without any financial provision for FPS owners etc. Again with fewer ration cards to serve, lower turn over and upper bounds on the margin that can be charged by BPL consumers, the net profit of FPS owners has been reduced. Since there are economies of scale, for instance, with respect to transport, the distribution of smaller quantities is likely to make many shops unviable. As a result it is negatively affecting the efficiency of PDS and FPS owners are adopting unethical means which drives the system away from its objectives.

Realizing the key position of dealers in PDS, increasing cost and reducing return from operating FPS the present study is planned with the following objectives-

- To study the income & expenditure pattern of operating FPS in rural and urban area.
- To study the economic viability of FPS in rural and urban area.
- To suggest measures to improve the economic condition of FPS.

### **Data and Methodology**

Both primary and secondary data are collected for the present study and a multi-stage random sampling is used. At the first stage Cuttack district is selected, which is consisting of 14 C.D. blocks (rural area) and two Municipalities & two NACs (urban area). In the second stage, one from 14 CD blocks and one from 4 municipalities & NACs are selected at random. Accordingly, Tangi-Choudwar block from rural area and Athagarh NAC from urban area are selected. Having selected the block and NAC, the total number of FPSs under each area are listed separately and all FPSs are managed by private agencies. From total of 66 FPSs operating in Tangi-Choudwar block and 22 FPSs in Athagarh NAC, 25 per cent from each is selected at random. Thus, 17 FPSs from Tangi-Choudwar block & 06 FPSs from Athagarh NAC are selected for the purpose of getting data for present study. Official records of FPSs were taken into account to collect information regarding the working of PDS. A structured pre-tested schedule was developed for the study to collect information for FPSs. Items such as Kerosene, Rice and Sugar which were distributed through FPSs during study period (2006-07) were taken into account. Records of civil supply departments were also referred as per requirement.

### Status of Fair Price Shops in India and Orissa :

As per the available data in 2006 there were total 48 million Fair Price Shops in the country providing services to 222.2 million households and on an average of 454 ration cards per Fair Price Shop. It is found that in the year 2003-2004, 23,827 Fair Price Shops were engaged in distributing the essential commodities among the beneficiary households in the state of Orissa, out of which 04(0.01 per cent) are managed by Municipalities/NACs, 89(0.38 per cent) by OSCS, 1784 (7.49 per cent) by Gramapanchayats, 1155(4.84 per cent) by Cooperatives and 20,795(87.28 per cent) by private dealers. It is revealed from Table-1 that 14.83 per cent of total FPS in Orissa are operating in urban area and rest 85.47 per cent in rural localities. Of the total urban FPSs, 97.62 per cent is managed by private dealers, 4.43 per cent by cooperatives, 0.83 per cent by OSCS and 0.12 per cent by Municipality/NAC and in a rural area 86.02 per cent FPSs is managed by private dealers, 8.76 per cent by Gramapanchayats, 4.93 per cent by Cooperatives and 0.29 per cent by OSCS.

**TABLE-1**

#### FPS Status in Orissa During 2003-2004

Particular	Urban	Rural	Total
Private dealers	3276(94.62)	17519(86.02)	20795(87.28)
Cooperatives	153(4.43)	1002(4.93)	1955(4.84)
OSCS	29(0.83)	60(0.29)	89(0.38)
Municipality /NAC	04(0.12)	—	04(0.01)
Gramapanchayat	—	1784(8.76)	1784(7.49)
Total	3462(14.53)	20365(85.47)	23827(100)

*Figures in parentheses indicate percentage*

*Source-Directorate of Statistics and Economics, Government of Orissa*

### Income and Expenditure of operating FPS :

Economic viability of FPSs depends upon the revenue and cost of operating FPSs the details of which are given below.

### **Income of the dealer from Fair Price Shop (FPS) :**

Income from operating the fair price shop for the dealers is worked out by taking into account its different components from which income is obtained. On the basis of information received, we classify the income obtained by the dealers into two broad categories viz. (i) Commission fixed by the government for carrying out FPS business (ii) Income obtained through the sale of gunny bags of rice and sugar.

Civil Supply Department in Orissa has fixed the commission for distributing a liter of kerosene to the beneficiary at 35 paise and for 1 kg of rice and 1 kg of sugar at 10 paise each. It is to be noted here that a dealer is paid nothing for distributing rice to the Annapurna cardholders. Taking all these into account, we have worked out the monthly income received through commission by the dealers for selling the items amongst the beneficiary households. Added to this we have worked out the income obtained by selling gunny bags in the market by the dealers during the year under survey. Accordingly, the average monthly income received by a dealer for operating the fair price shop is calculated. Data in this respect are presented in Table 3, 4 and 5.

### **Income obtained through commission by the dealer**

Commission for distributing the PDS items among beneficiary households constitutes the main official source of income for FPS dealers. It varies according to quantities of different commodities obtained round the year.

Average quantities of commodities obtained for distribution by sample dealers in the study period is presented in Table 2. It is revealed from the table that on an average a rural dealer obtains 1,107.44 Its of kerosene, 3071 kgs of rice and 354 kgs of sugar per month and the corresponding figures for urban area are worked out at 589.92 Its, 2,163 kgs and 252 kgs respectively. Thus, a rural dealer obtains more quantities of each commodity in comparison to his urban counterpart. It may be due to the fact that average number of beneficiary households per dealer in rural area is greater than that in urban area.

**TABLE -2****Average Quantities of Commodities Obtained For  
Distribution by FPS During Study Period**

Area	Beneficiary Type	Kerosene in lts.	Rice in kgs.	Sugar in kgs.
R	APL	652.48 (58.92)	—	—
U	BPL	390 (35.22)	2496(81.28)	312(88.13)
R	ANT	52.48 (4.73)	525 (17.09)	42(11.84)
A	ANN	12.48(1.13)	50(1.63)	—
L	Pooled	1107.44(100)	3071 (100)	354(100)
U	APL	267.48 (45.34)	—	—
R	BPL	282.48 (47.89)	1808(83.58)	226 (89.69)
B	ANT	32.48(5.60)	325(15.03)	26(10.31)
A	ANN	7.48(1.26)	30(1.39)	—
N	Pooled	589.92(100)	2163(100)	252(100)

(Figures in parentheses indicate percentage)

Taking the quantities of different commodities received by the sample dealers from the stockist during the study year into account, we have worked out monthly commission and income obtained therefrom. Data in this respect are presented in Table 3. We have calculated the total amount of income obtained in shape of commission for distributing each items among the beneficiary households in both rural and urban areas during the study year.

**TABLE-3****Income Obtained Through Monthly Commission (in Rs.)  
By FPS During Study Period**

Area	Beneficiary	Kerosene	Rice	Sugar	Total
R	APL	228.37	—	—	228.37 (31.50)
U	BPL	136.50	249.60	31.20	417.30 (57.55)
R	AAV	18.37	52.50	04.20	75.07 (10.35)

A	ANN	4.37	0	—	04.37 (0.60)
L	Total	387.61 (53.45)	302.10 (41.66)	35.40 (4.89)	725.11 (100)
U	APL	93.62	—	—	93.62 (21.04)
R	BPL	98.87	180.80	22.60	302.27 (67.93)
B	AAY	11.37	32.50	2.60	46.47 (10.44)
A	ANN	2.63	0	—	02.63 (0.59)
N	Total	206.48 (46.40)	213.30 (47.93)	25.20 (5.67)	444.98 (100)

(Figures in parentheses indicate percentage)

As revealed (Table 3) monthly, a dealer in rural area receives Rs. 725.11 and Rs. 444.98 in urban area as commission for distributing the items among beneficiary households. Thus a rural dealer gets more income through commission per month in comparison to the urban counterpart. This may be due to the greater number of beneficiary households per dealer in rural area as compared to the urban area.

In rural area a dealer gets 53.45 percent of his commission by distributing kerosene followed by 41.66 percent from rice and the rest 4.89 percent from sugar. Category-wise a dealer gets highest percentage of total commission from BPL (57.55 per cent), followed by APL (31.50 per cent), Antodyoya (10.35 per cent) and Annapurna (0.60 per cent) beneficiary households. On the contrary an urban dealer gets highest percentage of commission from rice (47.93 per cent) followed by Kerosene (46.40 per cent) and sugar (5.67 per cent). In relation to beneficiary households, it is revealed that an urban dealer gets highest commission from BPL (67.93 per cent), followed by APL (21.04 per cent), Antodyaya (10.44 per cent) and Annapurna (0.59 per cent) beneficiary households.



### Income from sale of gunny bags

Sale of empty gunny bags also provides some income to the dealer. Accordingly we have worked out the income obtained from the sale of gunny bags by the dealers of rural and urban areas during the year under study. Income from sale of gunny bags is calculated by multiplying the number of gunny bags with the price at which the gunny bags are sold in the market. As per the response of dealers, the prevalent market price per gunny bag of rice and sugar in rural and urban areas during the study period are Rs. 15.80 & Rs. 18.60 and Rs. 24.40 & Rs. 29.90 respectively. The average market price of gunny bags in rural and urban area is worked out at Rs. 17.20 and Rs. 27.15 respectively. Taking this into account we have calculated the income obtained from gunny bags and the data in this respect are presented in Table 4.

**TABLE -4**

**Income (in Rs.) From Sale of Gunny Bags  
During Study Period**

Area	Income from rice gunny bags (Rs.)	Income from sugar gunny bags (Rs.)	Total (Rs.)
Rural	1049.36(81.34)	240.84(18.66)	1290.20(100)
Urban	904.45 (82.70)	189.30(17.30)	1093.75(100)
Pooled	1021.31 (81.56)	230.86(18.43)	1252.17(100)

(Figures in parentheses indicate percentage)

It is revealed from the table that a rural dealer receives Rs. 1290.20 and an urban dealer Rs. 1093.75 from the sale of gunny bags. As regards the rural area, it is found that 81.34 percent and 18.66 percent of income from sale of gunny bags are obtained from sale of rice and sugar bags respectively and the corresponding figures for urban area is worked out at 82.70 percent and 17.30 percent.

### **Combined Income of the dealers from Fair Price Shop (commission + sale of gunny bags)**

Monthly income in shape of commission (Table 3) and gunny bags (Table 4) are added together to find out monthly income of dealers and the same are presented in Table 5.

**TABLE - 5**

#### **Monthly Income of Dealers From FPS During Study Period**

Area	Commission (Rs.)	Gunny bags (Rs.)	Total (Rs.)
Rural	725.11 (35.98)	1290.20 (64.02)	2015.31 (100)
Urban	444.98(28.91)	1093.75(71.09)	1538.73(100)
Pooled	655.07 (34.34)	1252.17(65.66)	1907.24(100)

*(Figures in parentheses indicate percentage)*

It is revealed from the table that a rural dealer on an average gets Rs. 2015.31 as income per month as compared to Rs. 1538.73 for the urban dealer. As regards the composition of income, not much difference is noticed between rural and urban dealers. The percentage of income received from sale of gunny bags works out at 64.02 for rural dealers as compared to 71.09 for the urban dealers. Income from commission works out at 35.98 percent for the rural dealers and 28.91 percent for the urban dealers. Thus, between the rural and urban dealers, the former gets higher income from the commission and sale of gunny bags as compared to the latter for obvious reasons.

### **Cost of operating Fair Price Shop (FPS)**

Each dealer incurs makes some expenditure for running the shop. Expenditure incurred in running the fair price shop has been divided broadly into two heads: (i) cost of maintenance of fixed assets and (ii) operational cost. Maintenance cost comprises those items which are incurred for maintaining fixed assets i.e. weights & measures, furniture and containers for storing kerosene and operational cost consists of the monthly expenses incurred for running the business i.e. rent of the house, electricity bill, labour expenses, measurement expenses at the stockist level, cost for renewal of licence, interest on money deposited for taking the quota from stock point, office stationery and transportation.

Taking into account the different items of costs, monthly cost of operating the FPS is calculated and presented in Table 6. It is revealed from the table that the average cost of operating a FPS in rural and urban area are Rs. 2692.08 and Rs. 2361.31 respectively. It is observed that both in rural and urban areas the operational cost constitutes a lion share of total cost of operating FPS. Between the rural and urban areas, the operational cost in the former is found to be higher than that of the latter. Component-wise analysis of cost of operating FPS reveals that in case of rural area the maintenance cost constitutes 2.10 percent and operational cost 97.90 percent of the monthly cost of operating a FPS. Thus, it may be concluded that in both rural and urban areas operational cost constitutes sizable amount of the total cost and within operational cost it is the transport cost and labour cost which are quite high.

**TABLE- 6**

**Monthly Cost (in Rs.) of Operating  
FPS During Study Period**

<b>Particular</b>	<b>Rural</b>	<b>Urban</b>
Maintenance of fixed assets	56.63 (2.10)	36.82 (1.56)
Weight and Measures	4.93 (0.18)	4.35 (0.20)
Furniture	4.40 (0.16)	4.44 (0.18)
Kerosene Barrel	47.30 (1.75)	28.03 (1.18)
Operational Cost	2635.45 (97.9)	2324.49 (98.44)
Rent	140.25 (5.2)	180.85 (7.66)
Electricity charges	80.15 (2.98)	123.45 (5.22)
Labour	345.22 (12.83)	334.33 (14.16)
Kanta (Measurement at stock point)	201.21 (7.48)	135.40 (5.74)
Renewal of licence	16.67 (0.63)	16.67 (0.7)
Interest	126.06 (4.68)	101.11 (4.28)
Stationary	43.50 (1.62)	52.33 (2.22)
Transportation	1682.39 (62.49)	1380.35 (58.46)
Total cost	2692.08 (100)	2361.31 (100)

(Figures in parentheses indicate percentage)

**Profit / Loss from Fair Price Shop (FPS)**

We have worked out profit / loss for having such an activity at the dealers' level. The monthly profit / loss for carrying out FPS operation is presented in Table 7.

**TABLE -7**

**Average Monthly Profit / Loss (in Rs.) From FPS  
During Study Period**

Area	Income (Rs.)	Expenditure (Rs.)	Profit/loss (Rs.)
Rural	2515.31	2692.08	-676.77
Urban	1538.73	2361.31	-822.58
Pooled	1923.06	2628.06	-704.99

Observation revealed that dealers of both rural and urban areas are incurring loss in running the FPS. Between rural and urban dealers the loss amount is higher in case of urban dealers as compared to their rural counterparts. The monthly average amount of loss worked out to Rs. 822.58 for a urban dealer and Rs. 676.77 for rural dealer. As a result private agents are facing hardships loss in operating fair-price shop, and it is becoming economically unviable. Therefore they are practicing unethical means to increase their income which goes against the objective of Public Distribution System.

**Policy implications**

- Since expenditure of operating FPS exceeds its income steps may be taken to reduce major items of expenditure.
- As commission of distributing items through FPS is very marginal, steps may be taken to enhance it. Besides financial benefit to FPS owner may be given for distributing all items.
- Steps may be taken to give a fixed income to FPS owner for taking the responsibility.

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# Public Distribution System And Food Security

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## I. INTRODUCTION

Food security is said to prevail when all people at all times have both physical and economic access to basic food they need (FAO, 1983). However, food security in a broad sense includes something more and is defined as "Access by all people at all times to enough food for an active and healthy life" (WDR, 1986). Food security as defined above involves the following four things.

- Physical availability of food to entire population,
- Enough purchasing power in the hands of the people to buy food,
- Maintaining adequate quantity and quality of food to meet the nutritional requirements and
- Maintaining timely, reliable and nutritionally adequate supply of food on long term basis.

Food insecurity, therefore, may be described as absence of any one of the above conditions. Though opinions stand divided on the causes of food insecurity, it may be said that both natural and man-made causes are responsible for occurrence of the same. A supply side analysis of food insecurity in India shows that it is not an economic problem. According to the data published by the government of India and the Food Corporation of India, total production of food grains was 230.78 million tonnes in 2007-08 which decreased to 229.85 million tonnes in 2009-10. There is just 0.93 million tonnes of decrease in foodgrain production. Looking at the statistics relating to the major foodgrains production in 2007-08 and 2008-09, it is found that rice production has increased from 96.69 mt. to 99.37 mt., wheat production has decreased from 78.57 to 77.63 mt, production of coarse cereals is decreased from 40.76 to 38.67 mt., cereals production is decreased from 216.02 to 215.67

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mt., and production of pulses is near about stable. It has changed from 14.76 to 14.18 mt during the same period.

It may be noted that during this period fish production has increased from 6.8 mt. to 7.3 mt., fruits production increased by 59563 thousand tonne and production of vegetables increased from 1,15,011 thousand mt. to 1,25,887 thousand mt. Apart from the production of food grains and supported foods, buffer stock of food grain also increased continually since 2007. In the year 2006-07 buffer stock of wheat and rice were 54.28 mt and 119.77 mt. respectively. In year 2007-08 the corresponding figures were 77.12 mt. and 114.75 mt.. In the year 2009, stock of wheat increased to 182.12 million tonne and stock of rice increased to 175.76 million tonne.

In the same period population growth was near about hardly 1.10 per cent and it is not a larger growth which may become burden on food supply in India.

Supply side analysis of the food market shows that, there is no substantial change in food grains production in India. But recently all Indians are facing a problem of low availability of food grains in the market and its higher prices. It is questionable because general trend of rising price is found when production of particular goods is decreased. But unfortunately production of food grains is near about stable while prices are rising rapidly in India. It happens in the retail market due to the speculative practice of the traders. According to the supply department of the government of India, most of the traders are keeping illegal stock of food grains and pulses. They are doing such for profit motive and ignoring morality. Hence, the trade practices analysis of food grains market shows that food insecurity is not only a natural problem but also is man-made. In other words we can say that "Hunger is not created by nature but created by traders."

## II. EVOLUTION OF PDS

Evolution of public distribution of grains in India had its origin in the 'rationing' system introduced by the British during the World War II. The rationing system and its successor, the Public Distribution System (PDS) have played an important role in eliminating the threats of famines and providing certain amount of food security.

It was really the own compulsions of World War II that forced the then British Government to introduce the first structured public

distribution of cereals in India through the rationing system-sale of a fixed quantity of ration (rice or wheat) to entitled families (ration card holders) in specified cities/towns. The system was started in 1939 in Bombay and subsequently extended to other cities and towns. By the end of 1943, 13 cities had been brought under the coverage of rationing and by 1946, as many as 771 cities/towns were covered. Some rural areas, suffering from chronic shortage were also covered. The Department of Food under the Government of India was created in 1942 which helped in food matters getting the serious attention of the government. When the War ended, India, like many other countries, decided to abolish the rationing system. This was in 1943. However, on attaining Independence, India was forced to reintroduce it in 1950 in the face of renewed inflationary pressures in the economy.

Public distribution of food grains was retained as deliberate social policy by India, when it embarked on the path of planned economic development in 1951. It was, in fact, an important component of the policy of growth with justice. In the first five year plan, the system, which was essentially urban based till then was extended to all such rural areas which suffered from chronic food shortages. It was also decided to have two variations of the system, Statutory Rationing Areas, where food grains availability was supposed to be only through the Ration Shops and Non-Statutory Rationing Areas, where such shops would only supplement the open market availability. The system, however, did not successfully work in rural areas. In fact, towards the end of the First Five Year Plan (1956), the system was losing its relevance due to comfortable foodgrains availability. The net (gross minus 12.5 per cent for seed, feed and wastage) retail level availability of foodgrains had jumped from 54.0 million tonnes in 1953 to 63.3 million tonnes in 1954 and remained at 63 plus million tonnes up to end of the First Five Year Plan. This situation even prompted the government to abandon procurement of foodgrains and remove all controls on the private trading in foodgrains. However, true to its cyclic nature, the production dropped to 58.3 million tonnes in 1958, when the Second Five Year Plan had just started and forced the government to not only restart the procurement of cereals and put control on trading of foodgrains but re-examine the need for public distribution system (PDS). It was decided to re-introduce PDS. Other essential commodities like sugar, cooking coal and kerosene oil were added to the commodity basket

of PDS. There was also a rapid increase in the Ration Shops (now called the Fair Price Shops-FPSs) and their number went up from 18,000 in 1957 to 51,000 in 1961. Moreover, quantity of food grains distributed through PDS started getting increased with PL-480 availability. Thus, by the end of the Second Five Year Plan, PDS had changed from the typical rationing system to a social safety system, making available food grains at a 'fair price' so that access of households to food grain could be improved and such distribution could keep a check on the speculative tendencies in the market. The concept of buffer stocks was also incorporated in the overall food policy, although no buffer worth the name was required to be created in view of easy and continuous availability of PL-480 grains.

Creation of Food Corporation of India and Agricultural Prices Commission in 1965 consolidated the position of PDS. Government was committed to announce a minimum support price for wheat and paddy and procure quantities that could not fetch even such minimum prices in the market. The resultant stocks were to be utilized for maintaining distribution through the PDS and a portion of these was used to maintain buffer stocks. In fact, if stocks happen to be inadequate for maintaining a certain level of distribution through PDS, government have to take resort to imports to fulfil their PDS obligations. All through the ups and downs of Indian agriculture, PDS was continued as a deliberate social policy of the government with the objectives of :

- Providing food grains and other essential items to vulnerable sections of the society at reasonable (subsidised) prices;
- To have a moderating influence on the open market prices of cereals, the distribution of which constitutes a fairly big share of the total marketable surplus; and
- To attempt socialisation in the matter of distribution of essential commodities.

The PDS seeks to provide to the beneficiaries two cereals, rice and wheat and four essential commodities viz. sugar, edible oil, soft coke and kerosene oil. However, state governments, which actually manage the system at the ground level, are exhorted to add other essential commodities like pulses, salt, candles, matchboxes, ordinary clothes, school text books/copies and the like. Supply of additional items through PDS is especially relevant in interior areas which are away

from markets and where one or two traditional shopkeepers have the market monopoly. A number of state governments have set up Civil Supplies or Essential Commodities Corporations to buy such additional items directly from the manufacturers and use the existing structure of PDS to arrange for the sale at lower than market rates.

In the beginning, PDS was universal with no discrimination between the poor and non-poor. Over the years, the policy related to PDS has been revised to make it more efficient and targeted. In 1992, Revamped Public Distribution System (RPDS) was introduced in 1,700 blocks in the country. The target was to provide the benefits of PDS to remote and backward areas. From June 1997, in a renewed attempt, Targeted Public Distribution System (TPDS) was introduced to adopt the principle of targeting the 'poor in all areas'. It was for the first time that a differential price policy was adopted for poor and non-poor. Further, in 2000, two special schemes were launched viz., Antyodaya Anna Yojana (AAY) and the Annapurna Scheme (APS) with special target groups. The PDS has therefore become a part of government policy over the years in stabilising prices and making food available to consumers at affordable prices. It has been instrumental in averting widespread hunger and famine by supplying food from surplus regions of the country to the deficit ones.

### III. FUNCTIONING OF PDS IN ORISSA

The Public Distribution System (PDS) was started in Orissa with a view to providing certain essential commodities of daily use at subsidized prices to the poor and vulnerable sections of the society. This system was envisaged to bring about stability of market price "of different commodities, availability of food grains and equity in distribution." The present working of this system has been a departure from the original idea. The rich and the urbanites have a major share from the present arrangement. Functioning of this system in the urban areas is better organized than in rural areas.

The PDS now works through a well-organized network of different agencies which are involved in various stages starting from procurement of food grains till their distribution to the common man. At the apex are the Departments of Food and Civil Supplies. They are the monitoring agencies and look after various policy matters. The Food Corporation of India (FCI) is the agency looking after the procurement of food grains

from producers, their storage and also the import of other food items. At the state level, we have the Departments of Food & Civil Supplies supervising the entire functioning. The Civil Supplies Corporation plays the same role in the state as the FCI at the center. At the district and sub divisional levels, the district administration is in charge of the distribution system.

The primary outlet under this system is the FAIR PRICE SHOP (FPS), from which the people buy our rations. The number of Fair Price Shops in a locality depends on the number of people living within the particular area. The yardstick of one FPS is for two thousand persons. The officials of the FS & CW department along with the district administration authorities supervise the functioning of FPSs. In many States, there is provision for mobile Fair Price Shops in the hilly and inaccessible areas. Items supplied through the PDS include rice, wheat, sugar, kerosene, edible oil, dal and sometimes potato and onion to check the rise of price in the open market. The dealership is granted either to an individual or to a cooperative. It cannot be said that always a cooperative is working better than an individual. The civil supplies corporation has opened up some shops, which function better than others.

A dealership is granted invariably on the recommendation of the local M.L.A., sometimes, not a very desirable element in this system. There have been incidents of group rivalry on the issue of dealership. It is seen that sometimes people of a particular political opinion do not like to take ration managed by a person of different political opinion.

Though, the PDS has been in service for many years, some loopholes have been identified, which need be looked into for its proper functioning. Some of the problems are enumerated below.

- Fair Price Shops in rural areas hardly function regularly.
- Generally, the consumers get inferior food grains in the ration shops, though better stocks are available in the open market, even though at a higher price.
- It is complained that unscrupulous dealers exchange good quality products received from the F.C.I, with inferior stock.
- Many retail shopkeepers have large number of bogus cards. This is the method employed by them to get more quantity of food grains and earn huge profit by selling them in the open market.

- Sometimes, the dealer complaints of selling fewer quotas and accordingly try to cheat the consumers.
- Granting license for a dealership without proper inspection of place helps the dealers to keep the commodities in unhygienic conditions.
- Many FPS dealers resort to malpractice since they are provided with very little mansion of profit.

In the light of many such adverse problems faced by various agencies involved in the PDS, the following few suggestions are offered to rectify the mistakes.

- Margin of profit should be increased for an honest dealer.
- F.C.I. and other prominent agencies should provide quality food grains for distribution under this system.
- Frequent checks & raids are to be conducted to eliminate false cards for proper functioning of PDS.
- Mobile FPSs are pressed into service in tribal areas and remote areas. Essential commodities are also required to be sold in huts and slum areas through the civil supplies corporate agency.
- Affluent persons should not be given dealership and those who are economically weak and needy be encouraged through bank loans.
- The civil supplies corporation should devise means to deliver the products in the shops of the dealers, which will avoid many problems.

#### **IV. BIOMETRIC CARDS FOR PDS**

In a bid to make Targeted Public Distribution System (TPDS) work in a more transparent and efficient manner, Orissa government has introduced Biometrics Smart Card for beneficiaries in southern Orissa's Rayagada district on a pilot basis.

The Government of Orissa has launched this programme, which is a joint initiative of the state government and United Nations World Food Programme (WFP). Under it eligible beneficiaries will be issued "largest multi-modal biometrics smart cards" in place of the existing ration cards. The biometric ration cards, bar-coded coupons and smart cards will drastically reduce the possibility of fraud. The transaction between the



beneficiary and the Fair Price Shop (FPS) owners will be posted on the government website which will further enhance transparency in the distribution system.

## V. CONCLUSION

Food security problem has become serious in many parts of India due to unfair trade practices adopted by private traders. The problem of hunger is due to poor economic accessibility. It is the result of poor implementation of policy measures. The delivery system should be effective since it has to be competitive and competent. Vigilance squads should be strengthened to prevent corruption in this Department. Personnel in charge of the department should be chosen carefully and field staff should be recruited directly by the O.P.S.C.. Promotion avenues should be made available to them so that efficient and honest officers will get promotion and dishonest officers will be punished. For the genuinely needy people, food vouchers/stamps could be tried through the Panchayatiraj or local government machinery for ensuring food security.

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## **Food Security, Persisting Hunger And Rethinking of PDS in India**

**Dr. Sudhakar Patra\***

Food is as essential for living as air is for breathing. But food security means something more than getting two square meals per day. Food security refers to availability, accessibility and affordability of food to all people at all times. Food security has following three dimensions (a) availability of food which means food production within the country, food imports and the previous years stock stored in government granaries, (b) accessibility which means food is within reach of every person and (c) affordability which implies that an individual has enough purchasing power to buy sufficient, safe and nutritious food to meet one's dietary needs. The poorest section of the society are food insecure at most of the times while persons above the poverty line might also be food insecure when the country faces shortage of food grains. Food Security in India is threatened due to natural disaster/ calamity like earthquake, drought, flood, tsunami, widespread failure of crops causing famine, etc. Due to a natural calamity, say drought, total production of food grains decreases. It creates a shortage of food in the affected areas and the prices go up. At the high prices, some people cannot afford to buy food. If such calamity happens in a very widespread area or is stretched over a longer time period, it may cause a situation of starvation. A massive starvation might take a turn of famine. While poverty in India is falling, concerns over food security are increasing. According to recent surveys, 44 per cent of households are deficient in calorie intake. Spending on the Public Distribution Scheme has risen dramatically in recent years, but much of this reflects increasing operational costs; in effect, the government's procurement operation has simply withdrawn food grains from the market. The government needs to supplement the provision of food security (through a universal or targeted approach) with a mix of short- and long-term policies. In the short term, there needs to be a recognition that food insecurity stems

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from lack of opportunity. There is a need to ensure employment opportunities for at least one able-bodied member of a household.

In the long term, food security will result from the wider tackling of poverty. This will require improvements in infrastructure and time-limited targeted policies to improve rural farm and non-farm productivity. Food security depends on the Public Distribution System (PDS) and government vigilance and action at times, when this security is threatened. In this context, the objective of this paper is to analyse the performance and problems of food security and targeted public distribution system in India.

### **Persisting Hunger and Food insecurity in India**

The problems of chronic hunger and malnutrition persist on a mass scale in India. The FAO Report on State of Food Insecurity in the World 2006 confirms that no country in the world comes close to India in terms of the absolute number of people living in chronic hunger. At the all-India level, 45.9 per cent of children below the age of 3 were underweight or malnourished in terms of the standard weight-for-age criterion. Among married women in the ages 15 to 49, the prevalence of anemia has risen from 52 per cent in 1998-99 to 56 per cent in 2005-06 and to 58 per cent in 2008-09. No less than 58 per cent of pregnant women suffer from anemia. These indicators suggest that approximately one-half of the Indian population is malnourished today. The rate of decline in the absolute number of malnourished persons has been very slow, and slower than the rate agreed upon at the World Food Summit in Rome. India has failed to meet the targets set for itself in the Millennium Development Goals. The Government often shows India's GDP growth rate to claim economic progress. However, such GDP growth over the past two decades has not addressed the basic issue of ensuring nutrition 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.

### **The Public Distribution System in India**

The public distribution system or PDS is a rationing mechanism that entitles households to specified quantities of selected commodities at subsidized prices. Eligible households were given a ration card that entitles them to buy fixed rations of selected commodities. The exact

entitlement (quantity, range of commodities and prices) varies across States. The commodities are made available through a network of fair-price shops. Public distribution was first started in 1939 as a war-time rationing measure. The British government introduced it in Bombay and later extended it to six other cities and a few other regions. The drought and food shortages of the mid-sixties highlighted the need for strengthening and continuing with a system of food distribution and the PDS was made a universal scheme in the 1970s. Thus, from its inception as a rationing scheme in big cities during World War II, the PDS was converted into a universal programme for the provision of cheap food and made a component of the strategy to alleviate poverty. In 2008, there were a total of 0.48 million fair-price shops in the country. Private agents and co-operatives ran these shops and a few were state-owned. There were a total of 222.2 million families with ration cards in the country and, on average, one fair price shop served 454 ration cards.

The objectives of the PDS are as follows :

1. Maintaining price stability,
2. Increasing the welfare facilities for the poor (by providing access to basic foods at reasonable prices to the vulnerable population),
3. Rationing during situations of scarcity, and
4. Keeping a check on private trade.

The system of PDS was drastically changed with the introduction of the targeting system in 1996, which made people's entitlement to cheap food in India. The people above a particular income set by Planning Commission income levels are considered to be Above Poverty Line (APL) and therefore excluded from access to subsidized food. This has meant over half of agricultural labourers in India as well as half of dalit and adivasi households are excluded from the BPL category. This faulty policy of dividing the beneficiaries into APL/BPL/Antodaya and other categories, besides excluding a large number of deserving poor, has also led to unviability and closure of several PDS outlets, thus further shrinking its coverage. The weakening of the PDS has deprived many people of any relief in the backdrop of the steep rise in the prices of essential commodities.

### Targeted PDS in India

The Government of India introduced the Targeted PDS (TPDS) in order to curtail the food subsidy in 1997. The policy initiated targeting of households on the basis of an income criterion, that is, used the income poverty line to demarcate 'poor' and 'non-poor' households. The Targeted PDS differs from earlier variants of the PDS in following key points.

- (i) Targeting- In the TPDS, the most distinctive feature in India is the introduction of targeting, specifically, the division of the entire population into below-poverty-line (BPL) and above-poverty-line (APL) categories, based on the poverty line defined by the Planning Commission. The two groups are treated differently in terms of quantities and prices. With this, the Government of India initiated a policy of narrow targeting to households with incomes below the official poverty line.
- (ii) Dual (multiple) prices- The second distinguishing feature is that the PDS now has dual central issue prices: prices for BPL consumers and prices for APL consumers. A third price, introduced in 2001, is for beneficiaries of the Antyodaya Scheme (a scheme for the 'poorest of the poor', in which food grain is distributed with an additional subsidy). In March 2000, a major policy change occurred when it was announced in the budget that central issue prices, that is, prices at which the Food Corporation of India (FCI) sells grain for the PDS to state governments — will be set at half the 'economic cost' incurred by the FCI for BPL households and at the full 'economic cost' for APL households. In short, there was to be no subsidy for APL households.
- (iii) Centre-state control- The third important feature of the Targeted PDS is that it has changed centre-state responsibilities with respect to entitlements and allocations to the PDS. PDS is designed and managed by state governments, and state governments differ with respect to entitlements, the commodities offered, the retail price (state issue price) and so on. In the past, the State governments demanded a certain allocation from the central pool, and based on certain factors, most importantly, past utilization and the requirements of statutory rationing, the central government allocated grain and other commodities to

states for their public distribution systems. With the TPDS, the size of the BPL population and the entitlements for the BPL population are decided by the central government.

### **Exclusion in new TPDS**

One of the arguments made by proponents of Targeted PDS is that the scheme will be able to reach the poor or needy more effectively than the Universal PDS. There are two types of errors that occur in any targeted welfare programme due to imperfect measurement. Universal programmes are likely to have low errors of exclusion but high errors of inclusion. On the other hand, a programme targeted to a specific group is likely to have a low error of wrong inclusion, but may lead to a high error of exclusion. When one type of error decreases, the other type of error increases and so we have to attach weights to the two types of errors. Proponents of orthodox economic reform have implicitly attached a zero weight to errors of inclusion and are thus concerned only with minimizing errors of exclusion. So the relevant issue is the size of the error of wrong exclusion in the TPDS and its welfare implications. Recently released data from the 61st Round of the National Sample Survey, in a report titled Public Distribution System and Other Sources of Household Consumption 2004-2005 (GOI, 2007), show that targeting has led, in rural India, to high rates of exclusion of needy households from the system and a clear deterioration of coverage in States like Kerala where the universal PDS was most effective.

It is a matter of fact that the proportion of people having ration cards is generally higher in developed states. In Andhra Pradesh, 56.5 per cent of rural people are provided with ration cards followed by Karnataka with 51.7 per cent. But the proportion of people with card is only 6.7 per cent in Orissa, 17.4 per cent in Bihar, 16.8 per cent in Arunachal Pradesh and Himachal Pradesh. It is evident that better performing states are able to include higher proportion of people in PDS. Surprisingly, 9.6 per cent of rural people in Karnataka have Antyodaya cards followed by Goa with 5.1 per cent where per capita income is highest compared to other states. In Andhra Pradesh 53.7 per cent people have BPL cards followed by 42.4 per cent in Orissa and 41.1 per cent in Karnataka. Only 15.1 per cent people in Bihar have BPL cards. There is large variation in proportion of people covered in PDS among states in India.



### **Regional distribution of food grain**

The PDS always aims at ensuring price stabilization in the country by transferring grain from cereals-surplus to cereals-deficit regions. Targeted PDS has not served this objective. This is because under TPDS, the demand for cereals is no longer determined by state governments (based on their requirements, and in practical terms on past utilization) but on allocations decided by the central government (based on poverty estimates prepared by the Planning Commission). The new system of allocation, as pointed out by the High Level Committee on Long Term Grain Policy (GOI, 2002), has led to imbalances between actual allocations and 'allocations necessary to meet the difference between cereals production and requirement'. In a universal PDS, automatic stabilization of prices is ensured, as the demand for grain from fair price shops increases at times when the gap between the PDS price and the market price rises. In the new system, however, with APL priced out of the PDS and BPL quotas low and fixed, the role of the PDS as an automatic stabilizer has been weakened.

### **Food security act**

The Government of India has implemented the Food Security Act only for BPL cardholders, ensuring 25 kg of foodgrains (rice and wheat) to all BPL families at Rs.3 per kilo. The total number of BPL families at present is 6.52 crore, which the Government proposes to cut down to 5.91 crore. Antodaya benefits will be eliminated and Antodaya cardholders, who at present are getting foodgrains at Rs.2 per kg, will have to pay Rs.3 per kilo. For both BPL and Antodaya cardholders the quota will be cut by 10 kg per family from the present 35kg to 25 kg. No foodgrain will be allocated for APL sections. Not only will the APL subsidy be eliminated but the APL category will also be cancelled. The proposed law would therefore mean a higher level of exclusion and actually squeezing whatever people are getting today.

### **Food Inflation and food insecurity**

Food price inflation in India has risen to very high levels. Over the last one year (2007-08), situation has probably worsened given the rapid increase in prices of basic food items. In mid-2008, inflation was at a 13-year high of close to 12 per cent but price rises for certain food items including rice, some pulses, vegetables, fruits, tea and edible oils,

have been even higher. In Delhi, for example, retail prices rose between May 2007 and May 2008 by 20 per cent for rice, 20 per cent for groundnut oil, 21 per cent for mustard oil and 10.5 per cent for tur dal. Measured by wholesale price index, annual inflation in food articles was 18.22 per cent in the week ending 26th December 2009. The rise in prices of vegetables, pulses and cereals are particularly sharp. In terms of consumer price indices, India has the highest inflation rate among all the G 20 countries. The Government has been publicly stating that the reason for food price inflation is increase in crop prices for farmers announced by Government of India. Such pronouncements, besides concealing the real situation being faced by the peasantry, also seeks to divide the people and drive a wedge between the peasants and other sections of the working people. Bulk of the Indian peasantry is a net buyer of food. They are also suffering due to the steep rise in food prices. The main reasons behind high inflation, especially rising food prices are fourfold: (i) The policies causing agrarian crisis and eroding food self-sufficiency, (ii) weakening of the Public Distribution System (PDS), (iii) failure to check hoarding and speculation and (iv) increase in fuel prices. So the affordability of people to food has been badly affected due to high food inflation in recent years.

### Conclusion

The public distribution system in India has failed to include many needy poor people in India. Therefore, there is need to address the challenge of ensuring food security to ever growing population of our country. A second green revolution through diversified agriculture with the adoption of integrated farming system approach with focus on sustainability of our natural resources, dry land farming and food processing is necessary in India. There are several schemes introduced and measures taken by the government of India and state governments to reduce poverty and ensure food security. Opening new rationing shops like mobile fair price shops, part time and fair price shops run by women SHGs are necessary to ensure food security in the country. The gram panchayats are also authorized to run the fair price shops for immediate supply of food grains to rural poor. All BPL families must be covered under PDS and distributed with ration cards to ensure food security.

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# **Sustainable Food Security And Rice @ Rs.2 Per KG**

**Reenati Mishra\***

## **I. Sustainable Food Security - An Introduction :**

Food security is a complex issue linked to health through malnutrition, sustainable economic development, environment, and trade. Since independence achieving food security for all has been a national goal. Food security is now defined as physical, economic and social access to balanced diet, clean drinking water, environmental hygiene, and primary healthcare. Unfortunately, inspite of numerous government schemes and safety nets, under and malnutrition remain widespread in our country.

Until the seventies, the concept of food security focused on availability and stability of food. A broadly accepted definition of food security now goes beyond adequate availability of food. It includes "access to adequate food to all people at all times for an active and healthy life". The aim is not merely to supply adequate quantities of food but to reach at a state of nutritional sovereignty.

The four components of food security i.e. availability, (a function of production), accessibility is related to purchasing power), utilization is (determined by the availability of minimum basic needs), stabilization is (influenced by the extent of attention given to the sustainability of the system) can only be met through sustainable agriculture. Though India has made substantial progress in terms of overcoming transient food insecurity by achieving self sufficiency in food production, it could not solve the problem of chronic food insecurity. As a result, food energy intake at household level is now given prominence in assessing food security.

Transitory food insecurity is associated with the risks related to either access or the availability of food during the off-season, drought and inflationary years and so forth. Policies such as those relating to price stabilization, credit, crop-insurance and temporary employment

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creation are initiated for stabilizing the consumption of vulnerable groups. In contrast, the problem of chronic food insecurity is primarily associated with poverty and arises due to continuously inadequate diet. The strategy to overcome this problem includes intervention in agricultural production programmes, infrastructure and human resource development, etc. to raise the purchasing power of the poor through the endowments of land and non-land assets and by generating employment opportunities.

At the national level, we have solved the problem of food security which is reflected in mounting buffer stocks. Yet there are millions of food insecure and undernourished people in India. The limitation is not food supply, but food distribution.

## **II. The indispensable step : The MSP (Minimum Support Price)**

Minimum support price, procurement and distribution are three extremely critical government policies that are indispensable. Given that a large part of our workforce is engaged in agriculture, where typically poverty levels are also high, government support is absolutely necessary. The objective of having an MSP (Minimum Support Price) programme is to ensure that the farmers get a remunerative price for their produce. The scientific basis for calculating this MSP involves looking at various factors including cost of production, cost of living, price parity etc. The MSPs are declared for around 25 crops but are effective for virtually only rice and wheat and to a very limited extent for coarse cereals. In case of all other crops the market prices are higher and farmers prefer to sell their produce in the open market. The MSP problem is linked with procurement from the point of view of the government.

- (a) The first is to provide for food security so that there are stocks that can be used in times of a crisis.
- (b) The second is to provide for the PDS so that the poor have access to cheap food grains either directly or through specific government schemes.
- (c) The third is to stabilize prices.

## **III. Food Security : The Road Ahead**

The Report on the State of Food Insecurity in Rural India was prepared by the MS Swaminathan Research Foundation with support

from the United Nations World Food Programme (UNWFP). The Report is in two parts. The first part examines the status of food and nutrition security in Rural India. The second part examines the major public food delivery systems; Public Distribution System (PDS), Integrated Child Development Services (ICDS) and Mid-Day Meals Scheme (MDMS). The targeted public distribution systems (TPDS) has led to exclusion of large number of needy poor.

#### **The Report recommended**

- i. A return to the universal PDS that existed till 1997.
- ii. Universalization and effective implementation of ICDS and MDMS and employment generation programmes, like National Rural Employment Guarantee Scheme (NREGS).
- iii. Greater involvement of Panchayat Raj Institutions (PRIs) in food delivery at the grassroots level.
- iv. Integration of food and nutrition security objectives in ongoing government initiatives like the National Food Security Mission and National Horticulture Mission are crucial.

The Report further says the global food price increase and climate change will impact on food insecurity in rural India.

#### **.IV. Food Security and Mutually Complementing Programmes**

India has the largest food schemes in the world. To ensure the food security the National Food Security Act was made in 2009 by the Ministry of Consumer Affairs, Food and Public Distribution. Its objective is to ensure food security to the below poverty line (BPL) people in urban and rural areas.

- This scheme proposes to provide BPL families with 25 kgs of grain per month at Rs.3 per kg.
- Under this act the government would provide 25 lakh tons of food grains for BPL families only.

#### **Entitlement Feeding Programmes :**

- ICDS (Covering all children under six years of age, pregnant and lactating mother)
- MDMS (Covering all primary school children)



### Food Subsidy Programmes

Targeted Public Distribution System (35 kg/month of subsidized food grains)

- Annapurna (10 kg of free food grain for destitute poor)

### Employment Programmes

- National Rural Employment Guarantee Act now called (MGNREGA) providing 100 days at employment of minimum wages.

### Society Safety Net Programmes

National Old Age Pension Scheme (monthly pension to senior persons of BPL families)

National Family Benefit Scheme (Compensation in case of death of bread winner of the BPL families)

MNREGA and food security are two interventionary affirmative actions undertaken by the government which compliments one another. Since MNREGA provides buying capacity for the underprivileged. They can utilize it for other socially uplifting aspirational measures like education for children or health facilities for them only when they have other social buffer providing minimum allocation for food. According to the provision of MNREGA it becomes the legal duty of the government to provide a minimum 100 days of annual employment at minimum wages for any citizen who asks for it. Now, government intends to make the provision independent from the minimum wage and thus making the whole entitlement a farce as sans any minimum wage, the implementing functionary of this centrally funded scheme the provisional government can provide any wage (even Rs.1 as it was done in Andhra recently).

### Antyodaya Anna Yojana (AAY)

It was launched in December 2000. Under this scheme 25 kg of food grains were made available to each eligible family at a highly subsidized rate. In this scheme approved 2 crore families have been covered.

### Annapurna Yojana (AY)

This scheme aims at providing food security to meet the requirement of those senior citizens who through eligible have remained

uncovered under the National Old Age Pension Scheme (NOAPS). Under this scheme, 10 kg of food grains per month are to be provided free of cost to the beneficiary.

#### **Mid-day Meals Scheme (MDMS)**

It was launched in 1995 to improve the enrolment and regular attendance and reduce dropout in schools. It is also intended to improve the nutritional status of the primary school children. It is a largest school nutritional programme in the world and is meant to provide at least 450 calories and 12 grams of protein to 12 crore of children in over 905 lakh primary schools.

#### **V. PDS System in India**

PDS also has become a cornerstone of government development policy and is tied to implementation of most rural development programs. India's Public Distribution System with a network of 4.78 lakh fair price shops is perhaps the largest retail system of its type in the world. Since 1951, public distribution of food grains has been retained as deliberate social policy by India with the objectives of :

- Providing food grains and other essential items to vulnerable sections of the society at reasonable prices,
- To put an indirect check on the open market prices of various items and
- To attempt socialization in the matter of distribution of essential commodities.

Implementing a universal PDS or something close to it is the obvious answer to the worst forms of mass hunger and chronic food insecurity. PDS is operated under the joint responsibility of the central and state governments. 70 percent of the poor use the PDS in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. But only 50 to 60 percent of the poor use the PDS in Assam, Gujarat, Maharashtra and Odisha. In aggregate, only about 42 percent of subsidized grains issued by the Central Pool reach the target group, according to a Planning Commission study released in March 2008.

The off take per household has shown improvement under Targeted Public Distribution System but only about 57 percent of the BPL households are covered by it. The PDS was revamped in 1992 where

certain backward regions received higher subsidies as there is a strong case for treating regions differently. However, geographical targeting was given up in 1997, when it was replaced country-wide by the targeted PDS (TPDS). In the new programme, the PDS makes a distinction between Below Poverty Line households (BPL) and Above Poverty Line (APL) households. While APL households are provided grain at FCI's economic cost, BPL households receive grain priced at 50 percent of FCI's economic cost. Thus the subsidies are restricted to the BPL population.

During a recent conference of food secretaries of states and union territories, several possible initiatives were discussed to improve the delivery system, including the issue of food coupons, introduction of IT based initiatives through computerization of the TPDs and introduction of Smart Card based delivery of food grains.

#### **VI. Historic Judgement towards Right to Food**

On 12 August, 2010 the Supreme Court asked the centre to give away food grains rotting due to neglect among the poor at low cost or no cost. This would give relief to the country's starving millions and also solve the government's problem of preserving food grains after record procurement. The Supreme Court asked the centre to raise the quantity of food supply to below poverty line population and keep fair shops open all months. Distributing food grains for free may sound an easy thing to do, but is hardly so even if one ignores the problems associated with buying expensive wheat and rice and selling them cheap. A recent headline that captured the attention of all was that food grains worth 580 billion got spoiled due to lack of storage facilities with the Food Corporation of India. It necessitates looking for alternatives to Public Distribution System. The use of food stamps can be an alternative. Under this scheme the intended beneficiaries are provided with food stamps which recipients can exchange for an equivalent amount of food at any shop. The shopkeepers can get them credited in their Bank accounts. The biggest advantage of Food Stamps is that it can plug the leakages associated with the PDS.

The Secretary in the Department of Food said in an affidavit that as a result of record procurement of wheat and rice in the past three years, central pool stocks had reached 604.28 lakh tonnes. But there was no space to stock the produce and 178 lakh tonnes of wheat were

stored in inappropriate conditions. Taking note of the government's predicament in handling record procurement, the court said a permanent solution lied in building adequate storage facilities. It said the government may consider building at least one large Food Corporation of India warehouse in every state and one in every division if not every district, of all states. The government agreed for total computerization of the public distribution system.

## VII. Concluding Remarks

While concluding about the Food Security we should not forget that Food grain production is now well over 220 million tonnes but we are facing double digit inflation in case of food items. There is an extremely high prevalence of hunger and malnutrition. According to world food programme, nearly 50 percent of the world hungry lives in India. About 35 percent of India's population is food insecure. Nearly 9 out of 10 pregnant women between 15 to 49 years are malnourished and anaemic. India ranks an abysmal 67<sup>th</sup> in the Global Hunger Index-2010 in the group of developing countries. Therefore there is need to enforce food security system as early as possible to prevent malnutrition and hunger that raise ugly heads in the country.

# **Food Security And India – A Challenge**

**Dr. Lipishree Das\***

## **INTRODUCTION**

The concept of food security has undergone some changes in recent years. Up to the 1970s food availability and stability were considered good measures of food security. And achievement of self-sufficiency was given high priority in the food policies of developing countries. Now the concept of food security has become more wider. It also includes food accessibility and utilization. Though, food security has been a major objective in India since the beginning of planning, the self-sufficiency in food grain production is achieved in 1970s. But achievement of self sufficiency in the food grain production could not solve the problem of chronic food insecurity. India has achieved an increase in food grains production from 50 million tonnes in 1950 to 235 million tonnes in 2008-09 (Economic Survey 2009-10) which is more than four times against a threefold increase in population i.e., from 30 million to 103 million during the same period. Yet, India's efforts in achieving food security for all Indians remains unimpressive. According to an estimate by FAO, over 225 million Indians remain chronically undernourished. So, the question arises what is wrong with Indian agriculture and food policies.

In this paper an attempt has been made:

- To study the nature and extent of food insecurity in India.
- To examine the relationship among GDP, population growth, agricultural production and food security.
- To find out the factors affecting food security.

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- To highlight about the steps taken by the Government to achieve food security, and
- To suggest some suitable policy measures to solve this grave problem.

### **I. Meaning and Concept of Food Security**

World Development Report (1986) defined food security as "access by all people at all times to enough food for an active, healthy life." Food and Agriculture Organization (FAO, 1983) defined food security as "ensuring that all people at all times have both physical and economic access to basic food they need. Thus, food security is the access of all people to sufficient, safe and nutritious food to meet their dietary needs, and food preferences for an active and healthy life." In recent years, it emphasized on four basic components: availability, accessibility, utilization and stabilization with regard to food. Availability is a function of production, accessibility is related to purchasing power, utilization is determined by the availability of minimum basic needs, i.e. safe drinking water, primary health care, primary education, housing facilities, environmental hygiene and fourth one is influenced by the extent of attention given to the sustainability of the system. The challenge of meeting the food requirement of ever increasing population can only be met through sustainable agriculture. A nation may acquire self-sufficiency in food at a point of time, but food should be available on a long-term basis.

### **II. Nature and Extent of Food Insecurity**

According to FAO of the United Nations, one fourth of the World's undernourished population live in India. In addition to this 47 per cent of children under 5 years age are underweight and 16 per cent have severe malnutrition. Even if India is developing fast, without individual food security, a basic entitlement, it ranks 127 among 177 countries in the UNDP's human development index. Further though the food balance in India is relatively higher in South Asia (table -1) yet India is suffering from food insecurity as shown in table - 2.

The food security scenario in South Asia is presented in Table-1.



**TABLE-1****THE FOOD SECURITY SCENARIO IN SOUTH ASIA**

Figures in thousand metric tonnes

Country	Food Production	Food Export	Food Import	Food Balance
Bangladesh	26924	1.6	2827	-4601
India	174655	9490	56	23826
Nepal	5839	11	39	57
Pakistan	24936	2966	288	3818
Srilanka	1938	9.8	1307	252

*Source: FAO-2004*

According to millennium development goal report, 2009 the number of very poor people reduced from 180 crore to 140 crore globally. Government of India's Report (N.C. Saxena Committee) August, 2009 says that the number of poor since 1974 has increased instead of reducing. As per Millennium Development Goals, in 1990, the poor were 63.2 per cent which has to be reduced to 31.5 percentage points in 2015. But during 2004-05 it has increased to 75.8 per cent and but in 2010, as per UNDP report of Multidimensional Poverty Index (MPI) about 645 million people or 55 per cent of India's people are poor. Report released by International Food Research Institute which derives a hunger index shows that South Asia continues to face critical levels of hunger. The institute studied 119 countries and ranked countries on a 100 point scale, with zero being the best score (no hunger) and 100 being the worst. India and most other South Asian countries score in the region of 20 plus and are categorized in the group in which the food security is 'alarming'. Hunger Index of India on a five point scale on the basis of malnutrition and underweight scale children of under 5 years of age is depicted below.

0	no hunger
0-4.9	less hunger
5-9.9	medium hunger
10-19.9	more hunger
20-24.9	critical hunger

According to this index the hunger score of various states in India are given in table -2

**TABLE-2**

**INDEX OF HUNGER SCORE IN VARIOUS STATES OF INDIA**

Punjab	:	13.6 %
Kerala	:	17.6 %
Andhra Pradesh	:	19.5 %
Assam	:	19.8 %
Haryana	:	20.00 %
West Bengal	:	22.5 %
Karnataka	:	22.3 %
Odisha	:	23.7 %
Maharashtra	:	23.7 %
Gujarat	:	24.7 %
Chhatisgarh	:	26.6 %
Bihar	:	27.3 %
Jharkhand	:	28.5 %
Madhya Pradesh	:	30.9 %
INDIA	:	23.7 %

Source: International Food Research Institute Data

Thus, except for a few, all the states are in critical state of hunger. In India, high rates of child malnutrition are the main reason for the high hunger index. Amongst 88 developing countries India's place is 66. Thus, there is need of food security to meet the demand for food of particularly poverty stricken people.

At the national level, according to NSS, data, per capita cereal consumption has been declining since 1970's despite a significant rise in cereal production. This can be due to changes in consumer tastes from food to non-food items. The decline has been greater in rural areas, where the improvement in rural infrastructure has made other food and nonfood items available to rural households. Regarding the

nature of food intake, it can be said that bottom 30% of the population has not shown any improvement in cereal and calorie intake in the rural and urban areas despite a significant improvement in their per capita expenditure. Calories intake is 1600 to 1700 which falls short of the required norm. Other features related to this are:

- Micronutrient deficiency is common among the people.
- There is deficiency in Vitamin-A in 80. per cent of rural population.
- Iron deficiency is widely prevalent among pregnant women which contributes to malnutrition of the children.

So, the most important challenges are:

- To increase the energy intake of the bottom 30 per cent of the population.
- To facilitate diet diversification to meet micro-nutrient deficiency.
- Strengthening of National Social Assistance Program (NSAP) in all states.

To achieve sustainable food security three dimensions of the problem need attention.

- Availability of food which is related to production and import.
- Access to food, which is a function of purchasing power and employment.
- Absorption of food in the body that is related to clean drinking water, sanitation and health care.

Thus, food and non-food factors relating to food security need integrated attention. There are many schemes which address these issues. The Rajiv Gandhi Drinking Water Mission and National Rural Health Mission can ensure that whatever food is consumed is beneficial. The various employment generation schemes and more particularly, Mahatma Gandhi National Rural Employment Guarantee Programme are helping to provide the minimum essential purchasing power. For increasing availability of food, several steps have been taken like Rastriya Krishi Vikash Yojana (25,000 crore) National Food Security Mission (6,000 crore) and National Horticulture Mission during 11<sup>th</sup> Five

Year Plan. In spite of all these schemes agriculture sector is lagging behind as it is primarily monsoon dependent.

During 2009, the widespread drought brought down the agricultural growth rate to (-) 0.2 percent as against the target of 4 percent. Our country faces the challenge of producing food not only for 1.2 billion people but also for about a billion farm animals. Nearly 70 percent of our population live in villages and their main sources of livelihood are crop and animal husbandry, fisheries, agro forestry and agri-business. Innovative measures should be taken not only to increase food production but also to ensure that people who are poor and cannot afford to purchase required amount of food for their sustenance should get food at the time when they need it. This is the responsibility of the government.



# **Sustainable Agriculture And Food Security in India**

**Minati Mallick\***

## **I. Introduction**

Food security as it is understood now refers to physical, economic and social access to balanced diet, clean drinking water, environmental hygiene and primary health care. Thus food security can be achieved when all people at all times have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. It involves physical availability of food, enough purchasing power with people to have command over those available foods, maintain the quality of food to meet nutritional requirement of the people and timely supply of adequate nutritionally rich food on long term basis.

Sustainable food security also involves strengthening the livelihood security of all members within a household by ensuring both physical and economic access to balanced diet including the needed micronutrients, safe drinking water and sanitation, basic health care and primary education.

Today the world has enough to feed everyone yet 850 millions are food insecure. Achieving food security requires adequate food availability, access and use. Agriculture plays a key role in providing food availability. It is an important source of income to purchase food and it provides food with high nutritional status.

The present paper attempts to study the food security problem in India and the importance of sustainable agriculture in ensuring food securities. The paper is organized in the following manner : Section-II discusses the present food situation in India. The need for sustainable agriculture in ensuring food security is analysed in Section-III. Section-IV presents different measures taken by the government in this line followed by the concluding section.

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## II. Present Food Scenario in India

India is the second largest producer of food grains in the world yet over 300 million people of the country go without two square meals a day. According to the Global Hunger Index, 2008, India ranks 66<sup>th</sup> in a list of 88 countries with over 200 million people unsure about accessing their daily bread, 50 percent of children undernourished and stunted and about 68 out of 1000 dying before the age of one year (US Hunger Task Force). About 41 percent of world's underweight children live in India. The future human resource capital of the country faces enormous growth challenges, 47 percent of children less than five years old are underweight, 45 per cent are stunted and 16 percent have severe malnutrition. Such severity of malnutrition can only be observed in famine prone countries. Such a situation in India questions the agricultural policies of the country.

India's State Hunger Index, 2008, highlights the continued overall severity of the hunger situation in India. It is indeed alarming that not a single state in India is either low or moderate in terms of the hunger index score. Most states have severe hunger problem while Madhya Pradesh has an extremely alarming one. This shows that food security is undoubtedly a major concern and top priority for the government today.

Food security situation is alarming in India. High rates of child malnutrition is the cause of high global hunger index. It is the neglect of the human dimension which is at the root of the emerging crisis in food security. Growth rate in agricultural production is slowing down. PDS is working well in relatively better off states in India like Kerala and Andhra Pradesh but is virtually non-existent in hard core poverty areas like Bihar, Uttar Pradesh and Madhya Pradesh.

The broader socio-economic context is marked by powerful poverty generating processes like growing landlessness in villages, casualisation of rural labour and proliferation of small and marginal holdings with severe constraint in raising agricultural productivity and growth. These processes operate along with weak rural development programmes for provision of safe drinking water in adequate quantities, improved rural sanitation, provision of houses to rural poor etc. The result is emergence of three entities – The shining India of urban elites, Bharat of emerging rural elites and the rural poor. The last entity is numerically largest and



suffers from multiple deprivation including food insecurity and abysmal levels of health, nutrition, sanitation and housing. Their poverty gets perpetuated over time due to weak access to education, skills and assets.

Stagnation or decline in domestic production and large fluctuations in it clearly raise a potential problem of food availability at national level. The first sign of slow down in agriculture was observed in the mid 1990s mainly due to a decline in public investment in agriculture which discouraged the private investment also. The public investment in real terms in agriculture has witnessed a steady decline from Sixth Five Year Plan to Ninth Plan.

The other reasons of declining agricultural productivity are soil degradation resulting from unsustainable farming practices, declining land man ratio and size of farm holding. Thus the country started facing acute supply side problems that became intense by the turn of the century.

However, with an average growth over 4.9 percent over three years i.e. 2005-2008, the agricultural sector including allied activities lent credible support to the overall growth in GDP. But in 2008-09 it declined to 1.6 percent. This sharp fluctuation is due to the vulnerability of agriculture to vagaries of nature. In terms of composition, however, out of total share of 17.8 percent in GDP in 2007-08 for the agriculture and allied activities agriculture alone accounted for 16.3 percent of GDP followed by Fishery at 0.8 percent and forestry at 0.7 percent of GDP.

The annual growth rate of agriculture fluctuates during several plan periods. It increased to 5.8 percent in Sixth Five Year Plan and to 4.8 percent in Eighth Plan periods. Thereafter it declined to 2.3 in Tenth Plan which is a very low figure. It has been targeted to achieve 4.5 % growth in the eleventh plan.

The per capita availability of cereals has gone down from 458.7 grams per day in 2002-03 to 407.4 grams in 2007-08. However, per capita per day availability of pulses has increased marginally from 35.4 grams to 35.5 grams. The per capita per day availability of pulses has been drastically reduced by 40 per cent from 59.1 grams in 1952 to 35.5 grams in 2007. It is therefore necessary to take steps to increase agricultural production in order to meet the growing demand of increased population in the years ahead.

### **III. Sustainable Agriculture and Food Security**

Change is the law of nature. But changes have been accelerated much faster by human needs and greed. Natural resources are being over exploited. As a consequence there is large scale desertification, soil degradation, global warming, ozone depletion, environmental pollution and erosion of biodiversity.

Human perception of manipulating natural resources for food security this way will lead us into an era of hunger and desperation. FAO survey indicates that 93 developing countries including India are withdrawing ground water faster than recharging and 70 per cent of withdrawn water is used for agricultural purposes. Consumption of 2 million ton of herbicides, 3 million tons of pesticides and 1 billion tons of fertilizers annually all over the world speaks that agriculture is a big business of managing natural resources for the benefits of the human society. Hence our food and nutritional securities are safeguarded under the umbrella of an agro system that utilizes natural resources in such a way that productivity is either maintained or improved over a long period of time. It considers improving quality of plant, soil and human life and works within the carrying capacity of supporting eco-system. Sustainable agriculture represents that agro system.

Sustainable agriculture refers to the ability of an agro system to produce food without causing severe and irreversible damage to ecosystem. It is the ability entrusted with set goals enhancing environmental quality and the resources base on which agriculture depends, providing for basic human food and fiber needs. It is economical, viable and enhances the farmer's quality of life and society as a whole. This can be achieved by substituting biological technology for chemical technology. It is the agriculture that is productive for the foreseeable future, competitive and profitable, conserve natural resources, protect the environment, and enhance public health, food quality and safety.

As defined by FAO, sustainable agriculture embraces the management and conservation of resource base and orientation of institutional and technological changes in such a manner as to ensure attainment and continued satisfaction of human needs for present and future generations. Such sustainable development is environmentally non-degrading, technically appropriate economically viable and socially

acceptable. It is intensive agriculture with eco-friendly approaches. Farming practices in sustainable agriculture are –

- (a) Crop rotation to reduce weeds, disease, insect and pest problems; and to reduce soil erosion and risk of water contamination by agricultural chemicals.
- (b) Pest control measures that are eco friendly namely, cultural practices, use of resistant varieties, biological pest control etc.
- (c) Soil and water conservation practices technology for efficient use of irrigation water like the use of sprinklers, drip and pitcher.
- (d) Application of organic manures and bio-fertilisers.
- (e) Use of synthetic or natural inputs in a way that it poses no significant hazard to man, animal or environment.

Thus sustainability is built up of sophisticated approaches that maintains high yield to meet requirements of all the people without undermining the resources on which agriculture depends.

The continued growth of population requires further increase in agricultural production without placing the soil, water and environment in peril. The prevailing circumstances forced us to perceive one more green revolution in agriculture which should be productive and sustainable. Between 1990-2007 India's population grew by 1.9 percent while food production grew by 1.2 per cent. At this juncture India needs to attain a sustainable agricultural growth rate of 4 to 4.5 percent in order to reduce food insecurity and poverty. Urgent steps need be taken to infuse sustainable farming practices so as to meet the increasing demand for food by an expanding population without destroying the natural resource base. What is common with all the proponents of sustainable agriculture is that improvement must be made in current farming practices with greater emphasis on biological cycling including off farm wastes, balanced plant nutrition, integrated plant nutrient management, efficient use of nonrenewable resources, crop rotations and tillage practices to achieve the goal of sustainable agriculture. But organic farming need be supplemented by chemical fertilizers in a balanced way to increase production.

#### **IV. Components of Sustainable Agriculture**

**Balanced Plant Nutrition :** A crop requires an adequate supply of all nutrients for optimum growth. It is well documented that

unbalanced availability of nutrients not only produces low and poor quality yield but can also lead to mining of soil nutrients reserves which are short in supply and to losses of nutrients supplied in excess. The grain yield of some Long Term Fertilizers' Experiments in India clearly shows that response to N declined sharply in the absence of P and K fertilizers. When applied together the crop yield increased substantially. Thus unbalanced application of fertilizers is a sheer wastage of expensive fertilizer input.

In many regions of India sulphur and zinc deficiency have become the most commonly occurring micronutrient deficiency limiting crop growth and production.

### **Integrated Plant Nutrient Management (IPNM)**

The main objectives of the IPNM are to maintain and enhance soil fertility through a balanced use of chemical fertilizers along with biological sources to improve plant nutrients, increase crop productivity and minimize losses to the environment. The possible conventional and non conventional sources of plant nutrients for integrated supply in Indian agriculture are as follows.

#### **(a) Organic manures**

The use of organic manures which is as old as farming not only provides plant nutrients but also improves soil's physical, chemical and biological properties. The important organic manures in Indian context are farm yard manure, different kinds of composts, vermi composts and green manures. In addition to chemical fertilizers the use of organic manures is essential for sustaining crop productivity. At present on an average about 2 tonnes of organic manure per hectare is being used annually which is far below the general recommendations of 10-20 tonnes/ha. Use of cattle dung as fuel is main reason behind short supply. The plant nutrient supply from organic manures can be increased by developing biogas plants and agro forestry which will provide alternative fuel sources, the addition of crop residues, recycling of urban wastes and adding nutritional value through proper composting. According to a recent estimate 25 per cent nutrient needs of Indian agriculture can be met by utilizing various organic resources. Table-1 shows the requirement of organic resources to meet the possible 25 per cent nutrient needs of Indian agriculture.

**TABLE-1**

**The requirement of organic resources to meet the nutrient needs of Indian agriculture**

Resource in million tonnes	Year 2000	Year 2050
FYM	200	400
Crop residue	30	50
Urban/rural wastes	10	50
Green manure	25	50

**(b) Green Manure**

Green manuring with leguminous crops improve soil fertility and enhances availability of other nutrients. The sandwiching of the green manuring crops in the tight cropping system of the rice-wheat, maize-wheat or oil seed-pulses-wheat etc. is considered not only an excellent source of nitrogen but also improves physical condition of the soil. Many studies of green manuring before rice crop have shown a significant rise in rice production as well as subsequent wheat production. Table-2 shows potential Nitrogen (N) contribution of N-fixing legumes in Indian soils.

**TABLE-2**

**Potential N contribution of N-fixing legumes in Indian soils**

Name	Sowing season	Average yield of green manure (t/ha)	N(% on green weight basis)	N added (kg/ha)
Sunn Hemp	Kharif	15.2	0.43	84.0
Dhanichha	Kharif	14.4	0.42	77.1
Mung bean	Kharif	5.7	0.53	38.6
Cowpea	Kharif	10.8	0.49	56.3
Guar	Kharif	14.4	0.34	62.3
Senji	Rabi	20.6	0.51	134.4
Khesari	Rabi	8.8	0.54	61.4
Berseem	Rabi	11.1	0.43	60.7

Source : Kumar & Shivay, 2007

**(c) Crop Residue**

Crop residues like wheat straw, cotton stick, sugarcane trash, rice straw and husks help in giving sustained production and improve soil fertility and productivity in the long run. They contribute in improving organic matter. But due to some economic compulsions such as need for animal fodder and fuel the crop residues are partially recycled in the soil.

**(d) Sewage sludge, city garbage and industrial waste water**

Sewage sludge, city garbage, industrial waste water and effluents are also good source of plant nutrients. However these materials need treatment to remove heavy metals from them before application. If adequate treatment of waste materials is managed before their application to crops they will not only supplement chemical fertilisers but the chance of environmental pollution will also be minimized.

**(e) Chemical fertilizers**

Fertilisers play an important role in modern agricultural technology. It is found that the quantity of nutrients available via recycling of plant and animal residues is rarely sufficient to compensate for the amount removed through agricultural products. The positive environmental consequences of fertilizer use are substituting for land thereby reducing deforestation and loss of biodiversity preventing nutrient mining and soil degradation.

**(f) Bio fertilizers**

Bio fertilizers are the products containing living cells of different types of micro organisms which have ability to fix atmospheric nitrogen and mobilize and solubilise phosphorus in the soil from unavailable form to plant usable form. These are an important constituent of Integrated Plant Nutrient System. In recent times phenomenal increase in production and use of biofertilisers in India is the result of special attention given by the government and entrepreneurs to set up biofertilisers facility. Farmers have also realized the benefits of using biofertilisers in their field. At present the annual production of all kinds of biofertilisers is estimated at around 7000 tonnes from nearly 70 units and expected consumption is approximately 6000 tonnes.



### **Land Resource and Its Management**

Soil erosion and land degradation are among glaring environmental problems badly affecting soil productivity and continuously turning productive lands into waste lands. It is an irony that while nature takes 300 years to form only one cm. of top soil it is estimated that as much as 5334 million tonnes of soil gets eroded every year on a national basis accounting for about 16.4 tonnes /ha/year. Of the soil eroded 29 per cent is permanently lost into sea. 10 per cent is deposited in reservoirs resulting in loss of their storage capacity and rest 61 per cent is transported from one place to another. It causes depletion of about 8.5 mt of major plant nutrients. It is a potential threat to agricultural sustainability. Deforestation, overgrazing, and clearing of vegetation expose the soil surface to various forces of degradation. Micro-organisms which help in soil aggregation get destroyed. Efficient land resource management needs to be given attention. Suitable location specific soil conservation and land reclamation measures based on soil survey on watershed basis needs due priority.

### **Water Resource and Its Management**

About 72 per cent of the cultivated area of the country depends entirely upon rainfall. Hence efficient rainwater management which plays a vital role in ensuring stability and sustainability of agricultural production is the need of the day. The National Water Policy 1989 declares water as a precious natural resource to be planned, developed and conserved as such and in an integrated and environmentally sound basis. Agriculture consumes nearly 80 per cent of the total water resource of the country and it will decline in future due to industrialization and urbanization. As it is a natural resource and cannot be created as per desire an efficient management of water resources is required. Suggested steps for water resource management to achieve sustainable agriculture include:

#### **(a) Engineering measures**

- i) Prevention of conveyance losses by renovation of field channels.
- ii) Artificial recharge of ground water through series of check dams on natural streams, percolation tanks and recharge wells etc..
- iii) Precision irrigation including sprinklers and drip irrigation system.

**(b) Agronomic Measures**

- iv) Adoption of appropriate technology to increase water use efficiency.
- v) Scientific scheduling of irrigation.
- vi) Integrated watershed development to use rain water, ground water, soil water, and run-off water efficiently.
- vii) Crop diversification.
- viii) Contingent crop planning for climatic aberration.

**Management of forest resources**

Forests significantly contribute to the sustainable agriculture through conservation of soil and moisture, prevention of land degradation, preservation of soil fertility, conservation of biodiversity and regulation of temperature and rainfall. Loss of forests being an important factor detrimental to agricultural sustainability, adequate emphasis needs to be given on forest management through conservation of existing forests and compensation of loss of forests through massive afforestation programme with plantation of location suitable effective tree species. It necessitates a joint effort by government and non government agencies.

**V. Measures Taken to Reduce Food Insecurity**

The present stock of food grains available in the central pool is enough to feed our people for 13 months under Targeted Public Distribution System. India's Public Distribution System is the World's largest such network in the world that aims at ensuring food security to those below poverty line. The stocks of wheat and rice in the central pool as on June 1, 2009 were 331.22 lakh tonnes and 204.03 lakh tonnes respectively. On the other hand, the estimated annual requirement of food grains is about 446 lakh tonnes under TPDS and 50 lakh tonnes under other welfare schemes. Presently India is in a paradoxical situation of endemic hunger coexisting with the mounting food grain stocks.

In view of the stagnating food grain production and an increasing consumption need of a growing population, Government of India has launched a centrally sponsored scheme "The National Food Security Mission" in August, 2007. The main objective of the scheme is to increase production and productivity of wheat, rice and pulses on a

sustainable basis so as to ensure food security in future. The approach is to bridge the gap between supply and demand in respect of these crops through dissemination of improved technologies and farm management practices in a sustainable manner.

Among many other challenges before UPA government, providing food security to all undernourished and malnourished population is the most challenging one. To eradicate hunger and reduce malnutrition the central government is planning Food Security Act. This is a commendable initiative of the government which would hopefully realize the dreams of Mahatma Gandhi to provide food to every human being-- a goal that is enshrined in the constitution of India as right to life. (Article-21)

Implementation of this act will ensure that every below poverty line card holder gets 25 kg of either wheat or rice at Rs.3 per kg every month. Presently we have 6.5 crore families falling in the BPL category. Of these 2.5 crore are the poorest of the poor who are already getting wheat or rice at Rs.2 to 3/kg every month under Antyodaya Anna Yojana and Annapurna. In order to attract children to school and ensure nutritional security among them the Mid Day Meal Scheme is also working all over the country. Convergence of all the welfare schemes including MGNREGAS with NFS Act will certainly instill confidence among people and will bring those poor people out of the clutches of poverty.

## VI. Conclusion

The hurdles in achieving food security essentially lie with the policy shortcomings and shortfall in delivery mechanisms of food grains under PDS. Even if availability of food is there, people do not have access to those food. The hikes in food grain prices no way benefits the farmers. It is the middle man who reaps rich. This results in serious demand side problems in rural India. Provision of food grains at subsidized rate is no doubt good news for the poor, but to lead life they do not only require food grains but also vegetables oil, potatoes which are all high priced and go beyond the capacity of BPL families and also the middle class families.

In the future agriculture will continue to play a central role in tackling the problem of food insecurity. It can maintain and increase food production ensuring food availability. It can be primary means to

generate income for the poor, securing their access to food. And through new and improved crop variety it can improve their diet quality and diversity and foster the link between food security and nutrition security. But this can be assured only if we practice sustainable agriculture today. Balanced nutrition of agricultural crops through different sources of plant nutrients is an important key for food security and sustainability of agriculture in India.

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# **Food Security and Public Distribution System in India : Issues and Policy Options**

**Manoj Kumar Das\***

## **1. Introduction**

Food security in India is a major problem, as a sizable share of the population lacks economic and physical access to sufficient food. Poverty in India is falling but concerns over food security are increasing (D. Chakraborty-2005). Though there has been some increase in food production, it has not solved the problem of chronic household food insecurity (Radhakrishna and Reddy, 2004). The Uniform Recall Period (URP) consumption distribution data of the NSS 61<sup>st</sup> Round gives a poverty ratio of 28.3 per cent in the rural areas, 25.7 per cent in urban areas and 27.5 percent for the country as whole in 2004-05. According to India Country Report 2009 pertaining to Millennium Development Goals (MDGs), the proportion of population that has dietary energy consumption below 2100/2400 kcal in India tends to rise since 1987-88 (with about 64 per cent below the norm of 2100/2400 kcal in 1987-88 increases to 76 per cent in 2004-05). This necessitates a change in approach on food security.

The problem facing the country today is not only a shortage of food grains but also of managing the surplus. Though the godowns of the Food Corporation of India (FCI) are overflowing, stray cases of starvation deaths are still being reported. Therefore, while there is need to produce adequate food grains domestically, it is also necessary to look at the food grain distribution network. The most important medium through which government ensures food security at the micro-level is the Public Distribution System (PDS). With a network of more than 4.62 lakh fair price shops, the PDS in India is perhaps the largest distribution machinery of its type in the world. Each year PDS is said to distribute commodities worth more than Rs.30,000 crore to about 160 million families. However, doubts have been raised about the efficacy and cost-effectiveness of the PDS, especially in the light of the growing food inflation, food subsidy, food stocks and food insecurity.

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All is not well with the PDS. Therefore the PDS needs to be reexamined and there is a need to explore the possibility of introducing innovative ideas to eliminate hunger and make food available to the poor on an affordable and sustainable basis. Keeping the above in view, the main objectives of this paper are to highlight certain key issues and opportunities relating to PDS and food security in India. It is an attempt to review the food security scenario and the role of PDS towards accomplishment of the food security.

## **2. Food Security : The concept**

Food security is conventionally viewed in terms of three components, food availability, food access and food utilization. Food availability is the sum of domestic production, net imports (both commercial and food aid) and changes in national stock. Food access is a measure of people's entitlement to food, which is the amount they can either produce (net of feed, seed and losses), purchase or otherwise receive (e.g. through PDS). Food utilization relates to the capacity of an individual to absorb and utilise the nutrients in the food consumed, and is determined by food preparation, storage, utilisation, eating habits, sanitation, health, food safety, nutritional safety and dietary balance. More specifically according to FAO "Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life." So, the question of food security has a number of dimensions that go beyond production, availability and demand for food. However, in general food security may be defined as economic access to food and its utilisation along with food production and food availability. Food availability alone, therefore, does not ensure food security; access to food and utilisation are equally important.

## **3. Food Security Status and Issues in India**

India has witnessed high economic growth in the last decade, but the problem of food and nutrition insecurity still remains as great threat to a large number of poor and vulnerable people in the country. According to the FAO report the stark reality is that India has 29 per cent of the 872.9 million undernourished people in the world. WHO reports that 49 per cent of the world's underweight children, 34 per cent of the world's stunted children and over 46 per cent of world's undernourished children live in India. Further, 456 million people (about



42 per cent) of the population in India are below the new international poverty line (i.e., earning less than \$1.25 per day) and India is ranked at 67, way below neighboring countries like China (Ranked 9) and Pakistan (Ranked 52), in 2010 Global Hunger Index prepared by International Food Policy and Research Institute (IFPRI). So what it all means is that achievement of food security at the national level has not percolated down to the level of individual households and thus has not resulted in food and nutritional security. Further, there are certain food security issues relating to food availability, access and utilisations that are erupting in the recent years. These issues of food security are examined here in terms of food availability, access and utilisation.

### 3.1. Food Availability

There has been a continuous debate regarding whether India has achieved a status of food self-sufficiency, where the availability of foodgrains, especially at the national level, is not a problem. A report prepared by M.S. Swaminathan Research Foundation and WFP reveals that between 1950 - 51 and 2006 - 07, production of foodgrains increased at an average annual rate of 2.5 per cent compared to the growth of population, which averaged 2.1 per cent during this period. The rate of growth of foodgrains production however decelerated to 1.2 per cent during 1990 - 2007, lower than the annual rate of growth of population at 1.9 per cent. Consequently, the per capita availability of foodgrains witnessed a decline.

Changes in per capita net availability of foodgrains per day shows that there have been variations in the per capita net availability of foodgrains per day throughout the last six decades. The decade from 1961 to 1970 saw a rise in foodgrain availability by 4.12 per cent over the decade 1951-1960. Further, there was a dramatic rise in foodgrain availability by 4.98 per cent during the decade 1981-1990. However, the post liberalization period witnessed a decline in the per capita net availability of food grains. With foodgrain availability declining continuously between the period 2001 to 2008 after having a lower rate of increase in the period 1991-2000, resulting in food grain availability crisis, though there has been a sign of recovery in 2009.

Availability dimension of food security is fundamentally influenced by foodgrain production and imports. But the production of foodgrains is largely determined by total area under cultivation and yield of foodgrains per unit of land (say yield per hectare). The matter of

concern is that Indian foodgrain production and area under foodgrains remain stagnant during the last two decades though the yield per hectare has increased to a considerable extent. There is a pattern of clear deceleration and fluctuation in the rate of growth of foodgrain production throughout the last decade. The data therefore, suggest that claims of self-sufficiency are clearly unjustifiable as production levels were unimpressive throughout the last two decades in the light of the growing population and increased demand for foodgrains.

Economists and agricultural specialists have predicted that even with the intervention of technology and policy measures the food security situation in India is expected to be worse in upcoming years. The food demand will be driven by income, population growth, urbanization, and income distribution at a faster rate (Radhakrishna and Reddy, 2004). But supply will lag behind the increased demand and there will be supply demand gap of foodgrains in the upcoming years particularly at 2025 and 2050 which will worsen the scenario of foodgrain availability and food security in India.

### **3.2. Food Access**

Besides food availability, the important aspect of food security is the ability of individuals to have access to available food stocks. Economic access of a household to adequate food depends on its purchasing power including the value of its own production. Lack of purchasing power deprives a person of access to food even though food is available. One of the key indicators used by many scholars and commentators to measure access to food in India is that of food expenditure and foodgrains consumption.

Data from NSS surveys show that per capita food expenditure at constant prices increased at very slow rate throughout the last decade both for rural and urban areas and at the same time high food inflation during the said period. As access to food is primarily a matter of purchasing power and that is closely linked with the prices of food grains, there is a worsening scenario of food security in India in terms of food access. Because increasing food prices particularly affect the poor people, who spend a bigger share of their income on food.

### **3.3. Food Utilisation**

Along with efforts to enhance availability and access to foodgrains it is also necessary to address the problem of food utilisation. The

indicators of food utilisation are outcome indicators that indicate the health and nutrition status of the population. India houses a huge population of malnourished.

According to UNESCO's Global Monitoring Report, 2007, 47 per cent of India's children are malnourished. As per the latest round of National Family Health Survey-3 (NFHS-3), 39 per cent of rural women in the 15-49 age group suffer from chronic energy deficiency and 58 per cent are anaemic. Among rural children in the 6-35 months category, 81 per cent are anaemic and 41 per cent are stunted, 49 per cent are underweight and 20 per cent suffer from wasting- all indicators of chronic and acute undernutrition. Stunted growth is caused by malnutrition in early childhood including malnutrition during fetal development brought on by a malnourished mother and the effects are irreversible. Infant mortality rates (IMR) have shown a decline but are still on the high side. The NFHS-3 estimates of infant mortality is 57 deaths per 1,000 live births, compared with the NFHS-2 estimate of 68 deaths per 1,000 live births and the NFHS-1 estimate of 79. Still, more than one in 18 children die within the first year of life, and more than one in 13 die before reaching age five. Infant and child mortality rates are higher in rural areas. In 2001 - 05, the IMR was 50 per cent higher in rural areas (62 deaths per 1,000 births) than in urban areas (42 deaths per 1,000 births). Concerted efforts are needed to break the vicious circle (mother - child - mother) of malnutrition among the poor.

The high levels of malnutrition are pointers to the poor state of maternal and child healthcare services in the country. Only 44 per cent of children in 12 - 23 months category were reported to be fully vaccinated, and five per cent had not received any vaccination (NFHS-3). As Sen (2003) and others point out, aspects such as health and sanitation facilities are the key factors that affect the absorption of food. Ill health or endemic diseases can perpetuate undernourishment. Thus in India some of the important non-food factors that affect undernutrition and malnutrition are lack of access to health services, quick and effective medical attention, knowledge of nutrition, sanitary arrangements and provision of safe drinking water.

From the above it is apparent that the food security scenario and associated issues are very acute in India. Multiple actions and policy measures are, therefore, needed to meet the goal of food security.

#### 4. Public Distribution System (PDS) in India: The issues

With a network of more than 4.62 lakh Fair Price Shops (FPS) the PDS in India claims to distribute annually commodities worth more than Rs.30,000 crore to about 160 million families. Until 1992, the PDS had universal targeting, being available to all consumers irrespective of economic and social status. But in 1992, Government of India introduced a revamped PDS (RPDS) in limited areas (primarily drought prone, tribal and hilly, and remotely located). The RPDS was a purely location targeted scheme, being available to all in the selected area. This has been substituted in 1997 by the Targeted PDS (TPDS); specifically aimed at BPL people in all parts of the country. The intended goal of TPDS was reduction of food subsidies, food leakages and food diversion, ensuring the availability of food grains for the poor and vulnerable sections across the country. Moreover, maintaining price stability and making foodgrains available at reasonable prices to the poor and vulnerable across the country came to be the major objectives of the PDS.

But how far has these objectives been realized? Empirical study shows that the TPDS has not achieved its stated objectives. Apart from failing to serve the intended goal of reduction of food subsidies, the TPDS also failed to stabilize the food price level.

Table-1 shows that except during 2005-06 there have been continuous rises in food subsidies released by the Government of India. The annual food subsidy involved in maintaining the system is very huge. So, the rationale for moving from a universal PDS to a TPDS to contain food subsidies seems here infertile.

**TABLE-1**

#### Quantum of Food Subsidies Released By Government

Year	Food Subsidy (Rs. crore)	Annual Growth (in per cent)
1999-2000	9200	5.75
2005-06	23071	-10.39
2009-10*	46906.68	7.42

\* Figures up to December 29, 2009

Source : Economic Survey 2009-10, Govt.

While TPDS has not reduced food subsidy, the concerns for price stability remain high. Policymakers seem unable to bring food prices under control. Table-2 shows that Food inflation, based on the wholesale price index (WPI) for food articles and food products, which entered double digits in 2009 continue to remain at that level. Average food inflation for 2006-09 remains above 7 per cent. Inflation at the retail level, which ultimately is what matters for consumers, might be more serious than wholesale prices. At this rate of inflation, Indian consumers are required to spend about 20 per cent more on food compared to the previous year to maintain their consumption level. A large percentage of households in the country are not in a position to raise food expenditure to neutralise the effect of inflation. This is surely going to aggravate food and nutrition deficiency in the country (Deaton and Dreze 2009). This indicates food insecurity and ineffectiveness of TPDS.

**TABLE-2**

**Inflation in Food Articles, Food products and Food Commodities During 1994-95 to January 2010**

Periods	Food articles (a)	Food products (b)	Food commodities (a+b)
1994-95 to 2004-05	5.91	5.33	5.64
2005	3.94	1.58	2.97
2006	6.83	2.55	5.09
2007	7.02	3.43	5.60
2008	6.64	9.80	7.87
2009	12.32	13.79	12.90
January 2010	17.41	22.55	19.42
Average 2006-09	8.20	7.39	7.97

Source : National Accounts Statistics, CSO, and Department of agriculture and cooperation, GOI

Another issue under India's food distribution system is huge wastage of food grains (Table 1). Lack of adequate or proper storage facilities is resulting in rotting of foodgrains. The condition of the godowns

in the country is not good and that is resulting in the rotting of foodgrains. India wastes Rs.58,000 crore worth of food items every year due to lack of or poor storage facilities.

**TABLE-7**

**Quantity of Food Grains Damaged In India**

Year	Quantity (in lakh MTs)
2002-03	1.35
2005-06	0.95
2008-09	0.33
2009-10*	0.03
Average	0.61

*\*Upto September 2009*

*Source : Lok Sabha unstarred Question No.3065 dated 08.12.2009*

While TPDS has not reduced food subsidy nor wastage or food inflation, it has excluded large numbers of poor and nutritionally insecure persons from access to PDS. A survey conducted for the Comptroller and Auditor General of India by ORG-MARG found, for instance, that nationally an estimated 18 per cent of BPL households did not have ration cards. Several empirical studies have shown that large errors of exclusion occur as a result of narrow targeting based on an income/expenditure criterion. A performance evaluation of the TPDS by the PRO of the Planning Commission noted that "a large section of the population (particularly daily wage earners) who have been kept out of the target group because of their income levels, are potentially food insecure households". In other words, TPDS has seriously worsened food insecurity for a substantial segment of the population. Further, one of the major criticisms against PDS is that it is not cost-effective. According to Parikh (1994), "The cost effectiveness of reaching the poorest 20 per cent households through PDS cereals is very small. For every rupee spent, less than 22 paise reaches the poor in all states, excepting in Goa, Daman and Diu where 28 paise reaches the poor. This is not to suggest that PDS does not benefit the poor at all, but only to emphasize that this support is provided at a high cost". Therefore, keeping the above results in view, restructuring of PDS is the need of the hour.



## **5. Way Forward and Policy Options**

Comprehensive effort is required to tackle the problem of food security in India given its complexity and multidimensional nature. Within the country, a critical examination of domestic food policy is required to move towards greater food security.

### **5.1 Food Availability**

Since the availability of food is a necessary condition to ensure food security, India will need to take measures to increase foodgrains production by increasing productivity. This would imply substantial investments in agricultural research, extension and outreach programmes to disseminate technological know-how, effective communication that improves farmers' access to market information and improvement in the irrigation infrastructure. In particular, agricultural research will need to focus on the development of new varieties that can withstand the adverse effects of climate change on productivity. Crop successes in the future will depend on strategic breeding improvements to relieve specific environmental and disease problems (Mittal and Sethi, 2009).

A substantial amount also need to be invested in training people for extension and outreach programmes. Infrastructural development, particularly power and roads, must be accorded the highest priority to improve both availability and access. Existing policies such as the support price and procurement policies will need to be continued to stabilise incomes and prices.

Besides increasing food production, emphasis must be laid on reducing wastage of food. To this end, integrated harvest management and integrated storage and transportation strategies need to be developed.

### **5.2 Food Access**

Income inequalities make economic access to food unviable (Mittal and Sethi, 2009). Schemes aimed at reducing such inequities need to be strengthened, through sharpening the identification of beneficiaries to wipe out those who are ineligible for distributive relief. Further, measures to improve the purchasing of the poor, improve market access to producers and the creation of more non-farm employment opportunities in rural areas are some of the measures that need to be taken up.

### 5.3 Food Utilisation and Vulnerability

Food security programmes in India should move away from the calorie intake-based measures of adequacy and nutrient-based measures and programmes that address nutritional deficiencies need to be introduced.

The populations of disaster prone and remote areas are amongst the most vulnerable in terms of food security. While food security in these areas requires greater efforts, disaster management policies need to be devised to mitigate the impact of natural disasters. These may be addressed through social interventions. Imparting nutritional education, particularly among women, apart from introducing schemes that enhance the access of women, children and other vulnerable groups to getting food will ensure greater food security.

### 5.4 Strengthen and Restructure PDS

Various groups have advocated strengthening the existing scheme by improving efficiency. The Committee on Long Term Grain Policy (2002), while acknowledging the extent of inefficiency and economic loss through FCI functioning, argued that universal PDS is the only means of addressing food security concerns. This huge network of PDS can play a more meaningful role if only the system is able to translate into micro level along with a macro level self-sufficiency by ensuring availability of food grains for the poor households. The following steps may be taken for effective functioning of PDS.

- Improving the procedure for selection of BPL beneficiaries
- Because the present procedure for selection of BPL beneficiaries is opaque, bureaucratic, and does not involve Gram Sabhas a white paper should be prepared on the subject, and a clear policy should be laid down by the Ministry of Rural Development.
- Elimination of Ghost Ration Cards
- All card holders must be photographed, and their details along with their photographs should be in the public domain. This will make it easy for the civil society or consumers to check the list.
- Oversight by citizens
- There should be quarterly meeting of the Fair Price Shop dealers with all consumers which should be attended by senior staff. A list of responsible citizens should be prepared in the open meeting

(its photographs should be taken to record the size of the gathering). These people should be permitted to inspect the shop (preferably in group of two or three people, so as to avoid the complaint of favouritism).

- **Involve civil society**
  - Many states have a large number of reputed NGOs. Their list may be prepared in a transparent manner, and localities/villages may then be divided amongst them. They should be authorised to inspect the shops, meet the people and take their grievances to the higher authorities.
- **Develop grievance redressal mechanism**
- **State Governments should provide a free toll number, where complaints can be registered on-line.** The entire operation should be out-sourced and web-enabled, so that anyone could see how many complaints have come from each shop, and how many been satisfactorily disposed off.
- **Launch a drive to cover the poorest**
  - A large number of homeless and poor living in unauthorised colonies in urban areas have been denied ration cards, and are thus not able to avail of PDS, despite being Indian citizens. A drive should be launched in collaboration with civil society to cover them in a time bound manner with ration cards, preferably Antyodaya cards.

To conclude, domestic initiatives such as a focus on improving farm productivity to ensure greater availability food grains, procedural and policy reforms should be encouraged for food security. The concerns over food availability, food access, food utilisation requires to be addressed at national and local level. The huge network of PDS can play a more meaningful role in this context.

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## Concerns on Food Security in India

Shrinibas Jena<sup>1</sup>

Lalit Kumar Dash<sup>2</sup>

Food security has been a major objective of economic development in India after independence, particularly since the beginning of planning. India achieved self sufficiency in food grains in the 1970's and has sustained it since then. But the achievement of food grains security at national level did not percolate down to households and hence the level of chronic food insecurity is still high in our country. The country has achieved a fourfold increase in food grains production from 50 MT in 1950 to 219.3 MT in 2007-08 against a three fold increase in population from 33 crore to more than 100 crores. In spite of impressive production of food grains in the world, nearly 300 million go without two square meals in a day. Our food grain production is now over 220 MT and we are also facing two digit inflation in case of food items. There is an extremely high prevalence of hunger and malnutrition. The rampant malnutrition, anaemic mothers and stunted children indicate our failure to feed the empty stomach. The International Food Policy Research Institute has placed India in the 66th position in the global hunger index out of 88 countries.

India is faced with the puzzling problem of circular food insecurity. A circular constellation of forces are tending to act and react upon one another in such a way to keep India in the state of food insecurity. India is a poor country. The poor men do not have adequate physical and financial access to food which lead to low intake of nutritious food. So the poor are underfeeding and under nourishment is the cause of vulnerability of disease. This leads to low output and low caring capacity.

Food security is defined as, "Access by all people at all time to enough food for an active and healthy life." It implies ensuring the availability of food grains to the population at the affordable prices. According to World Food Summit, "Food security exists when all people

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at all time have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary-needs and food preferences for an active and healthy life. Household food security is an application of this concept to the family level with individuals within households as the focus of concern."

Food security has four basic components such as availability, accessibility, utilization and stabilization. Availability depends upon the production of food grains, accessibility relates to the purchasing power, utilization is determined by availability of minimum basic needs i.e., safe drinking water, primary healthcare, primary education, proper housing facilities, environment and hygiene, and stabilization is influenced by the extent of attention given to the sustainability of the system.

## **IMPLICATIONS OF FOOD SECURITY**

### **A. Availability of Food grains**

India's food security is likely to worsen because demand is likely to grow faster than supply. The supply of food grains will be lower than the demand for foodgrains by 36 to 64 million tonnes if population, demand for foodgrains and livestock continue to grow at present rate. A national survey shows that nearly 40 per cent of farmers want to give up farming due to low profitability of agriculture. Yield rate in India for almost all crops are stagnant and lower than other countries.

There has been diversification of cropping pattern and we are gradually shifting from cultivation of low profit consumption crops to high profit cash crops. There is a decline in area under coarse cereals and increase in area under oil seeds and high valued crops. This diversification of cropping pattern in favour of cash crops like oil seeds, fruits, vegetables and flowers should raise export but it can not provide food security to the vast majority of poor people whose staple foods are coarse grains.

The climate change affects the production of the agriculture. A one degree Celsius rise in mean temperature will reduce the growing period of wheat and rice by a week. This will result in reduction of rice yield by 4 to 5 quintals per hectares.

We lack agricultural infrastructure which has positive impact on agriculture specially in food production. There is only 40 per cent of

irrigated land The food grains are spoiled due to lack of storage facilities. We have no adequate cold storage for preservation of perishable food products.

Apart from production, its distribution is a big problem. Since 1939 Public Distribution System has been retained in our country as a permanent measure to ensure a regular supply of essential commodities to the economically backward section of the society at fair prices. Food Corporation of India (FCI) specializes in the purchase, storage and movement of food grains in most of the states. The Food Corporation of India (FCI) purchases food grains at procurement prices fixed by Central Government and issue price is reimbursed to the consumers at a subsidy.

Food subsidy which is a major part of non-planned expenditure of the central government is used to finance the operations of food management of FCI on the one hand and on the other, it covers a part of expenditure incurred to provide food grains to the consumers at subsidized rate.

The PDS also failed to cater to the needs of the poor on account of several loopholes in the scheme. They are :

- a) Public Distribution System has failed to cater to the needs of larger number of genuine card holders. There are a substantial number of ghost card holders in the society.
- b) Failure to supply all the essential items required by the people.
- c) Irregular opening of fair price shops which is manned by unscrupulous traders and dealers in most cases.
- d) The supply of poor quality of retained items and even this supply falls shorts of the actual requirements.
- e) The advantage of fair price shops is mostly reaped by non-poor than the poor.

Due to all these reasons PDS as an instrument for channeling subsidized food by the Government to the poor has not made any substantial progress.

#### **B. Accessibility of food grains**

According to Nobel laureate Amartya Sen "Hunger is not due to the lack of supply of food but more due to the inability of the people to

buy food.” Hungry are those who lack physical and financial access to food.

The growth strategy adopted in agriculture in our country, no doubt, helped to increase per capita net availability of food grains per day thereby improving the physical access to food by the poor but how many of the poor are in a position to buy the available food from the market is the real problem. Even whatever food grains they buy from the market that lacks nutrition and calorie value.

There are basically two reasons for this situation. Firstly, the poor do not have adequate income to buy available food. This compels them to go without food even though the supply position is satisfactory in the country. It is rightly observed by M.H. Suryanarayan that “A household is said to be food secured when it has the necessary purchasing power to buy food grains and access to the required amount of food grains. Secondly, supply of essential commodities including food grains through the mechanism of public distribution system has not helped the poor and hungry to meet their consumption requirement adequately.

### **C. Utilization and Stabilization**

Absorption of food in the body is the function of clean drinking water, sanitation and healthcare. After 63 years of independence in India about 50 per cent of population are not having proper sanitation and other social amenities. The stabilization can be achieved by sustainable development of agriculture,

Unfortunately, in spite of numerous government programmes and safety nets, malnutrition remains widespread in our country. Children and women suffer the most. We have made development in industries and rate of economic growth, but our status in the field of eradication of hunger and malnutrition is precarious.

### **SUGGESTIVE MEASURES FOR FOOD SECURITY**

The following suggestive measures should be taken for food security in India :

- i) It is more important to promote agricultural development by giving more stress on irrigation and supply of farm inputs. There is need for extending the area under pulses in the country which is lacking at present. Farming system integrates enterprises like fisheries, poultry, livestock, horticulture and other bio-physical

and socio-economic environment of the farmer to make it more profitable. There is a need to improve the overall agricultural scenario with the multiple goals of growth, equity, employment and efficiency.

- ii) Institutional reforms should be made to avoid further fragmentation of land holdings.
- iii) The challenges meeting the food requirements of an ever increasing population can only be met by practicing sustainable agriculture, protecting natural resources from being degraded and polluted and using production technologies that conserve and enhance the natural resource base of crops.
- iv) A long run solution for food insecurity can be possible only by research and development in agriculture.
- v) The present system of PDS should be targeted to cater to the socially and economically backward sections of the economy.

The most important challenge is to increase the energy intake of the bottom 30 per cent of the population and at the same time facilitate diet diversification to meet micronutrient deficiency. The food gap can be met from the existing foodgrain stocks in the medium term and by increasing purchasing power in the long run through increasing job opportunities. There is also a need to improve the efficiency of the various food schemes initiated by the government and make it more viable and free of corruption and urban bias.



# Issues And Perspectives of Food Security in India

Kabita Kumari Sahu\*

## Introduction

The concept of food insecurity was first used in the early 1990's for describing, researching and designing policies to address poverty-related food access problems at the household level in the United States. Though food insecurity is an issue which is present at both individual household level and at the community level, it is now a well established fact that food security problem is more critical from the perspective of community. Food security is a concept that has evolved, developed, and diversified considerably in late nineties and has undergone considerable changes in recent years. Food availability and stability were considered good measures of food security till the seventies and the achievement of self-sufficiency was accorded high priority in the food policies of developing countries. Though India was successful in achieving self-sufficiency by increasing its food grain production and also improved its capacity to cope with year-to-year fluctuations in food production, it could not solve the problem of chronic household food insecurity. This necessitated a change in approach and as a result, food energy intake at household level is now given prominence in assessing food security. Engulfed within a vortex of population growth, economic instability and climate change, food security has become an urgent challenge for national and global governance. Food security means availability, accessibility and affordability of food to all people at all times. The poor households are more vulnerable to food insecurity whenever there is a problem of production or distribution of food crops. Food security depends on the Public Distribution System (PDS) and government vigilance and action at times, when this security is threatened. Food security means something more than getting two square meals. In the 1970s, food security was understood as the "availability at all times of adequate supply of basic foodstuffs". Amartya Sen added

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a new dimension to food security and emphasized the "access" to food through what he called 'entitlements' — a combination of what one can produce, exchange in the market along with state or other socially provided supplies. Accordingly, there has been a substantial shift in the understanding of food security. The 1995 World Food Summit declared, "Food security at the individual, household, regional, national and global levels exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 1996). The declaration further recognizes that "poverty eradication is essential to improve access to food".

World Bank defines food security as access by all people at all times to sufficient food for active and healthy life. According to M S Swaminathan sustainable food security involves physical, economic and social access to balanced diet and clean drinking water to every child, women and man in the country. There must be three types of access to food such as a) physical access, b) economic access and c) social access. Physical access refers to proper match between demand and supply for which production and productivity of major crops must increase. Economic access refers to a need for adequate purchasing power in the hands of the people which can be achieved through work and income security. Social access involves attention to the gender, class and caste dimensions of food security.

### **Types of food security**

A distinction is made between transient and chronic food security in policy framework. Transitory food insecurity is associated with the risks related to either access or the availability of food during the off-season, drought and inflationary years and so forth. Policies such as those relating to price stabilization, credit, crop-insurance and temporary employment creation are initiated for stabilizing the consumption of the vulnerable groups. In contrast, the problem of chronic food insecurity is primarily associated with poverty and arises due to continuously inadequate diet. The strategy to overcome this problem includes intervention (agricultural production programmes, infrastructure, human resource development, etc.) to raise the purchasing power of the poor through the endowments of land and non-land assets and by generating employment opportunities, as well as long-term growth mediated interventions to improve food availability and incomes of the poor. India



is one of the few countries which have experimented with a broad spectrum of programmes for improving food security. It has already made substantial progress in terms of overcoming transient food insecurity by giving priority to self-sufficiency in food grains and through procurement and public distribution of food grains, employment programmes, etc. However, despite a significant reduction in the incidence of poverty chronic food insecurity persists in a large proportion of India's population. At the national level, we have solved the problem of food security which is reflected in mounting buffer stocks. Yet, there are millions of food insecure and undernourished people in India. The limitation is not food supply, but food distribution. Careful consideration of food security requires moving beyond food availability and recognizing the low incomes of the poor. It is also important to recognize the choices that households and regions face, including exploitation of natural resources when incomes fall short. Substantial human resources are wasted due to malnutrition related diseases. Vision 2020 should aim at complete eradication of food insecurity, both chronic and transient. Productivity generated by technological innovation particularly in less endowed areas and vibrant rural non-farm sector hold the key to eradicate food insecurity.

### **Causes of Food Crisis**

There are multiple causes for food crisis in India. Some of the important causes are as follows :

- Lack of relevant agricultural research and extension activities by public bodies.
- Overuse of chemical inputs that have long run implications for both safety and productivity.
- Explosive population growth and urbanization.
- A substantial increase in fertilizer prices.
- A huge increase in oil prices.
- Partial failure of the green revolution.
- Excessive use of ground water in cultivation.
- Ecological implication of both pollution and climate change, including desertification and loss of cultivable land.
- Poor weather conditions in many parts of the country.

### Global Scenario of food security

The following facts are notable with regard to global scenario of food security:

- a) A large number of people in the world are insecure in food, particularly in Africa and South Asia. About 84 crore people are malnourished and chronically food insecure which is 30 per cent of world's population.
- b) About 2.8 million children and 3 lakh women die annually in developing countries due to food insecurity.
- c) Even if food production increased to 2.3 billion tonnes in 2007 in the world, price rise and food inflation is the main cause of global food crisis.
- d) According to FAO, 207 countries in the world are importing wheat and 170 countries are importing rice from international market due to food shortage at domestic level.
- e) Rapid exploitation of natural resources and six fold rise in population during 1830-2005(6.5 billion), and increase in per capita income led to more consumption due to better purchasing power have negative impact on food security.
- f) A serious global concern today is that major climatic changes are a great threat to human safety and food security. Climate change as a result of global warming will significantly impact on conditions of food supply and food security. There is a perception among many that global climate change is simply global warming. In fact, global climate change is an integrated system of several atmospheric phenomena and their products. Any change in the climate is expected to increase the number of days without precipitation during the plant growing season (drought). Increase in air temperature can accelerate crop growth and consequently shorten the growth period. In cereal crops for example, such changes can lead to poor vernalisation (e.g., hastened flowering) and reduced yield.
- g) On 3<sup>rd</sup> June, 2008, at FAO Summit in Rome, UN Secretary General Ban Ki-Moon highlighted that by 2030 AD, world food production needs to be increased by 50 per cent to meet growing food demand. He also said that food export restrictions imposed by some countries leads to distortion of market prices.

### **National Scenario of food security**

India has a huge population (57.84 crores in 2010, FAO Report) depending on agriculture but its contribution to Gross Domestic Product has been declining over the years due to less public investment and underemployment. The employment in agriculture being 60 per cent of the economically active population in 2000 A.D. will decline to 52 per cent in 2010 A.D. and further to 50 per cent in 2020 A.D. Thus, FAO projects that it will have implications on food security in India. The total food production of small and marginal farmers is not sufficient for the family consumption for a year but they sell a part of it in the market to meet the day to day requirement which is called a distress sale. The important aspects of food security in India are as follows-

- i) The food accessibility at the household level is reflected by the purchasing power and economic access of people. In India 25 per cent people are undernourished and insecure in food.
- ii) The food consumption pattern is another aspect of food security. There is a visible discrimination for food against the females, old-aged, widow and disabled.
- iii) Food absorption is another aspect of food security at individual level. A holistic nourishment and sound health requires safe drinking water and hygiene environment along with staple diet. Unfortunately 19 per cent of Indians do not have access to safe drinking water and 69 per cent do not have access to sanitation services.

### **Issues of Food Security**

In fact, the real issue today is not the availability of food but of its affordability by the poor. The issue is also of food and nutrition security based on the access to a diet of high nutritional quality. From this point of view, the modern concept of food security has become rather broad-based, encompassing livelihood security and poverty alleviation as means to ensure economic capacity to buy food. Adequate nutrition has also assumed significance in India because the problem of malnourishment has been more acute than stark hunger which has more or less been overcome. This modern concept also requires access to potable drinking water because food security is meaningless without an adequate health cover. There are different planes at which food security needs to exist-right from individual level food security to household, social, regional

and national level food security. Again within the household food security, there are issues relating to gender, children, old and infirm. Females and the non-working old people, often, tend to be discriminated against in food consumption at the household level. Thus Indian policy planners have treated food security as a national priority and therefore an integral part of the food policy right from the beginning. The strategy to achieve this has been three pronged: consistent increase in production, maintenance of food supply line, and ensuring access to food for all, especially the poor and the underprivileged.

### **WTO and Food Security in India**

The Indian agricultural scene has witnessed changes following the economic reforms in the nineties as well as with the establishment of World Trade Organisation (WTO) in the mid-nineties. While the world trading environment has become more liberal, transparent and rule bound than before, it would have become even more favourable had the developed countries adhered strictly to the Uruguay Round agreement and permitted better access to imports from developing countries. India seems to be a victim of thirty years of agricultural policy with an exclusive focus on spreading HYV seed fertilizer technology in a few potential regions for achieving food self sufficiency. Consequent to the adoption of this strategy India achieved self-sufficiency in food grains by the mid-seventies and is currently facing the problem of disposing of huge food grains stocks. It is observed that self-sufficiency in food grains is partly due to the weak purchasing power of the poor. As a remedial measure it is suggested that India should diversify its agriculture and get a foothold in the world food market. The diversified and accelerated agricultural growth would enhance the food security by improving the purchasing power of the poor. However, even after the establishment of WTO, the agricultural trade did not improve much during the transition period since agricultural prices have sharply declined in the world markets and there has been no reduction in the degree of protection by the developed countries. The protectionist measures are coming in the form of non-tariff measures and preventing the entry of agricultural commodities from developing countries by resorting to anti-dumping restrictions in one form or another. Some concessions under the Green and Blue Boxes do not favour developing countries. Some of these concerns should figure in future negotiations. The deceleration in the agricultural growth during the nineties is more

due to internal factors such as decline in public investment in agriculture (irrigation and research) slow down in the growth in fertilizer consumption slow rise in the expenditure on agricultural research and so on. It is argued that if India is to benefit from the emerging opportunities opened up by liberalized agricultural trade, major reforms have to be undertaken on the domestic front. It is recognized that cereal prices in the world market which have declined during the nineties are unlikely to rise on account of reforms in the developed countries. Fresh challenges also have come from the sharp fall in the international price of some commercial crops. For instance, Kerala's agricultural economy has been severely affected by a dramatic drop in world prices which has led to greater transient poverty among its farming community. As domestic food economy gets integrated with the world market, it will experience price volatility. India should depend on cost-reducing technology through domestic reforms, promote agricultural diversification and put pressure on the developed countries to open up their markets for value added agricultural products.

#### **Food Management System**

The food security system is not confined to mere food sufficiency but buffer stocking and distribution as well. Hence, an elaborate food management system has evolved over the years. There are three elements of food management: firstly, procurement of food grains at the minimum but remunerative and support prices can serve as an incentive for boosting production; secondly, storage of food grains are official expenses in the go-downs of Food Corporation of India, thirdly, distribution of food grains through a massive country-wide public distribution system (PDS) run by the state governments with financial support by the center. Besides, the stored food grains are often used for poverty alleviation and employment generation purposes to improve the economic access of food for the poor. The stored grains are also used during the periods of natural disasters like drought, flood and other calamities. Thus, the buffer stock is not only a measure of food security but also an instrument of stability in the market prices of food grains.

#### **Food Stamp Programme**

The Tenth Plan (2002-07) Documents point out that the level of government subsidies granted on food rose from Rs.24.5bn to Rs.212bn between 1990/91 and 2002/03. Most of the increase has been spent on



administration rather than on productive purposes. To check mismanagement of funds, while guaranteeing food security, the Tenth Plan Documents ask the government to explore the effectiveness of the FSP and proposed that each eligible household should be given documents specifying the number of household members, their age and entitlement, which would determine the number of stamps given to them per month. The target households would then collect stamps each month from prescribed distribution centers and use them at the retail outlets to buy rice and wheat, and the state government would subsequently reimburse the retailers. However, Swaminathan argued that this proposal would be over-targeted and exclude a significant proportion of eligible households. The experience of other less developed countries clearly shows that if the objective is to achieve food security for the people, a targeted food stamp programme is a dangerous path to tread. Such a scheme will exclude a large number of needy persons from the food distribution system, erode the value of the subsidy to those who receive benefits and undermine the existing network of fair price shops.

#### **Policy and Suggestions**

The challenge to food security comes mainly from the slow growth of purchasing power of the people in the rain-fed eco-systems. Efforts must be made to help them by developing drought resistant seeds and cost-effective dry-land farming techniques. In addition, rain water harvesting techniques, moisture conservation, inter-cropping are imperative to stabilize and improve the production in the dry-land areas. It is also essential to explore the possibilities for cost-effective expansion of irrigation. Appropriate pricing of water, electricity and fertilizer and rationalization of minimum support prices would augment resources available for investment in irrigation, rural infrastructure and prevention of soil degradation.

#### **Conclusion**

Food security is the imperative prerequisite for the economic and social stability of any nation and it is a major issue for an overpopulated country like India. The scarcity of food and food insecurity can cause considerable distortions in the socio-economic and political conditions of the country. The Right to Food is nowadays considered as a fundamental human right and internationally related to the government's responsibility to provide social protection and promote household



economic security. In order to enhance ownership of this right, one of our main challenges will be to carefully examine the coping strategies of poor families and their children to overcome food insecurity. The roots of food insecurity which have been highlighted by analysts are largely ignored by policy makers in most countries. So, policies and plans must be geared to ensure that people must have easy access and affordability to food for active health. While India achieved success in combating transient food insecurity caused by droughts or floods, it miserably failed to make much dent on chronic food insecurity as reflected in the low energy intake and high incidences of malnutrition. The overall improvement in nutritional status has also been very slow. There is chronic under-nourishment in about half of the population, particularly among the vulnerable groups of children, women and elderly from the lower half of the expenditure class. Curiously, the proportion of consumption expenditure spent on food is slowly going down even in the households with chronic under-nourishment. The mounting food stocks miserably failed to banish mass undernourishment. While the current growth rate would significantly reduce income poverty, the chronic food insecurity is likely to persist. Moreover, with the recent shift to a more market-oriented and outward-looking macro-policies, the poor are likely to be exposed to the resultant risk of market uncertainties. As a result several types of programmes need to be targeted exclusively to the poor aimed to (i) eliminating transient food insecurity on account of inadequate access to food in periods of crises, (ii) reducing chronic food insecurity by enhancing their capabilities to participate in the growth process, (iii) reducing malnutrition among pre-school children and women and (iv) improving basic services (safe drinking water, health care etc.) to the poor. The cropping pattern should be diversified through increase in farmers' income and contribution to economic growth. Procurement programmes and stocking of farm produce should not just be a mechanical process but it must be managed properly. In order to save the farmers of this country and to ensure sustainable food security with adequate, safe, diverse, nutritious, culturally appropriate foods for all Indians, there is a requirement of a cogent and robust food policy for India. There is an urgent need of a flexible and holistic approach towards food production which takes into account the capabilities of the available production resources including natural resources. To eliminate the problem of hunger, the political framework of democracy and an uncensored press can make a

substantial contribution, but it also calls for activism of the public. Above all, agriculture must be given prime importance and must be governed by farmers, rather than institutions that are profit-oriented, in order for food security to be ensured. Since adequate food grains are always available in government go-downs with increasing cost of storage, it is necessary to provide minimum food grains to both APL and BPL families. It is necessary to ensure food sufficiency, social equity and sustainability of agriculture in an integrated way so that there is an inter-generational equity for our better future.



## **Issues And Dimensions of Food Security in India**

**Dr. Ranjita Kumari Mohanty\***

The concept of food security implies physical and economic accessibility of food that meets peoples' dietary needs as well as food preferences. The World Food Summit 1996 defined food security as existing "When all people, at all times have physical and economic access to sufficient safe and nutritious food to maintain a healthy and active life." A household is considered to be food secured when its occupants do not live in hunger or fear of starvation. Food security is built on three pillars.

- i) **Food Availability :** Sufficient quantity of food is available on a consistent basis and is affected by climate, disasters, agricultural production, war, population, industrial unrest, trade etc.
- ii) **Food Accessibility :** Having sufficient resources or ability to acquire and obtain appropriate foods for nutritious diet. It means that the food is affordable without any difficulty in obtaining sufficient safe and nutritious food.
- iii) **Food is Utilised :** At the household level sufficient and varied food needs to be prepared safely so that people can grow and develop normally, meet their energy needs and avoid disease. It implies appropriate food use, based on knowledge and basic nutrition and care as well as adequate water and sanitation.

A hungry man has the inability to eat sufficient food in terms of calories and nutrients to lead an active and healthy life. According to Prof. A.K. Sen, hunger is not due to lack of supply of food but more due to the inability of the people to buy food. He argues that the ability to acquire food of a person is affected by his endowment (land, labour, power) or exchange based acquirement (employment, wages, food prices, price of goods and services sold by the person and social security measures). Food security implies not only adequate supply of food at

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the aggregate level but also enough purchasing capacity. A hungry mother will give birth to a underweight and malnutrient baby.

## **DIMENSIONS OF FOOD SECURITY**

The problem of food security has two to important dimensions

1. Quantitative Aspect
2. Qualitative Aspect

1. **Quantitative Aspect** : It focuses on the food policy to increase the supply of food to achieve self sufficiency in food. Use of scientific and technological inputs for the Green Revolution to enhance agricultural productivity and sustainable measures of agricultural development will enable to overcome the food grains shortage and build up large stocks of food grains to counter any scarcity conditions. Improved capacity will cope with year to year fluctuations in food production by building up large buffer stocks through the Food Corporation of India (FCI) and supplying these stocks to the people through PDS . Buffer stock operations go a long way to overcome the problem of food crisis. With the growth of population, there is a shift of food habits away from coarse grains with the rise in incomes which calls for augmenting the production of rice and wheat on intensive and extensive basis. Imports of vegetable oils and pulses in large quantities overcome the food shortage at the domestic level in its quantitative aspect.

2. **Qualitative Aspect** : The qualitative aspect of the problem reflects the nutritional status of food since food insecurity leads to malnourishment or undernourishment. According to Global Hunger Index 2007, India ranks an abysmal 96 in a group of 119 developing countries. Only Bangladesh has the worse levels of hunger than India in South Asia. The following features reflect the distressing situation of food security in India in its qualitative aspects :-

- According to the World Food Programme nearly 50 per cent of the world's hungry live in India.
- About 35 per cent of India population or over 350 million is food insecure consuming less than 80 per cent of the minimum energy requirement.

- Nearly 9 out of 10 pregnant women between 15-49 years of age are malnourished and anemic.
- Anemia in pregnant women causes 20 per cent of infant mortality.
- Malnutrition accounts for 50 per cent of under-five deaths.
- India contributed 21.6 per cent of total deaths in the world below 5 years group.
- About one-third of under weight children under 5 live in India (54.6 million out of 156 million).
- The states like Madhya Pradesh, Bihar, Jharkhand, Orissa, Chhatisgarh, Meghalaya and Uttar Pradesh are the worst sufferers in the nutritional aspects.
- In India 77 per cent of children are suffering from anaemia and 37 per cent have stunted growth.
- In India 45 per cent of the children are malnourished compared to 35 per cent in the least developed countries.

Various causes of food insecurity are poverty, insufficient production, natural disasters and conflicts, population growth and urbanization, trade barriers on import and export and food inflation.

### **INITIATIVES ON FOOD SECURITY**

The Govt. has initiated several direct and indirect measures to ensure food security to its population. These measures can be categorized as

#### **1. Direct Measures**

- Food Subsidy Measures
- Entitlement Feeding Programme

#### **2. Indirect Measures**

- Employment Programme
- Social Safety Net Schemes

#### **Food Subsidy Measures**

These are carried on through the network of fair price shops through the Public Distribution System. The PDS, later changed as targeted

Public Distribution System (TPDS), covers two important Programmes named Antodaya Anna Yojana (AAY) and Annapoorna Yojana (AY) to meet the food need of the poorest of the poor. Under the AAY food grain was supplied with highly subsidized rate of Rs.2/- per kg. of wheat and Rs.3/- per kg. of rice.

#### **Entitlement Feeding Programme**

The two important programmes covered under the Entitlement Feeding programme are the free meal under ICDS launched in 1975 and mid-day meal scheme 2004 previously known as the National Programme on Nutritional Support to Primary Education.

#### **Employment Programmes**

The four key Employment Programmes launched by the Government of India are Food for Work Programme (FWP), Jawahar Rozgar Yojana (JRY), Sampoorna Grameen Rozgar Yojana (SGRY) and Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS). While under the FWP and SGRY food grain was supplied along with the wage to the labourers engaged in those programmes, under the MNREGS 100 days wage employment is provided to one member of the family in a calendar year.

#### **Social Safety Net Scheme**

The two schemes launched to ensure food safety are (i) National Old Age Pension Scheme (NOAPS) providing pension to people above 65 (ii) National Family Benefit Scheme (NFBS) providing lump sum family benefit of Rs.10,000/- to the bereaved household in case of death of the primary bread winner.

### **FLAWS IN THE FOOD SECURITY SYSTEM**

Following operational leakages and managerial deficiencies are noted in implementing various measures to ensure food security.

#### **1. Limited Benefits To Poor From PDS**

The TPDS has failed on many counts. The rural poor have not benefited much from the PDS. The welfare gains from PDS and also its effect on poverty and nutrition are negligible. Many empirical studies have shown that there is severe bias in the inter-regional distribution of



the PDS supplies. States with incidence of poverty like Odisha, Bihar and Madhya Pradesh received a lower share. Even the TPDS introduced in 1997 has not made a significant impact on the access of food, since delivery system in the poorer states is weak. The TPDS has the conceptual problem in using official poverty line as estimated by the Planning Commission on the basis of income and ignoring nutritional status of food. The problem both at the conceptual level and operational level in identifying households below the poverty line and chances of misidentification and exclusion of the vulnerable population from the TPDS are very high.

## **2. Late and Irregular Arrival of Grains in Fair Price Shops**

PDS commodities arrive late with irregularity, at fair price shops. There is a problem of economic access in the sense that the poorest people do not have cash ready at the moments stocks arrive.

## **3. Leakages from the TPDS**

There is a problem of leakages from the system in the form of losses in transport, storage and diversion into the open market. In the post-harvest period sometimes shop keepers make bogus entries in the ration cards or use fake cards which is more prominent and frequent in tribal areas. It has failed to reach the genuinely needy and failed to provide them adequate food at a reasonable price.

## **4. Increase Burden of Food Subsidy**

The low prices to the BPL families have pushed up the burden of subsidy. Introduction of Antyodaya Anna Yojana in 2001 which envisages the supply of wheat and rice at Rs.2/- per kg. and Rs.3/- per kg. respectively to the poorest 2.5 crore BPL families has pushed up the food subsidy from Rs.31,546/- crore in 2007-08 to Rs.50,000/- crore in 2008-09.

## **5. Problems of implementation and Accountability of ICDS**

The most serious problem of Integrated Child Development Scheme (ICDS) relates to implementation and accountability. There is a lack of proper supervision and irregular payment to workers and helpers which act as a demotivating factor.

## **POLICY IMPLICATIONS**

The following policy measures are suggested to have sustained food security.

### **1. Emphasis on Wage Employment Programmes**

It is seen that rural poor and hungry people have not received substantial benefits from the self-employment programmes because of poor entrepreneurial ability and poor quality of economic assets which are not sustainable. Wage Employment Programmes like MNRGS should be implemented effectively to generate more purchasing power in the hands of the rural poor.

### **2. Strengthening the Targeted Public Distribution System (TPDS)**

The Targeted Public distribution System (TPDS) adopted by the Government of India since 1997 aims at providing food grains to people below the poverty line at highly subsidized prices which is limited to the BPL families. In taking the eligibility for BPL not only the poverty line estimate of the Planning Commission based on income should be taken into account but also the nutritional status of food of the vulnerable section should be incorporated. There should be proper identification of the vulnerable poor.

### **3. Education and Training on Food Preservation**

There is an imperative need for applied and adoptive research and development in post-harvest processing, preservation and value addition of cereal grains, pulses, millets and oil seeds, crops of wet land, spices and other important crops. Education and training need to be imparted for the establishment and promotion of food processing industries.

### **4. Sustainable Agriculture and Improving Food Production**

Increase in the amount of food available is necessary to feed the growing population. Food production can be increased by improving irrigation facilities, better farm practices, training & land reform to provide secure access to land to more people, provision of low cost finance to farmers and a new approach to Green Revolution. The improved techniques like appropriate planning, rain water management, watershed management and adaptation to climate change are new

dimensions of sustainable agriculture. Sustainable agriculture requires a 'region specific', 'area specific' and 'crop specific' approach in dryland areas with rain fed agriculture.

### **5. Inclusive Agriculture**

Inclusive agriculture focuses on promotion of agriculture through special strategy to provide benefits to small and marginal farmers and greater access of land to the impoverished households, greater accessibility of credit from banks and providing incentives to farmers, inputs of subsidized prices and extension and training to farmers on new technological practices. Reduction of poverty and hunger requires a productivity revolution in small holding agriculture. Agricultural productivity determines the price of food and wage costs. Hence, there is a need for improving productivity, profitability and sustainability of small farmers holding.

### **6. Recognizing the Role of Women**

Gender equality is a basic prerequisite for the eradication of poverty and hunger. Changes in the access to food can be made more effective by use of women's role in agricultural production and food preparation. They should be trained in lines of food safety and prevention of illness.

### **7. Promoting Rural Development Measures**

It includes not only rural development Programmes and assets to the poor but also sustainable agriculture, fishery and forestry and management of natural resources.

### **8. Disaster Management**

There is another priority need for preparing for disasters and emergencies to meet transitory and emergency food requirements in ways that encourage recovery and rehabilitation.

### **9. State Intervention in Food grains**

The Government should intervene so as to ensure stability in food grains, fixation of remunerative procurement price to the farmers, improving transport system and storage operation and effective implementation of the Public Distribution System.

## CONCLUSION

Providing food security to every individual should be the prime concern of every development policy. The goal of food security can be secured by an integrated management of production and distribution, improving administrative ethics, price stability and resorting to liberalization on food import. It is not only the availability of quantity but also the accessibility to quality and nutritional status that will realize the welfare gains for a hunger free economy.



Economic development is normally accompanied by improvements in a country's food supply and gradual elimination of dietary deficiencies. During the process of economic development of India, the level of food grain production has reached its peak level of 211.88 million tonnes in 2002-03 from the level of only 50.8 million tonnes in 1952. In such a context, an attempt has been made in this paper to examine the food security system in India.

The Food Security System (FSS) like any other system, has to be continually adjusted to changes in the economy to remain effective and useful. (Rao, 1997). Improvements in food security system and the

## **Food Security in India - Challenges Ahead**

**Dr. Kishor Hari Badatya\***

Food security refers to the availability of food and one's access to it. A household is considered food secure when its members do not live in hunger or fear of starvation. In the world, around 852 million people are chronically hungry due to extreme poverty, while up to 2 billion people lack food security intermittently due to varying degrees of poverty (FAO, 2003). In India, 30 million people have been added to the ranks of the hungry since the mid-1990s and 46 per cent children are underweight. Mostly families with the financial resources to escape poverty rarely suffer from chronic hunger, while poor families not only suffer the most from chronic hunger but are also the segment of the population most at risk during food shortages and famines. As per the United Nation's Food and Agriculture Organisation, food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food strategies must be directed at ensuring food security for all and also must achieve the consumption of adequate, quantitative, safe and good quality foods that together make a healthy diet.

Economic development is normally accompanied by improvements in a country's food supply and gradual elimination of dietary deficiencies, thus improving the overall nutritional status of the country's population. During the process of economic development of India, the level of food grains production has reached its peak level of 233.88 million tonnes in 2008-09 from the level of only 50.8 million tonnes in 1951. In such a context, an attempt has been made in this paper to examine the food security system in India.

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development policies affecting agriculture and rural poor determine the success in reaching food to the poor.

## **FOOD SECURITY SYSTEM IN INDIA**

Food Security System in India can be composed of three components namely,

1. Food Production
2. Food Management
3. Food Marketing

### **Food Production**

The most important component of FSS is food production. Since independence, various measures have been adopted through Five Year Plans followed by land reforms and other technological measures to increase food production. The agricultural policies leading to New Agricultural Strategy have led to multifold increase in food grains production.

Table-I presents the production of food grains including rice, wheat, coarse cereals, pulses and on the whole the total foodgrains during the planning process of India. It is observed that the production level of foodgrains reached its peak level of 233.88 million tonnes in 2008-09 indicating a more than four-fold rise from merely a level of 50.8 million tonnes in 1950-51. In case of rice production there is nearly five-fold increase whereas in case of wheat production there is an increase of more than twelve times during the period which is highly significant. But in case of cereals on the whole, the rise in production is five-fold from 42.4 million tonnes in 1950-51 to 219.2 million tonnes in 2008-09. The performance in case of coarse cereals covering jawar, bajra, maize etc. has been found to be poor as it has increased up to only 39.4 million tonnes from 15.4 million tonnes in 1950-51. The level of production of pulses presents a grim picture as the peak level of pulses production in 2008-09 was 14.7 million tonnes against 8.4 million tonnes in 1950-51. Among all the crops, the performance in case of pulses is found to be highly insignificant. Of course, the increase in foodgrains production on the whole seems to be satisfactory.

But the peculiarity which can be noticed is that the compound growth rates of production of the foodgrain items like rice, wheat, coarse



cereals and pulses have been found to be higher during pre-green revolution period (1949-50 to 1964-65) than that of the post-green revolution period (1967-68 to 2008-09) although all the crops have maintained increasing trend over the whole period (Table-II).

### **Food Management**

Food management is another component of FSS and its objectives are procurement of foodgrains from farmers at remunerative prices, distribution of foodgrains to consumers particularly the vulnerable sections of society at affordable prices and maintenance of buffer stocks for food security and price stability. The Food Corporation of India (FCI) which was set up in 1965 acts as a nodal agency which undertakes procurement, distribution and storage of foodgrains.

The overall procurement of rice and wheat together was 22.84 million tonnes in 1990-91, which reached the level of 41.91 million tonnes in 2000-01. In 2008-09, the level of procurement reached a peak level of 55.5 million tonnes. It has resulted in comfortable food stock availability to meet Targeted Public Distribution System (TPDS) needs.

Decentralised Procurement Scheme has been introduced in 1997. A number of states have opted for its implementation. Under this scheme foodgrains are procured and distributed by State Governments themselves. The difference between the economic cost fixed for the state and central issue prices, passed on to state Government as subsidy. This scheme has the objective of covering more farmers under Minimum Support Price (MSP) operations improving efficiency of PDS, providing foodgrain varieties more suited to local tastes and reducing transportation costs.

Government of India introduced buffer stock of foodgrains to ensure regularity and certainty in food supply throughout the country. Government started buffer stock of 5 million tonnes of foodgrains in 1973-74. But its level reached 17.0 million tonnes in 1990-91. In year 2009-10 it has reached the level of 47.4 million tonnes comprising 24.3 million tonnes of rice and 23.1 million tonnes of wheat.

Offtake of foodgrains is primarily under the TPDS and other welfare schemes of Government of India. Offtake amount has been increasing from 14.9 million tonnes in 1990-91 to 34.8 million tonnes in 2008-09 comprising 22.2 million tonnes of rice and 12.6 million tonnes of wheat (Table-III).

Besides this, allocation of foodgrains for BPL and AAY under TPDS are made at the rate of 35 kg per month for all accepted 6.52 crores of families in the country. The total BPL and AAY allocations made during 2009-10 were 27.67 million tonnes comprising 18.1 million tonnes of rice and 9.57 million tonnes of wheat. Even allocations are made under the APL category depending upon the availability of stocks of foodgrains. During 2009-10, 19.72 million tonnes of foodgrains have been allocated to states / union territories.

Thus food management through procurement and PDS helps in supplying essential commodities at a subsidized price to poor and vulnerable sections of the society to ensure food security.

### **Food Marketing**

A network of regulated markets exists in the country. It has been promoted to provide the opportunity of Organised Marketing of Agricultural Commodities. Most of the states / union territories have enacted legislations (Agricultural Produce Marketing Act) to provide for regulation of agricultural produce markets. There are 7139 regulated markets in the country as on March 2009. Alongwith these regulated markets, the country also possesses 20868 numbers of rural periodical markets. The most important advantage of the regulated markets is that they help in mitigating the market handicaps of producers / sellers at the wholesale assembling level. But rural periodical markets in general and tribal markets in particular have remained outside the ambit of APMC act.

Open Market Sale Scheme has been started since 2008 to release wheat into open market so as to check inflationary trends in the food economy. These releases have been made through allocations to states / union territories for distribution to retail consumers and sale to bulk consumers by the FCI through open tenders. It has helped in stabilizing wholesale prices of wheat.

All the measures relating to food production, food management and food marketing have been the source of strengthening FSS in India. But within this system, the net availability of foodgrains includes net production, net imports and change in government stocks. The strength of FSS can be noticed from the level of per capita per day net availability of the food grains in the country. It is because of the fact that it can

indicate how much of food grains have been increased from 51.8 million tonnes in 1950-51 to its peak level of 189.5 million tonnes in 2002. Since then, it has been fluctuating to reach a level of 174.6 million tonnes in 2008. The similar trend is found in per capita per day net availability of foodgrains in India. It can be seen from Table-IV that the per capita per day net availability of foodgrains was 394.9 grams in 1951, which reached its highest level of 510.1 grams in 1991. But in 2001, it declined to 416.2 grams which is found to be the lowest figure in the recent decade. Of course it has again increased to a level of 436 grams in 2008.

According to the recommendations of the National Institute of Nutrition, Hyderabad to achieve a minimum energy requirement of 2738 calories per day per head, a balanced diet containing of at least 460 grams of cereals apart from pulses, vegetables, fruits and milk should be consumed (Gautam, 2007). Accordingly the per capita per head requirement of cereals will be around 165.6 kg. per year. But per capita per day net availability of cereals has not reached this level in the whole period starting from 1951 to 2008 except only in 1991 in which it has reached the level of 468.2 grams. In 2002, it reached 458.2 grams which is much closer than the required level of 460 grams. But since then, it has been gradually reduced to 374.6 grams in 2008. Thus it has been a cause of concern as it indicates the incapacity of the FSS to provide the required level of cereals for fulfilling the energy requirements of the population in India.

As per the recommendations of FAO, per capita per day requirement of pulses is 80 grams. In none of the years in the whole period from 1951 to 2008, the per capita per day net availability of pulses has reached this required level. It is also stated that if the protein nutrition derived from other protein sources such as milk, egg, fish, meat etc. is taken into consideration, then at least per capita per day requirement of 50 grams should be met from pulses themselves. As per the records of Economic Survey, Government of India 2009-10, it can be found that this level of 50 grams of per capita per day availability of pulses has been reached in some of the years in between 1951 to 1976. But since then until 2008, it has been fluctuating and also lie at a low level and in 2003, it reached its lowest level at 29.1 grams. It shows that pulses production in our country has not been significant over the whole period since independence. The heavy rise in prices of pulses

due to short supply reduces the protein consumption of poor people. For them, buying pulses for daily intake becomes a far cry.

Thus the per capita per day availability of foodgrains comprising cereals and pulses is not found to be satisfactory in India. Again per capita per day availability of foodgrains has been computed by dividing the net availability of foodgrains by the population. When this average is found to be low, it is natural that a large share of poor and vulnerable section of the society is incapable of fulfilling recommended per capita per day requirement of cereals, pulses and other nutrients. It might be a cause of malnutrition and undernourishment in case of poorer sections of the community in India.

### **Challenges Ahead**

Good monsoon between 2005-06 and 2008-09 and the efforts of our farmers have helped in raising the foodgrains production to a record level of 233.88 million tonnes in 2008-09. But rising food prices caused by expectations of shortfall in food production have brought the issues of food security, food stock management and need for improving food production and productivity to the forefront of national strategy.

Although foodgrains production has reached its record level in 2008-09 and improvements in yield per hectare of foodgrains have been observed in recent years, it is not significant to cater to the needs of the rising population. It is because of the fact that the demand for foodgrains is always income-elastic. Therefore there is an urgent need to focus on research as well as better agricultural practices to ensure further rise in productivity of foodgrains in India.

More particularly, in case of pulses a sizeable proportion of its demand is met through imports. Again the scope of importing pulses is limited as limited number of countries produce it. It enhances the supply-demand gap, which leads to fluctuations of domestic prices as per the availability and the price level in international market.

PDS plays an important role in strengthening FSS as it always helps in reaching food, particularly rice and wheat, to those populations which are food insecure and lack ability to purchase from the common market. Hence there is a need to create a universal PDS with uniform prices affordable to the poor and the allocation should be based on the consumption units in the household (Athreya, 2009). Then only, it can help a lot in strengthening FSS in India.

**TABLE-I****Production of Foodgrains in India**

(in million tonnes)

Year	Rice	Wheat	Coarse Cereals	Total Cereals	Pulses	Total Foodgrains
1950-51	20.6	6.5	1.4	42.4	8.4	50.8
1960-61	34.6	11.0	23.7	69.3	12.7	82.0
1970-71	42.2	23.8	30.6	96.6	11.8	108.4
1980-81	53.8	36.3	28.9	119.0	10.6	129.6
1990-91	74.3	55.1	32.7	162.1	14.3	176.4
2000-01	85.0	69.7	31.0	185.7	11.0	196.8
2005-06	91.8	69.4	34.0	195.2	13.4	208.6
2008-09	99.2	80.6	39.4	219.2	14.7	233.9

Source : Economic Survey, Govt. of India, 2009-10

**TABLE-II****Compound Growth Rates of Production of Foodgrains**

(as % per annum with base T.E. 1981-82)

Items	1949-50 to 1964-65	1967-68 to 2008-09
Rice	3.50	2.46
Wheat	3.98	3.69
Coarse Cereals	2.25	0.67
Pulses	1.41	0.75

Source: Economic Survey, Govt. of India, 2009-10.

**TABLE-III****Procurement And Offtake of Rice And Wheat**

(million tonnes)

Year	Procurement		Off-take		Stock	
	Rice	Wheat	Rice	Wheat	Rice	Wheat
1990-91	11.74	11.07	7.87	7.08	11.20	5.80
1995-96	9.95	12.33	9.46	5.29	15.40	13.10
2000-01	21.28	20.63	7.97	4.07	20.70	25.00
2005-06	26.7	14.80	19.2	12.2	6.18	12.64
2008-09	32.8	22.70	22.2	12.6	18.20	17.60
2009-10	22.9	25.40	—	—	24.30	23.10

Source : Economic Survey, Govt. of India, 2009-10.

**TABLE-IV****Net Availability of Foodgrains**

Year	Net Availability			Per Capita Per Day Net Availability		
	Cereals (million tonnes)	Pulses (million tonnes)	Total Foodgrains (million tonnes)	Cereals (grams)	Pulses (grams)	Total Foodgrains (grams)
1951	44.3	8.0	51.8	334.2	60.7	394.9
1961	64.6	11.1	75.7	399.7	69.0	468.7
1971	84.0	10.3	94.3	417.6	51.2	468.8
1981	104.8	9.4	114.2	417.3	37.5	454.8
1991	145.7	12.9	158.6	468.5	41.6	510.1
2001	145.2	11.3	156.5	385.1	29.1	416.2
2002	175.9	13.6	189.5	458.7	35.4	494.1
2003	159.3	11.3	170.6	386.2	30.0	416.2
2004	169.1	14.2	183.3	426.9	35.8	462.7
2005	157.3	12.7	170.0	390.9	31.5	422.4
2006	168.8	13.3	182.1	412.8	32.5	445.3
2007	169.0	14.7	183.7	407.4	35.5	442.8

Source : Economic Survey, Govt of India, 2009-10



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Year		Foodgrain		Non-Foodgrain		Total
Production (million tonnes)	Consumption (million tonnes)	Production (million tonnes)	Consumption (million tonnes)	Production (million tonnes)	Consumption (million tonnes)	
1951	1.14	0.81	1.14	0.81	1.14	1951
1956	1.11	0.75	1.11	0.75	1.11	1956
1961	1.03	0.70	1.03	0.70	1.03	1961
1966	0.98	0.65	0.98	0.65	0.98	1966
1971	0.93	0.60	0.93	0.60	0.93	1971
1976	0.88	0.55	0.88	0.55	0.88	1976
1981	0.83	0.50	0.83	0.50	0.83	1981
1986	0.78	0.45	0.78	0.45	0.78	1986
1991	0.73	0.40	0.73	0.40	0.73	1991
1996	0.68	0.35	0.68	0.35	0.68	1996
2001	0.63	0.30	0.63	0.30	0.63	2001
2006	0.58	0.25	0.58	0.25	0.58	2006
2011	0.53	0.20	0.53	0.20	0.53	2011

# Food Security And Structural Reforms in India

Umakanta Tripathy\*

## Introduction

Development Report (1986) defined food security as "access by all people at all times to enough food for an active, healthy life". Food and Agriculture Organization (1983) defined food security as "ensuring that all people at all times have both physical and economic access to basic food they need".

Food security is defined as the ability to assure on a long term basis that the food system provides the total population access to a timely, reliable and nutritionally adequate supply of food. Food security has four essential components.

- (I) Food availability
- (II) Food accessibility
- (III) Food Utilization and
- (IV) Food Security

**Food Availability :** Food availability concerns with the availability of sufficient quantities of food of appropriate qualities, supplied through domestic production and import.

**Food accessibility :** The access of food by individual requires adequate resources. These resources are primarily monetary. It depends on household incomes and individual wages, food prices, consumer credit etc.

**Food Utilization :** The utilization of food through adequate diet, water, sanitation and healthcare brings forth the importance of non-food input in food security.

**Food Security :** There are two aspects of the food situation in India. Food grains security and food security. The physical and economic access to food grains implies food grains security; the food security

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would require the same for non food-grains items of food basket. India achieved self-sufficiency in food grains by the year 1976 and since then Indian imports of cereals have remained negligible.

### **Review of Literature**

Food security has both economic and physical dimensions; the former referring to economic access and the latter to physical availability of food grains in sufficient quantities required for an active and healthy life. The official definition and measurement of income/consumption poverty in India is anchored in a physical norm for food insecurity. Hence, one would expect the estimates of poverty and food insecurity to tally for any given reference year. However, the two sets of estimates could diverge for any other subsequent year for the following methodological reasons (Suryanarayana and Dimtri, 2007): (i) Estimates of poverty are based on monetary measures of consumer expenditure distributions (at current prices) with reference to a base year norm, where only the norm gets adjusted for percentage price changes; and (ii) those for deprivation in physical access to food are made in terms of physical quantities (which respond to changes not only in prices, but also tastes and preferences as well as a host of other variables such as levels of living and infrastructural facilities) with reference to a constant base year physical norm. Hence, from a methodological perspective, the estimates of poverty and food insecurity would not tally for non-reference years leading to both Type I and Type II errors in food distribution programmes targeted with reference to monetary measure based on poverty estimates. This is precisely what underlies the issue raised by the High Level Committee. If so, how to go about verifying the hypothesis underlying the Expert group study? One approach could be to revise the food security norms downward taking into account the ongoing structural changes in consumption preferences. Until 1993/94, cereal consumption, which is the major source of calorie intake for the Indian household, has increased for the bottom two decile groups and declined for the top seven decile groups in rural All-India; urban All-India does not exhibit such clear cut patterns; but broadly speaking, cereal consumption increased somewhat for the bottom decile groups and decreased for the top decile groups. Per capita calorie intake increased for the bottom four decile groups and decreased for the top six decile groups in rural All-India; as regards urban All-India, it increased for the bottom six decile groups and declined for the top four

decile groups. In other words, levels of cereal consumption and calorie intake for different decile groups have been converging to a limit. Hence, we have calculated (i) such limits for the alternative measures of physical access to food as the respective thresholds or revised norms to define food insecurity for both rural and urban India; and (ii) estimates of food insecurity after appropriate allowances for adult equivalent scales (Suryanarayana and Dimitri, 2007). The findings show that the estimates of monetary measures of poverty by sectors at the national level exceed or tally with those for food insecurity, obtained with necessary adjustments for calorie intake to account for age-sex composition. This result holds good for the majority of the states, except Andhra Pradesh, Gujarat, Karnataka, Kerala, Punjab and Delhi. The latter are relatively better off states; hence, any shortfall in cereal consumption/calorie intake could be by choice and does not call for policy measures for income transfers by subsidized food distribution.

In other words, estimates of food security may be worked out with reference to two alternative norms, viz., the norm underlying the estimation of the official poverty line, and the convergence levels observed in 1993/94. It is important to adjust for sex-age activity status of the population. What constitutes food security has gone through two phases of understanding or definition. In the 1970s, food security was understood as the 'availability at all times of adequate supply of basic foodstuffs...' (UN, 1975). But the 1981 publication of Amartya Sen's 'Poverty and Famines: An Essay on Entitlement and Deprivation' brought forward a new understanding of the problem of hunger or food security. Rather than just the 'availability' of food, Sen emphasized 'access' to food through what he called 'entitlements' - a combination of what one can produce, exchange in the market plus state or other socially provided supplies.

What Sen posited is that availability or supply of food does not itself create entitlements for food. In a sense, Sen's emphasis on entitlements is similar to Keynes' notion of 'effective demand'. Both entitlement and effective demand are quite different from need. Since Keynes was dealing with a fully capitalist market economy, with only two classes, employers and workers, all effective demand was related to monetary income. But Sen is dealing with a 'mixed economy' with at least three classes, employers, workers and peasants or other own-account producers. For those who produce food, part, if not all, of their

entitlement is due to their own production. This portion of the consumption of food is not mediated by the market. Consequently, this is not captured by the market-based notion of effective demand.

What an individual or household can consume or access depends on the individual's or household's entitlements. Entitlements draw attention to the conditions under which people's access to food, from direct production (or exchange with nature), market exchange (income from either goods produced or wage labour) and social security measures. Entitlements also draw attention to the rules that govern intra-household allocation; as a result of which women and girls may face hunger or deprivation even though they are part of households whose general entitlements are sufficient. Food, of course, is not an end in itself. Food is consumed for nutrition. Instead of focusing attention on the commodity, one can look at the objective for which food is consumed, that is providing nutrition for the body. The purpose of nutrition itself is not just to survive, but to lead a healthy and meaningful life - to be in the state one wants to be (well-being) and to do various things one wants to do.

At one level, some health questions, like the prevalence of intestinal parasites, affect the very ability of the human body to absorb nutrients. Thus, health concerns, focused on the availability of clean water and access to health facilities, are very much part of the very concept of food security itself. At another level, some health questions, like AIDS and endemic malaria affect the ability of the individual/household to engage in those livelihood activities that could ensure food security. Consequently, in order to deal with food security, it is not sufficient to pay attention to food alone, but also access to, at least, clean water and sanitation, which affect the ability to absorb food, or turn consumption of food into nutrition. It may thus be seen that all these factors affect food security in one way or the other. Hence they can be used as components of elementary well-being needed to lead a healthy and meaningful life.

Entitlements point to the fact that hunger is situated within poverty, rather associated with extreme poverty, as a result of which households and individuals do not have adequate entitlements to food. Thus, the elimination of hunger is the first landmark in reducing poverty. Capabilities are a combination of two factors - states of well-being (like being well nourished, being healthy, and so on) and activities

(achieving self-respect, or being socially integrated). Self-respect and social integration are in themselves goals of a meaningful life. But they are also instrumentally important, in that those without self-respect or the socially marginalized may not be able to achieve food security. Consequently, achieving self-respect or playing a meaningful part in social life may both be necessary to achieve food security. This leads to the proposition that food security is not just a matter of some external organization, whether the state or society, providing food, but of the enhancement of the agency of the hungry or poor. Thus, some level of complex capabilities, becomes necessary to reach adequate levels of primary well being.

Given women's general responsibility for food security in rural areas of developing countries, and given the pervasive gender bias in these societies, enhancement of the agency of the poor translates particularly into the enhancement of the agency of poor women. Consequently, food security approaches increasingly pay attention to the elimination of gender inequality and women's empowerment as important preconditions for food security.

Agency of poor women, or of the poor as a whole, is not only a matter of individual agency (which itself might be dependent on collective mobilization) but also of the poor putting their stamp on economic policies. This is necessary in order to bring about the much-needed political will that is often referred to as missing, in order to bring about adequate attention to food security policies. Without adequate political pressure for reform, proper food security policies are unlikely to be adopted. There can be no question that the political mobilization of the poor is required for such a food security policy to be implemented.

All of the above changes in understanding and context meant that 20 years after the 1975 World Food Summit, there was a substantial shift in understanding the meaning of food security. From the 1975 emphasis on adequate food supply, the 1995 World Food Summit declared '... food security, at the individual, household, national, regional and global levels... exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.' (FAO, 1996) The declaration further recognizes that 'poverty eradication is essential to improve access to food.'



The international discourse on food security has further developed along the lines of the right to food. This right to food derives from the 1948 UN Declaration on Universal Human Rights. Through subsequent instruments, the meaning of the right to food has been spelt out. In particular, the 1999 International Covenant on Economic, Social and Cultural Rights clarified the obligations of states in the context of the realization of the right to food. The right to food identifies three kinds of obligations of states: not to adopt measures that would prevent access to food; to adopt measures to ensure that no individuals are deprived of access to adequate food; and to proactively engage in activities that strengthen people's access to food, including means to ensure their livelihood and food security. There is also an obligation of states to fulfil that right directly, when people cannot obtain adequate food through the means at their disposal.

In India, following the case filed by the People's Union for Civil Liberties (PUCL), the Supreme Court has passed a number of judgments and orders on realizing the right to food. These include orders to implement the Mid-Day Meals Scheme (MMS) in primary schools in all states, the provision of work, etc. Consequently, it is in the context of the international and national obligations, following the acceptance of the right to food, that this Report looks at the ways to realize food security.

#### **Objectives :**

- (i) To study about the requirement of food security in Indian economy.
- (ii) To examine whether the supply is equal to the demand for agricultural commodities.

#### **Data Base and Methodology :**

The study is based on the secondary information. The data have been collected from Reserve Bank of India Bulletin, Currency and Finance Report, Reports of Planning commission, Economic survey etc.

The study is divided into three sections. First section deals with the requirement of food subsidy in Indian economy. Second section deals with the balance between demand and supply for agricultural commodities in the country. Last section deals with conclusion of the study.

## SECTION I.

### **Progress of Food Grains**

The food grain production has increased from 50.8 million tonnes in 1950-51 to 208.3 million tonnes in 2005-06. It shows there is fourfold increase of production of food grains. Cereals production has increased from 69.3 million tonnes in 1960-61 to 195.2 million tonnes in 2005-06. In case of pulses the increase of production was from 12.7 million tonnes in 1960-61 to 13.1 million tonnes in 2005-06. In 2008-09 the food grains production increased to 234.47 million tonnes, cereals production declined to 117.96 million tonnes and pulses production increased to 14.25 million tonnes.

The per capita availability of food grains improved from 394.9 grams to 422.4 grams between 1950-51 and 2005-06. This indicates an increase of nearly 9 per cent over the period of 55 years. The per capita availability of cereals improved from 334.2 grams to 390.9 grams between 1950-51 and 2005-06. This indicates nearly 30 per cent over the period of 55 years. The per capita availability of pulses declined from 60.7 grams to 31.5 grams between 1950-51 and 2005-06. This indicates nearly 50 per cent decline over a period of 55 years. While moving towards food grain security, India has succeeded in terms of cereals, but has miserably failed to increase the production of pulses to feed the continuously increasing population.

With regard to net availability, procurement and public distribution system of food grains during the period between 1951 and 2005, we see much improvement in net production of food grains production. It increased from 48.1 million tonnes to 173.6 million tonnes between 1951 and 2005. The net availability of food grains were also improved from 52.4 million tonnes to 170 million tonnes. Procurement of food grains showed much improvement in the same period from 3.8 million tonnes to 35.6 million tonnes.

While India is moving towards food security, The government distributes the food grains through public distribution system at subsidized rates. The PDS supply increased from 8 million tonnes to 1951 in 18.1 million tonnes in 2004. The PDS was conceived as a key mechanism in the government food security system.

## **SECTION II**

### **Demand-Supply Gap**

This section presents the supply and demand trends of rice, wheat, total cereals, pulses, edible oil/oilseeds and sugar/sugarcane. It provides the demand and supply projections for food items during 2011, 2021 and 2026. These projections have been based on change in productivity levels, changes in price, growth of population and income growth. Subsequently, the future supply-demand gap has been discussed in the light of policy requirements. It is concluded that an increase in total demand is mainly due to growth in population and per capita income. A diversification in consumption basket significantly away from cereals has been observed. On the supply side, production is constrained by low yield growths. This is more specific in context of total cereals and sugarcane.

While in the short and medium term, there might be surplus of cereals in the country; these prospects are likely to diminish in the years to come. This situation is even more alarming for edible oil, sugarcane and pulses. To meet the future food requirements, the country shall have to either increase agricultural production, or depend on imports. In this light, the paper suggests that the policy focus needs to be laid on productivity enhancement in agriculture, through public investment in irrigation, development of roads, research and extension.

The Eleventh Plan aims to achieve a 9 per cent per annum economic growth, with agriculture and allied sectors growing at the rate of 4 per cent per annum. It is important to assess the feasibility of achieving this growth rate because agriculture is constrained by a number of factors of which supply and demand constraints are crucial ones. The imbalance between production and demand impacts the prices and profitability, which calls for policy interventions and planning to tackle the situation in future. Thus, the projects on demand side and supply side become very relevant to make policy interventions.

It should however be pointed out that poverty in any state can be regarded as an indicator of need towards food security in that particular state. Most of the studies show that about 38 per cent of the people are not able to fulfill even their basic requirements even after nearly two decades of adoption of economic reforms in India. Therefore it is the responsibility of Indian government to provide them with the minimum

nutritional standard which is not only important for their livelihood but also for efficient working of any economy. Therefore there is a need for food security.

### SECTION III

#### **Conclusion**

It should however be pointed out that efforts have been made by government of India to increase the net production of food grains since the beginning of planning. No doubt the production has increased by more than four times since the inception of plan. Now the question arises whether the balance between the demand and supply of food grains have been secured. It appears that the Government has tried its best by importing food grains, maintaining buffer stocks of food grains and providing food grains at lower prices to the people belonging to BPL and APL etc. But it has not considered the question of nutritional standard.

It may be noted that merely providing food grains like wheat and rice is not sufficient for the poorer section of the society. There is no denying of the fact that a balanced diet is required which includes not only carbohydrates but also proteins, minerals, vitamins in the balanced quantity for healthy body and mind etc. However in an economy where prices are sky rocketing, it is very difficult for the consumer, especially for those below poverty line, to have balanced diet. Therefore it is the duty of the state to provide other articles of consumption which are necessities as well.



# **Impact of Green Revolution on Household Food Insecurity in Bargarh District : An Economic Analysis of Arjunda Panchayat**

**Digambar Chand\***

The onset of green revolution had given a tremendous boost to the economy by bringing sharp increases in incomes, production and productivity for all classes of agriculturists. However, the boost was short lived-with productivity declining / stagnating over a period of time, income dipping due to increased costs of production but near freeze in minimum support prices. Near stagnation in the agricultural sector and non-descript development of the other sectors of the economy saw the beginning of a crisis which has reached an unprecedented gravity, to the extent that cultivators were forced to take their own lives rather than live a life of extreme poverty, mounting debt burden and the agony of not being able to pay debts.

India has already entered the era of importing foodgrains regularly in order to ensure food security for all citizens, not merely for those living below the poverty line who depend upon the Public Distribution System. All people residing in this country have a fundamental right to be free from hunger and malnutrition. This requires sufficient availability of food, which in turn calls for strengthening of sustainable agricultural production systems, with special focus on rainfed farming and the small farmers. It requires that land and water must never be forcibly diverted away from food production for cash crops or industrial use. It also requires effective systems of minimum support prices, price stabilisation, efficient grain movement and storage, as well as strict regulation of speculation and trade. India has wonderful Food Schemes. But they do not reach the most deserving people, especially such marginalised communities as dalits, tribals, slum-dwellers and the rural poor.

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### The Food Schemes

1. Public Distribution System (PDS) helps people Below Poverty Line (BPL) to get essential commodities from Fair Price Shops.
2. Annapurna scheme provides food security to the senior citizens who are 65 years of age or above and not getting any support for their livelihood.
3. Antyodaya Anna Yojana Scheme targets to ensure food security for the poorest of the poor.
4. Mid Day Meal Scheme (MDMS) attends to the nutritional needs of children and promotes both right to food and right to education.
5. Integrated Child Development Schemes (ICDS) protects the rights of children under 6 Yrs, pregnant women, lactating mothers and adolescent girls. Their nutrition, health and pre-school education are taken care of through this scheme.
6. National Maternity Benefit Scheme (NMBS) meets the maternity needs of BPL families during pregnancy and after delivery. This reduces maternal and infant mortality through increased health services.
7. National Old Age Pension Scheme (NOAPS) ensures right to life to the senior citizens. It provides both food security and social security to those above 65 years with no adequate support for livelihood.
8. National Family Benefit Schemes (NFBS) attends to the Food security of BPL families on the death of primary breadwinner of the family. It supports the dependents of the deceased.
9. National Rural Employment Guarantee scheme (NREGS) tackles the problem of unemployment in the country especially in rural areas through local participation in planning, implementing and evaluating the work undertaken.

Agriculture is one of the riskiest professions in the country. A farmer sticks to this profession because he has no escape route. The government is yet to go the whole hog for undertaking massive agricultural reforms in order to quickly raise the productivity of the main cereals such as rice, wheat, bajra (pearl millet) and jowar (sorghum) besides pulses. Three food security missions for rice, wheat and pulses have been implemented by the states, since agriculture is a



state subject according to the Constitution. In Odisha Food Security Mission for rice and pulses is being implemented.

However, the sudden spurt in suicides by farmers in different parts of Odisha has brought agriculture back to the public arena. Academics, activists and policy makers are all talking about agriculture once again. But this time agriculture is not being talked about in the manner it was during the early decades after Independence, when the farmer was presented as a food giver, selfless and hard working and a symbol of national pride. Apart from public outcry on the subject, some scholars have also been looking into analyzing this phenomenon. Though overlapping significantly in their orientation and arguments, we can identify broadly different sets of perspectives in the current writings on the crisis of agriculture. This manifestation of agrarian crisis in the form of suicides has reached dangerous levels in the Odisha state. As many as 3,509 farmers have committed suicide in Odisha in the past 11 years. The neglect of agriculture in the rural economy has not only affected the farming community, but also the landless labourers. Because of this crisis in agriculture, farmers and labourers are finding it much more difficult to find employment on viable wage. We have therefore made a study of the impact of green revolution on household food in security in a grampanchayat of Bargarh district.

#### **Selection of Bargarh District for case study**

Bargarh District is known as the rice bowl of Odisha. But due to unsustainable industrialization and use of water resources by industry the irrigation in this region has suffered. High levels of pollution due to many small and large industries and indiscriminate deforestation have decreased precipitation and increased diseases leading either to decrease in yield or loss of crop in western Odisha.

According to a survey conducted by Pune-based National Centre for Advocacy Studies and the government's reply in the state Assembly, in just two years from 1998-'99 to 2000-'01 rabi irrigation potential has shrunk by 18.48 per cent in the command area. Prior to the pre-April 1997 period, water withdrawal permission to industries from Hirakud was just 71,252 lakh gallons per year (LGY), which was only 13.2 per cent of the total industrial water use permission granted in Odisha. Now the government of Odisha have permitted to use 5,04,431.2 LGY water from Hirakud which is 26.3 per cent of the total withdrawal permission.

After the formation of Water Allocation Committee, industrial water allocation from the reservoir has gone up to 31.45 percent total water burden of industries. Development Support Centre, Ahmedabad has found that in the tail-end of the designated command area 82 per cent are not getting water even today. So, Hirakud dam is no more solving the purpose of irrigation but solving the purposes of industries. Step-motherly attitude of government of Odisha and no step up for irrigation, no crop insurance, no easy finance etc., have brought so much frustration that the farmers have no other way but to commit suicide. A large number of farmers committed suicide in the panchayat due to failure of crops for which they could not pay off their loans.

#### **Selection of Households**

One hundred households were selected randomly comprising 20 households each from five categories such as big farmers (holding 10 acres), medium farmers (holding more than 5 acres), small farmers (holding more than 2.5 acres), marginal farmers (holding more than one acre), and agricultural labourers having less than one acre or no land.

#### **Development of measuring tools**

The tools were developed around the following variables of the study-demographic data, socioeconomic status of the households, farming systems, dietary pattern and dietary intake of the households and adjustment mechanism when there is shortage of food.

#### **Dietary pattern and per capita consumption of food**

The meal and menu pattern is similar to that prevalent in rural areas. Agricultural labourers, and marginal and small farmers followed simple food habits, less variety and mostly vegetarian. They consume fish one day in a week. Sometimes leafy and other vegetables and roots and tubers are used in curry preparation. No milk or milk products are taken by them. Big or middle farmers take pulses, cereals were major food items. Milk, egg or meat are occasionally included in their food items three or four times in a month. 73 per cent farmers told that their fathers produced 15 to 17 bags of paddy in one acre of land, but cost of production was low. After green revolution cost of production is more but production has been doubled. Nearly 80 per cent of their produce is

used to meet the cost of production. So it is difficult to bear education and health expenditure with 20 per cent or less profit. Now they are unable to maintain their offspring properly. Visions of larger yields and happiness of common people had buoyed them up when they took up and adopted the green revolution technique. Progressive farmers told that larger food basket means not merely large quantities of wheat and rice, it means a collection of coarse and fine cereals, vegetables, oil, pulses, oilseeds, milk etc. Diversified food could meet the nutrition needs better. It was possible to feed people better with organic farming and mixed cropping. Now farmers depend on others for seeds, fertilizer, pesticides, insecticides, sale in market etc. Local seeds have been abolished. There is no proper representation of farmers in legislative assembly and Parliament.

### Conclusion

The nexus between agriculture and forestry was disrupted and the bond between agriculture and animal husbandry was ruptured. A determined effort is necessary to do vermin-culture, farmyard manuring and composting of human excreta, composting of plant, animal and kitchen wastes, nurturing of blue green algae and *Azolla pinnata* while using canal silt and tank silt. It will work wonders. Due to monoculture, pests become both abundant and free. The cure for pest menace is not the application of chemical pesticides, not even the less harmful bio pesticides, but the restoration of diversity. Weeds and grasses are essential to keep the soil to remain alive. These draw nutrients from the sub surface. It is not necessary to kill these by herbicides but to plough these to enrich the soil properties. Multi-tier planting can better utilize the air.

Indigenous technology and sustainability of production system is facing a grave danger from the political-economic policy of globalization. In cultivating the new varieties of crops, the farmers find that their traditional agricultural knowledge is no longer useful. They come to depend on companies that sell them seeds and give detailed instructions on sowing, watering sequence and the fertilizers, weedicides and insecticides to be used. People's traditional practices are multi-dimensional while so called modern practices leading towards monoculture are uni-dimensional.

Food intake were generally simple, predominantly cereal and consisted of low amount of protective foods such as pulses, milk, milk products, vegetables and fats and oils. Food, of course, is not an end in itself. Food is consumed for nutrition. The purpose of nutrition itself is not just to survive, but to lead a healthy and meaningful life-to be in a state one wants to be (well-being) and to do various things one wants to do. The elimination of hunger is the first landmark in reducing poverty. Entitlements are not only based on an individual's or household's own economic attainments. There are also government-or-community-based-entitlements. Government organized entitlements have been gaining in importance while community based entitlements have been in decline, even among adivasis.

The biofuel factor has led to significant shifts in acreage to the cultivation of crops that can produce biofuels, and diversion of such output to fuel production. 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 Odisha has been largely a policy-determined crisis.

Supply side factors have been-and are likely to continue to be-more significant. These include the short-run effects of diversion of both acreage and food crop output for biofuel production, as well as more medium-term factors such as rising costs of inputs, falling productivity because of soil depletion, inadequate public investment in agricultural research and extension, and the impact of climate change that has affected harvests in different ways. 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 seed and fertilizer companies and input dealers. As a result, prices of seeds, fertilizers and pesticides have increased quite 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 in accessing institutional

credit, because financial liberalization 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.

In addition, there is the impact of recent climate change, which has caused poor harvests in different ways ranging from droughts to excessive rain in parts of Western Odisha. 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 groundwater in cultivation, inadequate attention to preserving or regenerating land and soil quality, and 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 policymakers in most countries. Reversing these processes is possible, and of course essential. But it will take time and will also require not only substantial public investment but also major changes in the orientation and understanding of policymakers.



## **Sustainable Food And Nutritional Security For the Poor**

**Prof. Surendra Nath Behera\***

The goal of ensuring food security is an integral part of the development policy. It implies physical and economic accessibility of food that meets the people's needs. A household is called to be food secured when its occupants are free from hunger and starvation. The World Food Summit 1996, defined food security as a situation "When all people and at all times have physical and economic access to sufficient safe and nutritious food to maintain a healthy and active life."

**To be food secured means that :**

- (1) **Food is available :** Sufficient quantity of food is available on consistent basis and temporarily or on long-term basis effected by factors like climate, disasters, war, civil unrest, population, agricultural practices, environment, social status and trade.
- (2) **Food is affordable :** People must have ability or required purchasing power to purchase sufficient safe and nutritional food. Poor people may have difficulty in obtaining sufficient safe and nutritious food without assistance.

The World Food Summit was held in Rome in 1996 with the aim of renewing global commitment to fight hunger. The Food and Agricultural Organization (FAO) of the United Nations called the summit in response to the widespread under nutrition and growing concern about the capacity of agriculture to meet future food needs. The Conference produced the Rome declaration on World Food Security and World Food Summit Plan of Action. The Action plan sets security of the individual, household, national, regional and global level. The FAO declared that no child, woman or man should go to bed hungry and no human being's physical or mental growth should be stunted by malnutrition.

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### Public Distribution System (PDS) and Food Security

The PDS is the main plank of India's food management initiatives. Food management aims at procuring food grains from farmers at remunerative prices, distributing food to consumers, particularly the poor and vulnerable sections of society at affordable prices and maintaining food buffers for food security and price stability. The prime instruments used in PDS are the Minimum Support Price (MSP) and Central Issue Price (CIP). Food Corporation of India (FCI) carries out the procurement, distribution and storage of food grains, while off-take of food grains is primarily under the Targeted Public Distribution System (TPDS) and other welfare schemes like Antyodaya Anna Yojana (AAY), Mid Day Meal Scheme (MDMS), Annapurna Scheme, Food for Work Programme, Welfare Programmes for SC/ST/OBC, Village Grain Bank Scheme etc. The off-take of food grains under the TPDS has gone up from 29.7 million tonnes in 2004-05 to 34.8 million tonnes in 2008-09 but the off-take has been commensurate with the allocation made under TPDS.

The National Sample Survey on PDS and other sources of household consumption, 2004-05 have indicated that at the all India level 81 percent of the rural households and 67 percent of the urban households have held ration cards (NSSO, 2007). Table I shows the percentage distribution of households by ration cards in major states:

**TABLE - I**

**Percentage Distribution of Households by  
Ration Cards in 17 major states**

State	2004-05 (in percent)	
	Rural BPL	Urban BPL
1	2	3
Andhra Pradesh	54.0	26.6
Assam	12.0	3.2
Bihar	15.0	4.7
Chhatisgarh	35.0	15.2
Gujarat	36.0	8.4

Haryana	16.0	9.9
Jharkhand	23.0	7.5
Karnataka	42.0	14.4
Kerala	28.0	19.8
Madhya Pradesh	31.0	12.7
Maharashtra	31.0	8.0
Orissa	42.0	11.8
Punjab	12.0	3.9
Rajasthan	16.0	2.4
Tamilnadu	19.0	12.8
Uttar Pradesh	14.0	7.2
West Bengal	27.0	8.8
India	26.5	10.5

Source: NSS Report 2004-05.

An analysis of the percent distribution of households by ration card in 17 major states highlights that Below Poverty Line (BPL) cards were held by 26.5 percent of rural households and 10.5 percent of urban households.

The Saxena Committee of the Ministry of Rural Development and the Tendulkar Committee of Planning Commission have recommended a set of new poverty figures. If the recommendations of these Committees are accepted then there will be an automatic expansion in the coverage of the PDS where beneficiaries are decided on BPL basis.

The Government announced in 2009 that a Food Security Act would be passed to ensure a particular quantum of rice and wheat to needy households. The Government is going to enact the Food Security Act, which will ensure availability while facilitating affordability to the families devoid of resources, assets and deprived of opportunities. The PDS network will contribute greatly to effective implementation of National Food Security Act. The implementation of the Act will ensure legal entitlement to subsidized food grains to 75 percent of the country's population covering 90 percent in rural areas and 50 percent in urban

areas: Poverty and food and nutritional security are intricately linked and greater rural coverage will ensure food security to the larger chunk of the population.

### **The Current Scenario**

The state of India's food security is worsening over the years. The situation of food crisis is reflected by the latest global hunger index released in 2010. In 2009 Global Hunger Index, India ranked 69 out of 88 countries and slipped down to 67th position in 2010. The index is rated on the basis of three leading indicators- prevalence of child malnutrition, rate of child mortality and the proportion of people who are calorie deficient. In India 230 million people are undernourished- the highest for any country in the world. Malnutrition accounts for nearly 50 per cent of child deaths in India. According to the latest report on the state of food security in rural India, more than 1.5 million children are at risk of becoming malnourished because of rising global food prices. A recent estimate of the UNICEF reveals that India is home to 42 percent of the world's underweight children and 31 percent of its stunted children. The National Family Health Survey (2006) showed that the child undernutrition rate in India is 46 per cent, which is almost double that of Sub-Saharan Africa. India is a home to 40 per cent of the world's underweight children and ranks 126 out of 177 countries in the UNDP Human Development Index. The Government launched in 2007 the National Food Security Mission to raise food output by 20 million tonnes during the Eleventh Plan and is now proposing to legislate food as right.

There has been fluctuation in the net per capita availability of food grains since independence. It was 384.5 grams in 1952-53, which went up to 442.8 grams in 2007-08 and came down to 436.0 in 2008-09 as revealed by the Economic Survey 2008-09 and 2009-10. The affordability dimension of food security is influenced by the price movement of food-grains in the country. The food inflation based on Wholesale Price Index (WPI) at 1993-94 prices during 1994-95 to 2009-10 indicates that the growth in net availability of food-grains has not been able to influence the demand for food-grains as the same food-grains over the years have become unaffordable. According to the Economic Survey 2007-08 food-grains production grew at the annual rate of 2.5 percent between 1950-51 and 2006-07 slightly higher than the 2.1 percent population growth rate. It is argued that as the consumption pattern of

the people is changing due to increase in per capita income, urbanization, convergence of food habits and more availability of horticulture and livestock products, food security should not be confined to the mere availability of food-grains but to the overall availability of edibles including fruits, vegetables, dairy products, eggs, meat and fish. The National Family Health Survey Report (2005-06) shows that percentage of anaemic married women in the age group of 15-49 has increased from 53.9 in 1998-99 to 57.8 in 2005-06 in rural areas and from 45.7 to 51.5 in urban areas. Similarly the percentage of anaemic children has also increased from 75.3 to 81.2 in rural areas and 70.8 to 72.7 in urban areas between the same periods. This clearly indicates that undernourishment among women and children has increased. Among the poor households decline in the per capita availability of cereals and pulses as the main sources of calorie intake has increased food insecurity among them. The percentage of malnourished children is higher in rural areas than in urban areas. They are undernourished and malnourished as they cannot afford to buy enough nutritious food. Food insecurity in rural India is primarily a reflection of rural poverty that affects their food entitlement, which calls for increasing their means and ability.

### **Right to Food and Food Crisis**

Right to food is a birthright for all and should be an integral part of right to life as enshrined in Article 21 of the Indian Constitution as well as Universal Declaration of Human Rights (1948). Unless it gets enforced legally and socially hunger will continue. Right to food is a basic human right. It is bedrock of human sustainability. Current food crisis is becoming the main hurdle in the right to food. Right to food as a basic human right and binding obligation was established under international law recognized in Universal Declaration on Human Rights and International Covenant on Economic, Social and Cultural Rights (ESCR) as well. It is the right of every man, woman and a child, alone and in community with others, to have physical and economic access at all times to adequate food or means for its procurement in ways consistent with human dignity. The right to food is not a matter of charity but about ensuring that every one has the capacity to feed him/her with dignity. Government must provide maximum available resources for eradicating hunger. Article 2(1) ESCR, states agreed to take steps with all their available resources to achieve progressively the full realization

of food. Under Article 3 of the Covenant, states have agreed to ensure equal rights to men & women to enjoyment of right to food. Article 47 of the Directive Principles of State Policy states that the state shall try for raising the level of nutrition and the standard of living of its people and improvement of public health as among its primary duties.

### **Operational Lapses in the Food Security System**

Ensuring food for all the citizens is a complex exercise related to availability of food, its affordability and providing access. Paradoxically, though India is one of the largest producers of food in the world, yet millions of people struggle to get two square meals a day and an equal number are undernourished. The food security system in the country is faced with various operational leakages, managerial deficiencies and flaws in the production and distribution system. There have been challenges and gaps in tackling the problem of poverty & hunger. The PDS network, the food sufficiency and the quality and nutritious value of food grains have emerged as considerable challenges related to poverty and nutrition.

- The rural people have not been duly and properly benefited from the PDS. The TPDS introduced in 1997 has the conceptual problems in using official poverty line as estimated by the Planning Commission. Wrong identification of the households has led to exclusion of the vulnerable population and the welfare gains for the poor are limited and negligible.
- There has been severe bias in inter-regional distribution of the PDS supplies. States with higher incidence of poverty like Orissa, Bihar, Madhya Pradesh, Jharkhand and Chhatisgarh received a lower share compared to the affluent states.
- Improper implementation of the ICDS, Mid-day Meal Scheme, MGNREGA and Antyodaya Anna Yojana (AAY).
- The price of neglecting agriculture has resulted in a progressive decline of food grains production from 2.73 per cent in 1980's to 2.09 per cent in 1990's and 2.01 per cent in 2000-01 to 2007-08. The rate of growth of GDP in agriculture was 2.9 per cent during 2000-08 as a whole. Climate change aggravates the situation for both biodiversity, conservation and food security by increased risks of crop failure.

- The per capita availability of food grains has in fact dropped in the last two decades. Rising cost of food grains due to supply side factors is said to be one of the reasons behind the drop. Food inflation has pushed food security up in the policy agenda keeping a renewed focus on tackling hunger and malnutrition.

### **The Emerging Challenges and Strategic Actions**

For tackling the challenge to ensure food security the Government has been implementing some major programmes like PDS, ICDS, MGNREGA, Mid-day Meal and AAY. The National Food Security Mission (NFSM) is now operational in 467 districts of 17 states. The challenge of ensuring food security lies not only in enhancing the productivity in the agriculture sector but also in the distribution of food and making them affordable to the poor. The policy measures aim at accessibility to adequate and nutritious food.

Following policy measures, key issues and options and strategic actions need to be taken to ensure food and nutritional security.

- Globalization and liberalization in import and export of food grains and tariff concessions will ensure equilibrium between demand and supply. However, food sovereignty also can be secured not by high cost western technology but appropriate indigenous technology.
- Sustainable agricultural practices such as dry land farming, adaptation and mitigation strategies to climate change, biotechnology practices, diversification of cropping pattern, inclusive agriculture with a focus on providing incentives and subsidies to the small and marginal farmers are ways forward to augment the supply of food grains. Improving agricultural production will ease the problem of food security by two ways viz. by making the food items affordable to the consumers and by generating additional employment opportunities to the work force.
- Support prices for agriculture, innovative marketing mechanism and an income security measure that motivates the farmers to making farming financially sustainable should be evolved.
- Food grains storage should be modernized to prevent insect and pest infestation. Safe storage, marketing and value additions to



primary products have to be attended at the village level. A national grid and ultra modern grain storage facilities must be created without further delay. The Food Corporation of India and Central Warehousing Corporation should provide more processing and storage facilities for food-grains, fruits and vegetables to reduce post harvest losses and improve food safety.

- Ground water recharge and rainwater harvesting must be given priority in the ground water depleting regions.
- The PDS is to be reformed to have a transparent structure where food transfers can be channelled all the way to the card-holders and fair price shops are managed by accountable community institutions.
- The Rural Non Farm Sector (RNFS) needs to be developed so as to provide income security and livelihood support to the small cultivators, agricultural labourers, rural artisans and other rural non-farm workers.
- Supply chain system for agricultural products must be developed in a way that benefits both farmers and consumers.
- Effective linkage between farmers' groups and consumers' groups need to be established to eliminate the intermediaries.

### **Conclusion**

Policy measures in the demand and supply side, effective implementation of Government programmes, coping with the changing pattern of consumption, sustainable management of natural resources, controlling food inflation and opening up the markets through trade liberalization would help to realize the goals of food justice and nutritional security for a hunger free world for healthy and active life. Food security can be secured on a sustainable basis with priority on productivity and profitability of the small farmers' holdings for the nutritionally vulnerable sections. Problem of food security cannot be viewed only in terms of procurement and distribution of food. It should also be seen in the context of production of food-grains, livelihood of the people and overall management of the economy. Improving productivity and profitability in agriculture through enhancing public investment in agricultural infrastructure, irrigation, extension, water management, post harvest technology, storage and distribution are to be emphasized. An appropriate

out put mix is necessary to strike a right balance between "Wage Goods" and "High value goods" for the food security. India has witnessed the Green Revolution and is readying for the second round of the Green Revolution with newer farmer technologies and innovations in farming systems. An integrated suitable national policy on production and distribution will expose the ways and means for ensuring food security.

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# **New Dimensions of Sustainable Agriculture And Food Security in Orissa**

**Babilata Shroff<sup>1</sup>**

## **INTRODUCTION**

A paradigm shift is needed for making the development process faster and more inclusive. In this context India has to face the challenges of overcoming Malthusian trap along with breaking stagnancy in agriculture. India is basically an agricultural country where almost 60 percent of the population depends on agriculture directly or indirectly. Agriculture continues to be the backbone of the economy contributing about 15 to 16 per cent to our GDP. Food being the growing need of the mankind and with a majority of our population are in the danger zone of food insecurity, adequate production and even distribution of food have become a high priority concern. Vagaries of monsoon and inadequate irrigation have made agriculture a seasonal business and weak enough to provide livelihood security to the rural masses. The nation is in the threat of food insecurity and gradually derailing from the track of sustainable economic development. Challenges of climate change as well as changing agricultural scenario and post-globalisation developments have necessitated to produce more and more food and other farm commodities from diminishing per capita arable land and water resources.

Orissa is blessed with a diverse agro-climatic condition, enormous natural resources and untapped human population and has great potentiality to keep its people in a comfortable position in providing employment and income as well as secured in the food front. In such a situation the state needs commercialisation and diversification of agriculture along with management of existing resources optimally.

**The research problem :** In this backdrop the present study aims at examining the food security system of Titilagarh subdivision of Bolangir district in Orissa. The cropping pattern of the Titilagarh

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Agriculture District is dominated by traditional & low productivity crops. Low production has resulted in low income & employment insecurity. Lack of alternative job opportunities has encouraged migration.

This paper aims at finding solutions towards paradigm shift in Indian agriculture as a step towards food and livelihood security with reference to Titilagarh Agriculture District (TAD) under the KBK districts of Orissa under the rain fed conditions.

The study is based on both primary & secondary data. The primary data are collected through field survey. The secondary data are collected from Government & non-government organization.

**A profile of Titilagarh agriculture district :** Titilagarh Agriculture District (TAD) comes under Bolangir Revenue District under the KBK region comprising 8 districts : Kalahandi, Nuapada, Bolangir, Sonepur, Rayagada, Koraput, Nabrangpur and Malkangiri. These districts of the state look like the sick children of Orissa. This area has attracted the attention of international media, politicians and research scholars due to its recurring drought and flood, chronic and transient poverty, hunger and starvation death, underdevelopment and migration, distress sale of property and children, and outbreak of epidemics. Though very rich in natural resources, this area has a substantial regional disparity in terms of literacy (31.58 per cent which is 63.61 per cent for the state), health & poverty stricken people (74.24 per cent BPL which is 47.17 per cent for the state). This area constitutes a sizeable amount of tribal population (16.7 per cent SC & 38.95 per cent ST). While 85.03 per cent of our state population lives in rural areas, it is 89.89 per cent for KBK. 90.5 per cent of rural population of this region is basically engaged in primary sector activities.

### **Findings**

Almost all the people in the villages studied depend upon agriculture & most of them are poor. They do not want to take risk in adopting a new crop and /or new technique & follow some big farmers who adopt & succeed. While adopting a new crop they look into the livelihood security, the big farmers look at profit (which may be in the long run). Crop diversification has raised the level of income & standard of living of the small & marginal farmers & provided high profit to the big farmers. Besides, all those who have diverted from their traditional crops have experienced increase in their incomes.

Adoption of appropriate location-specific crop pattern with lab-land link will remove poverty, check migration, remove dislike to agriculture, beat stagnation & improve the rural economy. The challenge before the country today is of providing food security and enhancing the quality of life of all citizens by making available employment, enhanced income and better livelihood opportunities. Orissa has high incidence of poverty, social and economic backwardness, illiteracy and inequalities. The enormous potential of the state in agriculture, horticulture, animal husbandry, forestry, fishery, etc. is contrasted by the low levels of productivity which are generally below the national average. A holistic and a mixture of indigenous-modern approach are needed to redress the adversities and imbalances that exist today and to bring about a comprehensive change in the human development graph. This is possible only with the optimum utilisation of the latent resources and bridging yield gaps. Provision of multiple livelihood opportunities can only contribute to income enhancement, health-nutrition-education accompanied by empowerment of people and the most important outcome will be food security. Last but not least linkages from research and development to agriculture, agro-processing and marketing will bring a significant shift in the human development paradigm. This is nothing but a step towards evergreen revolution approach towards food security. It requires a set of empirical knowledge concerning hydrological, economical, social, ecological and institutional issues involving multi-disciplinary and people's participatory practices.



# **Food Security in India and The Issues of Production, Procurement And Distribution**

**Rajan Kumar Sahoo<sup>1</sup>  
Sk. Kalimulaha<sup>2</sup>**

## **Introduction :**

A recent headline of the newspaper that captured the attention of all was that in the country huge stocks of food grains worth Rs. 580 billion stored in temporary sheds of Food Corporation of India (FCI) got spoiled and a substantial portion wasted by mices and insects. It is no less than a sin to waste such huge quantities of food grains when millions of people remain unfed and underfed in many parts of the country and starvation death has become a chronic issue. Even today malnutrition has remained wide spread and eradication of hunger is poor inspite of numerous government schemes and safety nets. The problem has become more critical after the Supreme Court's oral declaration of free distribution of food grains to the poor instead of letting the stock rot. The situation has become more grave after its written order. The court said, "The Government shall supply food grains to poor at low cost or no cost". To address the above situation there is a need of meeting the requirement of food and increasing the agricultural productivity for ever rising population through sustainable agriculture and revamping the food procurement and streamlining its distribution system.

## **Objectives of the study and database**

Realising the miserable situation the poor people face to-day in the food front the study has been planned with the following objectives.

- To study the nature of food security the people of the country will have in future.
- To point out the problems faced by farmers in the field of production & threats to sustainable agriculture.

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- To find out the problems in the procurement & distribution of food grains in the country.

The study draws heavily on secondary data sources.

### **Nature of food security and issues of production, procurement and distribution**

Over the next four decades i.e., by 2050, the world population will grow by 2.3 billion. Meeting the demand of 9.5 billion inhabitants in 2050 will require 70 per cent more food than we currently produce.

India has achieved a four fold increase in food grains from 50mt. in 1950 to 219.3 mt. in 2007-08, against a three fold increase in population from 33 crore to more than 100 crore. But the tragedy in the country is that though it is the largest producer of milk, vegetables, fruits, fish & egg in the world, 300 million of its people go without two square meals a day. This shows the nature of food insecurity faced by the people of the country.

Similarly another demand and supply projection developed at Indian Council for Research on International Economic Relations explains the magnitude of food insecurity that will be faced by the people of the country. The domestic demand projected under two scenarios which assume the Gross Domestic Product (GDP) growth rates to be 8 percent and 9 percent are as follows. The total cereal for 2011 is 187 mmt if the economy grows at the rate of 8 percent per annum and 188.5 mmt if the GDP is 9 percent. The cereal demand in 2026 will be 273.5mmt and 272.2 mmt in the alternative scenarios, respectively. During the same period, demand for rice, wheat and pulses is expected to be 102mmt, 65.9 mmt and 57.7 mmt respectively under scenario 2. Increase in demand for pulses is quite evident as this is the major source of protein for the vegetarian population. Demand for edible oil is projected to be 40.9 mmt by 2026 and sugar demand is expected to increase almost nine fold to 100.7mmt in 2026 from base year demand of 11.9 mmt.

Supply projections have been computed using the yield growth for the most recent period of 1993-2003 and taking 2003-04 as the base year for area and production. Supply prospects have accordingly been presented for selected food items. If there is no area expansion and future supply is only dependent on yield growth, then total supply of cereals will be 209.7mmt in 2011, 242.2mmt in 2021 and 260.2mmt in

2026. Rice and wheat production is also estimated to increase to 111.2mmt and 97.9mmt respectively by 2026.

Increase in total demand is mainly due to growth in population and per capita income and as far as supply is concerned, production is constrained by low yield growth in total cereals in 2021 and 2026 and in case pulses, edible oil and sugar in all the periods i.e. in 2011, 2021 and 2026.

The challenge of meeting food requirement of ever increasing population can only be met through sustainable agriculture. But nearly 40 per cent of farmers want to give up farming if an option was available. The reason is low profit. To-day yields in India for almost all crops are stagnant and lower than other countries. The per-capita availability of land in India has declined. Nearly 60 per cent of the farmers on an average own 0.9 hectare while another 20 per cent on an average hold 1.4 hectares. This puts the population of small and marginal farmers at about 80 per cent of the total. Such meager land holdings by a large majority of the farmers are neither viable nor sustainable for a country with billion plus mouths to feed.

The threat of climate change looms large over Indian agriculture. A 1°C increase in the temperature will reduce the duration of wheat and rice in north and western India by a week. This will result in reduction of rice yield by 4 to 5 quintals per hectare. Besides affecting the productivity, climate change will result in emergence of new insects, pests shifting the range of various species, decline in milk production and increased susceptibility to various diseases.

Dry land is home to more than 450 million farming people. It contributes 42 per cent of total food grains especially coarse grains, 75 per cent of pulses and oil seeds and 40 per cent of wheat. Climate change would expand dry land by 11 per cent. Dry land are characterized by low level of fertility, low productivity, frequent crop failure, uneven and untimely rainfall, extensive holdings, prolonged dry spell and low moisture retention capacity.

We still are lacking in the desired infrastructure for providing irrigation to the cultivable areas, technology for soil and moisture conservation, infrastructure for storing perishable products, road connectivity for bringing perishable products into the market at the earliest, chains of cold stores at the village level, small scale industries

for value addition and water harvesting structures for conserving water. To-day agriculture sector will have to deal with a small agricultural labour force as some 600 million people will move from country side to cities.

As poverty level is very high in agriculture, government support through minimum support price (MSP) is absolutely necessary. It ensures the farmers to get remunerative price for their produce. But its calculation involves looking at cost of production of the crop, cost of living of farmers, price parity of commodities etc. It assures the farmers to cultivate the crop of their choice. Moreover MSPs are declared for around 25 crops but are effective for virtually only rice and wheat and to a very mild extent for coarse cereals. This is done to counter inflation while there have been occasions where they have been increased to induce more cultivation in certain crops, but it creates inflation.

The tendency for the cropping pattern is skewed towards rice and wheat as the prices offered are high and the farmers instead of being encouraged to grow pulses and oilseeds (where India has deficit) prefer to grow rice, wheat and cereals where MSP is available. So there are lot of problems in the field of production of food grains.

MSP is linked with procurement. There are three motivations for procurement of food grains. Firstly, it provides food security by utilizing the produced stock at the time of crisis. Secondly, the procured grains are provided to Public Distribution System as a consequence of which the poor people have access to cheap food grains and thirdly, it stabilizes price in the market. But there are some problems in the procurement system of the Government. Government procurement is for a fair average quality of the product and is an open ended scheme. Open ended scheme means that there are no limit to what the FCI can pick up. While procurement is open ended, distribution through PDS and other schemes is more or less fixed and grows marginally every year being related to population growth and development schemes. For example in financial year 2009-10 the FCI procured 57 million tonnes of wheat and rice of which the off take through PDS and other schemes was just 31.4 million tonnes involving holding cost of 25.6 million tonnes of excess stocks. Assuming an average cost of Rs.1050/per tonne, the overall cost would work out to an investment of Rs.26,250 crore with an interest cost of over Rs.2600 crore (assuming rate of 10%). Keeping

aside these costs, the more serious implication is the distortions in the market caused by to such a policy.

India produces around 80 million tonnes of wheat. Of this around 2/3 enters as marketed surplus which means that 54 million tonnes come out in the open. Now from this 54 million tonnes if the Government takes in another 25 million tonnes as procurement, there would be around 30 million tonnes available for the private players. Given that procurement and subsequent stocking are far in excess of what is required, the Government ends up hoarding food grains quite inadvertently in the process. This creates scarcity in the market pushing up prices despite there being healthy production. So we need to reconsider the procurement policy so as to avoid excess stock.

The third area is distribution where procured food grains are distributed across the states under various schemes. After the revamping of Public Distribution System in June 1992 and subsequent launching of TPDS (Targeted Public Distribution System) in June 1997, the system has been oriented more towards BPL families. Many parliamentary committees and Food Ministry studies have confirmed leakages in the delivery mechanism which results in food grains often not reaching the beneficiaries. Sometimes a lot of pitfalls are seen in identifying the targeted groups. According to the Economic Survey the procurement cost varies between Rs.2.12 - 2.89 per kilo for wheat and rice while distribution cost varies between Rs.1.82 and 2.45 per kilo. These costs need to be reduced while delivering the commodity to the poor, who get rice between Rs.3-7.95 / kilo and wheat at Rs.2.6-1 / kilo as against a total cost of Rs.18.93 and Rs.14.02 / kilo for rice and wheat respectively.

### Conclusion

Food security is a major issue for our country as scarcity & starvation death can cause great disaster in the country. Policies are needed to be geared to increase agricultural productivity and safety nets may be introduced by the Government to increase the purchasing power of the poor. Procurement programmes have to be adapted to the changing requirements. Stocking of farm produce should not just be a mechanical process and must be managed well. An efficient and transparent Public Distribution Mechanism may be adopted for making the food grains available at the door step of the poor.



# **Food Problem And Agricultural Price Policy in India**

**Gouranga Panda**

## **ABSTRACT**

The agricultural price policy in India has succeeded in establishing certainty and confidence in respect of the prices of agricultural products through the fixation of minimum support prices by the Commission for Agricultural Costs and Prices. Again raising the minimum support prices and procurement prices offered incentive to the producers to increase their production but these benefits were mostly restricted to large farmers. Moreover, the public distribution system in India is also subjected to various limitations such as its restricted operation in wheat and rice only, insufficient coverage of rural areas, inadequate coverage of the people lying the below poverty line and its too much expensiveness due to lack of targeting.

As argued by several economists, continuous increase in the procurement prices has resulted in a spurt to inflationary pressures in the economy. This increase in the price of food grains has also resulted in huge hardships to the rural poor consisting of marginal farmers and landless labourers who constitute the bulk of rural population.

Moreover, the fixing of uniform purchase price for the country on the basis of cost of production has benefited the developed states having low average cost of production such as Punjab and Haryana etc. Thus, the agricultural price policy has a bias in favour of the rich states at the cost of consumers in general adversely affecting food security of households.

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# **Public Distribution System And Sustainable Food Security in India**

**Monalisha Bindhani\***

Public Distribution System (PDS) means distribution of essential commodities to a large number of people through a network of Fair Price Shops (FPS) on a recurring basis. PDS evolved as a major instrument of the government's economic policy for ensuring availability of food grains to the public at affordable prices as well as for enhancing the food security for the poor whose number is more than 330 million and are nutritionally at risk. PDS with a network of about 4.99 lakh FPS is perhaps the largest distribution network of its type in the world. PDS is supplemental in nature and is not intended to make available the entire requirement of any of the commodities distributed under it to a household or a section of the society.

PDS is operated under the joint responsibility of the central and state governments. The central government, through Food Corporation of India, has assumed the responsibility for procurement, storage, transportation and bulk allocation of food grains to the state governments. The operational responsibility including allocation within state, identification of families below the poverty line, issue of Ration Cards and supervision of the functioning of FPS, rest with state governments. Under the PDS, presently the commodities namely wheat, rice, sugar, and kerosene, are being allocated to the states/UTs. They also distribute additional items of mass consumption through the PDS outlets such as cloth, exercise books, pulses, salt and tea etc.

## **Evolution of Public Distribution System**

Public Distribution of essential commodities had been in existence in India during the inter-war period. PDS, with its focus on distribution of food grains in urban scarcity areas, had enacted from the critical food

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shortages of 1960. PDS had substantially contributed to the containment of rise in food grains prices and ensured access of food to urban consumers. As the national agricultural production had grown in the aftermath of Green Revolution, the outreach of PDS was extended to tribal blocks and areas of high incidence of poverty in the 1970s and 1980s.

PDS, till 1992, was a general entitlement scheme for all consumers without any specific target. In order to strengthen the system, A Revamped Public Distribution System (RPDS) was launched in June 1992 in 1775 blocks of its reach in the far-flung, hilly, remote and inaccessible areas of the country. Subsequently the government launched the Targeted Public Distribution System (TPDS) in June, 1997 with focus on below poverty line population.

#### **Revamped the PDS**

The PDS earlier covered the whole population without any segmentation. There used to be a lot of pilferage under the system and huge amounts of food grains would enter the open market with the connivance of fair price shop owners. On the basis of recommendation of the Chief Ministers' conference held in July 1996, an effort was made to streamline the public distribution system. As a result the targeted public distribution system was adopted from June, 1997. This system follows two tier subsidized pricing structure for families Below Poverty Line (BPL) and for those Above Poverty Line (APL). Under the TPDS the government has announced a dual issue price structure for food grains separate for both the group of people, i.e. people below poverty line and people above the poverty line. However, for years the government both at the center and the states have been grappling with the issue of efficient running of more than five lakh odd ration shops or fair price shops which deliver food grains under TPDS. Many parliamentary committees and food ministry studies have confirmed leakages in the delivery mechanisms which result in food grains often not reaching the beneficiaries. Many state governments have initiated innovative measures to stop pilferage in the TPDS system by introducing smart cards, biometric thumb impression of the beneficiaries etc.

As food subsidy bills mount, the need for complete revamping of the existing TPDS has been felt across many quarters including the food ministry and state government. The total food subsidy released during the last three years is given in the following table.

YEARS	SUBSIDY RELEASED (Rs/Crore)
2007-08	31259.68
2008-09	43668.08
2009-10	58242.45

Source: Food ministry

The above table shows that, in the year 2007-08, the subsidy released is Rs.31259.68 crore and it is Rs.43668.08 crore in the year 2008-09. So, between these years food subsidy is increased by Rs.12408.40 crore. In the year 2009-10, the subsidy is Rs.58242.45 crore. So, the food subsidy bill is increasing during last three years. During a recent conference of food secretaries, several possible initiatives were discussed to improve the delivery system, including the issue of food coupons, introduction of IT based initiatives through computerization of the TPDS and Smart Card based delivery of food grains. In order to make the TPDS more focussed and targeted towards poorest of the poor, since April, 2002, Government is providing 35kg. of food grains per family per month at low price of Rs. 2 per kg. for wheat and Rs. 3 per kg. of rice. The Antyodaya Anna Yojana (AAY) now covers 3 crore Below Poverty Line families. Subsidized food grains also are issued to all beneficiaries under EAS/JRY as per guidelines at the rate of 1 kg. per man day for which food coupons would be issued to beneficiaries for exchanging at fair price shops.

#### Recent Policy Changes

- PDS linked to employment guarantee programme – Sampoorna Gramin Rojgar Yojana, 2001.
- Government removed many items from Essential Commodities Act – enhanced private sector investment in warehousing.
- Removed restrictions on storage and movement of food grains.
- No licensing requirement for dealers.
- Open ended procurement at high price and disposal at a subsidized price is not sustainable.

- Instead of providing subsidized food grains, financial assistance is provided to state government to procure and distribute food grains.
- To avoid high cost of procurement, stocking and distribution – farmers are permitted to sell in the open market and the differential between MSP and market price will be reimbursed by the government. Privatization of procurement, storage and transportation has been attempted.

### **Food Security System**

Food is the first among the hierarchical needs of a human being. A household is considered food secure when its occupants do not live in hunger or fear of starvation. By the growing age, with the vast increase in population the concept of food security is changing. Food security is the access of all people to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. It has four basic components: availability, accessibility, utilization, and stabilization. Availability is a function of production, accessibility is related to purchasing power, utilization is determined by the availability of minimum basic needs i.e. safe drinking water, primary health care, primary education, proper housing facilities, environmental hygiene and stabilization is influenced by the extent of attention given to the sustainability of the system.

Two commonly used definitions of food security come from the UN's Food and Agriculture Organization (FAO) and the United States Department of Agriculture (USDA):

- Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.
- Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum the ready availability of nutritionally adequate and safe foods, and an assured ability to acquire acceptable foods in socially acceptable ways (i.e. without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).

From 1947 onwards, achieving food security for all has been a national goal. Food security is now defined as physical, economic, and social access to balanced diet, clean drinking water, environmental hygiene, and primary health care. India at presents finds itself in the midst of a paradoxical situation: endemic mass hunger coexisting with the mounting food grains stocks. The food grain stocks available with the Food Corporation of India (FCI) stand at an all time high against an annual requirement for ensuring food security. Still, an estimated 200 million people are underfed and 50 million are on the brink of starvation, resulting in starvation deaths. The paradox lies in the inherent flaws in the existing policy and implementation bottlenecks. The country has achieved a fourfold increase in food grains from 50mt. in 1950 to 219.3mt in 2007-08 against a threefold increase in population from 33 crore to more than one crore. Today, India has become the largest producer of milk, vegetables, fruits, fish and eggs. But it is a tragedy that in a country which is one of the largest producer of food in the world, nearly 300 million go without two square meals a day.

Unfortunately, in spite of numerous government schemes and safety nets, under and malnutrition remain widespread in our country. Children and women suffer the most. In spite of all the progress we have made in industry and economic growth rate, our reputation in the field of eradication of hunger and malnutrition is poor. In the last decade, emphasis in relation to basic human needs has shifted from a patronage to a rights approach. Thus, we have now legal rights through Parliament Approved Legislation in the fields of education, information, and employment. Currently, there is an ongoing exercise in developing a National Food Security Bill which will confer on every Indian the legal right to food.

### **Food security as a challenge**

Food security is a complex sustainable development issue, linked to health through malnutrition, but also to sustainable economic development, environment and trade. There is a great deal of debate around food security with some arguing that:

- There is enough food in the world to feed everyone adequately; the problem is distribution.
- Future food needs can or cannot be met by current levels of production.

- National food security is paramount or no longer necessary because of global trade.
- Globalization may or may not lead to the persistence of food insecurity and poverty in rural communities.

### **Introducing the concept of Sustainable Food Security**

For meeting the challenge of food requirement of ever increasing population, sustainable food security policy is a better way to tackle the situation. To achieve sustainable food security, the following dimensions of this problem need concurrent attention:

- Availability of food, which is a function of production.
- Access to food, which is a function of purchasing power and employment.
- Absorption of food in the body which is a function of clean drinking water, sanitation and health-care.

Thus, food and non-food factors relating to food security need integrated attention. Fortunately, we have many schemes which address these issues. The Rajiv Gandhi Drinking Water Mission, the Total Sanitation Programme and the National Rural Health Mission can all ensure that whatever food is consumed is beneficial. The various employment generation schemes and more particularly, the Mahatma Gandhi National Rural Employment Programme are helping to provide the minimum essential purchasing power. For increasing the availability of food, several steps have been taken such as Rastriya Krishi Vikas Yojana with an outlay of Rs.25000 crore, National Food Security Mission with an outlay of about Rs.6000 crore, National Horticulture Mission with an outlay of Rs.10,363.46 crore during the 11th five-year Plan period etc. There are many other schemes dealing with different areas of production, such as soil health-care, crop protection, and irrigation. In spite of all these schemes our agriculture is still very vulnerable to the behavior of the monsoon. For example, during 2009 the widespread drought brought down the agricultural growth rate to -0.2 percent, as against the target of four percent. Our country faces the challenge of producing food not only for 1.2 billion people, but also for about a billion farm animals. Nearly 70 per cent of our population lives in villages and their main sources of livelihood are crop and animal husbandry, fisheries, agro-forestry, agro-processing, and agri-business. Therefore, in our

country agriculture is not merely a food producing machine but is the backbone of the livelihood security system of a majority of our population. This is why we should concentrate on building our food security with home grown food. Importing food grains by a predominantly agricultural country like ours will have the same impact as importing unemployment and will lead to greater agrarian distress. Therefore, food security should have the first charge on the available financial resources. Spoilage of grains through lack of investment in storage is a sad reflection on our sense of priorities. A National Food Security Act giving legal rights to food can be implemented only by attending to the safe storage of both grains and perishable commodities like fruits, vegetables, and milk. At the same time animal nutrition also requires greater attention. Unfortunately, grazing land is fast shrinking. Animals are underfed and are therefore low yielding. Animal food security is essential for human nutrition security. So, sustainable agriculture leads to a path for sustainable food security.

#### **Reorganization of food security and PDS**

Seeing the weakness and shortcomings in PDS, suggestions are:

a) **Adopting a targeted PDS.**

Such targets can be achieved in 3 ways.

- (i) **Person targeting:** Identify the person who needs food subsidy.
- (ii) **Limit:** Food subsidy to those food grains consumed by poor.
- (iii) **Geographic targeting:** Limit PDS only to those areas where poor are concentrated.

b) **Linking PDS with public works programmes**

The main object of PDS is to provide "safety nets" for poor by providing adequate quantities of food grains at affordable cost. So, PDS serves as cushion to poor against high price. Rural Works Programme, Employment Guarantee Scheme, JRY and EAS provide employment to poor people and are also a "safety net" for poor. The most important advantage of public works programme is that target group people who participate are mostly poor and highest unemployment prevails among them. Secondly, Rural Works Programme contributes in building up rural infrastructure e.g., soil conservation, land development, construction of tank and road etc. So, consensus is to link PDS with Public Works



Programme. Keeping this view, government recently launched two programmes.

- Food for Work Programme and
- Sampurna Gramin Rojgar Yojana.

Food for work programme launched in rural areas of draught effected states in January 2001, as part of EAS has been later extended to flood/heavy rain affected areas of Bihar and Kerala. Allocation of food grain is free of cost. SGRY was launched on September 25, 2001. Under SGRY all wage employment schemes will be merged. Under SGRY 50 lakh tonnes of food grains will be provided every year free of cost to all states/UTs.

### Conclusion

PDS is essentially a supply side management intervention in the food market. PDS alone will not solve the problem of food security. While the PDS does influence the lowering of seasonal price escalations of cereals to sustain consumer prices, it can also be viewed as an institutional insurance against future food insecurity. In the absence of the PDS, cereals prices can become volatile and also cause supply constraint. A reformed and decentralized PDS can improve targeting of the poor and influence local price determination of cereals in a way that it provides both physical and psychological food security to the vulnerable. Along with PDS, demand side management i.e. creation of effective demand for food, is necessary. Therefore, proper implementation of poverty alleviation programmes, generation of employment, controlling rise in food prices, nutrition education and health care are highly essential for increasing food security in India.

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# **Agricultural Policy And Food Security in India**

**Sabita Soren\***

## **I. Introduction**

The agriculture and agri-related activities form the backbone of Indian economy. The sector has the potential for absorbing large labour and in providing livelihood to a majority of people. According to the India Development Report about 60.7 million workers were absorbed in 2004-05. The country has made impressive growth on the agricultural front during the last three decades. There is significant increase in food production and its availability through policy support, production strategies, public investment in infrastructure, research and extension for crop, livestock and fisheries by the government. The increase in production resulted from yield gains rather than expansion of cultivated area. Increased agricultural productivity and rapid industrial growth in the recent years have contributed to a significant reduction in poverty level. During the last 30 years India's food grains production nearly doubled from 102 million tonnes in 1973 to 200 million tonnes in 1991. Under the assumption of 3.5 per cent growth in per capita GDP, demand for food grains is projected in the year 2020 at the level of 256 million tonnes comprising 112 million tonnes of rice, 82 million tonnes of wheat, 39 million tonnes of coarse grains and 22 million tonnes of pulses. The massive increase in population and substantial income growth, demand an extra about 2.5 million tonnes of food grains annually. Besides significant increase is needed in the supply of livestock, fish and horticulture products. Rapid growth of agriculture is essential not only to achieve self-reliance at the national level but also for household food security and to bring about equity in distribution of income and wealth. So it is imperative for any government to increase agricultural production and its availability to the people through the appropriate agricultural policy which will be guaranteeing adequate food security. Engulfed within a vertex of population growth, economic instability and climate

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change, food security has become an urgent challenge for national and global governance. Food security particularly for rural communities is a product of agricultural policies that protect their resources and livelihoods. With this backdrop this paper seeks to examine the goal of agricultural policy in providing food security.

## **II. Agricultural Policy and Food Security**

Agriculture is and will continue to be central to all strategies for planned socio-economic development of the country. But the rising prices of food grains which cause food price inflation in India is a matter of concern. In terms of consumer price indices, India has the highest inflation rate among all the G20 countries. According to the government this is due to increase in crop prices. There are mainly fourfold reason behind high inflation, especially food prices. These are : a) the policies causing agrarian crisis and eroding food self-sufficiency, b) weakening of Public Distribution System, c) failure to check hoarding and speculation and d) increase in fuel prices.

For guaranteeing supply level, price stability, product quality, product selection, land use or employment there is need for a proper agricultural policy. Governments usually implement agricultural policies with the goal of achieving a specific outcome in the domestic agricultural product markets.

Agricultural policy is a set of laws relating to domestic agriculture and import of foreign products. The policy approach to agriculture has been to secure increased production through subsidies in inputs such as power, water and fertilizer. The National Policy on agriculture seeks to increase the growth potential of Indian agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro-business, create employment in rural areas, secure a fair standard of living for the farmers and agricultural workers and their families who are the backbone of Indian agriculture, discourage migration to urban areas and face the challenge arising out of economic globalization and liberalization. The aim of the policy is to attain:

- Over 4 per cent growth rate in agriculture sector.
- Growth with efficient use of resources which conserves soil water and biodiversity.

- Growth with equity across regions and farmers.
- Growth which creates demand and caters to domestic market and maximizes benefits from exports of agricultural products.
- Growth that is sustainable technologically, environmentally and economically.

All these policies have not been performing well. The pattern of growth of agriculture brought uneven development across regions and crops as also across different sections of farming community and is characterized by low levels of productivity and degradation of natural resources. Still it has increased the annual food grains production from 51 million tonnes of the early fifties to 206 million tonnes at the turn of the century and contributed significantly in achieving self-sufficiency in food and in avoiding food shortages in our country. Agriculture is generally regarded as a unrewarding profession due to unfavorable price regime and low value addition causing lack of interest among farmers and increasing migration from rural to urban areas.

Over 200 million Indian farmers are engaged in agriculture sector. For the well being of the community there is the urgent need for National Food Security. The establishment of an agrarian economy which ensures food and nutrition to India's more than one billion people, raw material for its expanding industrial sector and surpluses for exports and a fair and equitable reward system for the farmers are the reforms needed in agriculture sector.

### **III. Goal of Agricultural Policy for increase in Production**

For ensuring food security special efforts are made to raise productivity and production of crops.

- The development of new crop varieties, particularly of food crops through genetic modifications.
- Differentiated strategies are pursued, taking into account the agronomic, climatic and environmental conditions for the growth of every region.
- A major thrust is given to development of rain fed and irrigated horticulture, floriculture, roots and tubers, plantation crops, aromatic and medicinal plants, bee-keeping and sericulture for augmenting food supply, exports and generating employment in the rural areas.

- Availability of hybrid seeds and disease-free planting materials of improved varieties, supported by a network of regional nurseries, tissue culture laboratories, seed farms are promoted to support systematic development of horticulture having emphasis on increased production, post-harvest management, precision farming, bio-control of pests and quality regulation mechanism and exports.
- Development of animal husbandry, poultry, dairying and aquaculture has received a high priority in the efforts for diversifying agriculture, increasing animal protein availability in the food basket and for generating exportable surpluses.
- A national livestock breeding strategy is evolved to meet the requirements of milk, meat, egg and livestock products and to enhance the role of draught animals as a source of energy for farming operations and transport. Major thrust will be on genetic upgradation of indigenous/native cattle and buffaloes using proven semen and high quality pedigreed bulls and by expanding artificial insemination network to provide services at the farmers' doorstep.
- Greater attention is given for generation and dissemination of appropriate technologies in the field of animal production as also health care to enhance production.
- Cultivation of fodder crops and fodder trees are encouraged to meet the food and fodder requirements and to improve animal nutrition and welfare.
- Priority attention is also given to improve the processing, marketing and transport facilities.
- The improvement of cooperatives and the private sector are encouraged for development of animal husbandry, poultry and dairy.
- An integrated approach to marine and inland fisheries designed to promote sustainable aquaculture practices are adopted.
- Biotechnological application in the field of genetics and breeding, hormonal applications, immunology and disease control has received particular attention for increased aquaculture production. Development of sustainable technologies for fish and shell fish culture as also pearl-culture, their yield optimization, harvest and post-harvest operations, mechanization of fishing

boats, strengthening of infrastructure for production of fish seed, berthing and landing facilities for fishing vessels and development of marketing infrastructure are accorded high priority. Deep sea fishing industries are developed to take advantage of the vast potential of country's exclusive economic zone.

#### **IV. Conditions for Guaranteeing Food Security**

Food security refers to the availability of food and one's access to it. A household is considered food secure when its occupants do not live in hunger or fear of starvation. According to the Food and Agricultural Organization 'Food Security for a household means access by all members at all times to enough food for an active, healthy life'. Guaranteeing food security for a population would require the state to intervene and guarantee the rights of its citizens on a number of dimensions. At the minimum it has to have a policy of guaranteeing food for all. There are three basic dimensions to food security: availability, access and absorption. A country should have enough food available with it to feed its citizens adequately on a regular basis. And for this it should have the capacity to produce and should be self-sufficient in so far as its basic food requirements are concerned.

#### **V. Government Proposal for Food Security**

The National Food Security Act envisages entitling every below poverty line family to a certain quantity of food grains each month at subsidized prices. According to this Act each below poverty line (BPL) family would be entitled by law to get 25 k.g. of rice or wheat per month at Rs.3/- per k.g. The proposal for a Food Security Bill has come at the right time when world has witnessed food crisis in 2008. The government has provided 277 lakh tonnes of food grains for below poverty line (BPL) and Antodaya Anna Yojana (AAY) categories, with a subsidy amounting to Rs. 37,000 crore. But under the new Bill, the government is providing 251 lakh tonnes of food grains for BPL and AAY categories, with subsidy amounting to Rs. 40,380 crore. Also there is a proposal for computerization of Targeted Public Distribution System which will take place along with setting up of village grain banks and Food Security Tribunals. The Rashtriya Krishi Vikash Yojana has been launched to incentivize states investing additional funds in the agriculture sector.

Orissa is also implementing these programmes under the National Food Security Mission and Rashtriya Krishi Vikash Yojana launched by



the central government. In a poor state like Orissa, the productivity of major food crops is pretty low in comparison to those in better producing states as well as the national average. The present agricultural growth rate in Orissa ranges between 2.5 and 3 per cent. So the government has prepared proposals for taking up programmes with an estimated cost of Rs. 850 crore under the National Food Security Programme, which has a total outlay of Rs. 5,000 crore. Action plans for Rs. 25,000 crore Rastriya Krishi Vikash Yojana are drawn up both at the state and district levels. The action plans prepared at the district level are forwarded to the state level after being approved by the District Planning Committees. The major thrust areas are their provision of seeds or fertilizers and water management under the action plan. It is also decided to involve "Pani Panchayat" (water users' association) and women self-help groups at the time of grass roots level planning.

### Conclusion

In the context of India, Food Security not only means ensuring adequate supply of food materials at the aggregate level but also the citizens should have the capacity to demand adequate levels of food. The National Food Security Mission has been launched as a centrally sponsored scheme to increase production and productivity of major food crops such as, rice, wheat and pulses on a sustainable basis to ensure food security in the country. In addition to the existing policies the government has drawn up a road map to ensure food security to all sections of people. An appreciable growth in the agriculture sector can certainly be achieved with better technology transfer and a good policy support from the government. It is possible through use of appropriate technologies for both progressive and resource poor farmers with availability of inputs at their doorsteps at affordable prices. The cost reduction is possible through increasing the productivity, decreasing the cost of cultivation, diversified cropping and farming systems and remunerative prices for agricultural commodities and parity price policy for inputs, effective utilization of available resources etc. Enhancement of irrigation coverage and provision of inputs such as agricultural credit as well as marketing support also would help in boosting the sector. Last but not least, all these are possible through the involvement of all stakeholders.



## **ORISSA STATE FINANCES**



## **Fiscal System in Orissa After Reforms**

**Bimal K. Mohanty\***

Fiscal system of a sub-national government in India in its conventional design comprises various devices through which financial resources of the concerned government are raised including the shared taxes and grants-in-aid from the Centre and plan grants from the Planning Commission and channelled into several outlets of expenditure. After the 73rd and 74th Amendments to Constitution on 25 April 1993, a new dimension has been added to the sub-national finances in India. The state governments have been bound by statutory provisions as enshrined in these two Amendments, to transfer a portion of their resources from their respective Consolidated Funds to Urban-Local Bodies and Panchayats on the basis of the recommendations of the State Finance Commissions. Keeping this in view, it has been decided to make a study of the Orissa finances starting with the initiation of reforms agenda in 1991-92. In the following paragraphs some of the budgetary parameters have been highlighted with facts and figures for a synoptic view on the Orissa finances.

### **AN OVERVIEW OF ORISSA FINANCES SINCE 1991-1992**

In the year 1980-81, Orissa enjoyed surplus in revenue account by Rs.74.5 crore and in the following year (1981-82) the surplus declined to Rs.27.98 crore. The reversal of the trend occurred from 1982-83 onwards and the imbalance in the fiscal position of the state turned significantly adverse to the perception of fiscal discipline in the post-reform period. During the period under study (1991-92 - 2008-09), the annual average compound growth rates of revenue receipts and revenue expenditure of the Government of Orissa were 13.05 and 14.57 per cents respectively. Deficits in revenue account persistently increased on an average by 17.33 per cent per annum till 2001-02. From 2002-03 onwards, the revenue account of the Government of Orissa showed the symptom of recovery from a chronic deficit to a state of elastic and manageable deficit. The revenue deficits of the Government of Orissa

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declined from Rs.1575.91 crore in 2002-03 to Rs.522.30 crore in 2004-05. From 2005-06, there has been surplus in revenue account in the Consolidated Fund of Orissa. In all, the year 2001-02 was the worst in the financial history of the state.

Deficits in general and fiscal deficit in particular are important measures for judging the strength of not only the national finance in India but also the sub-national finances. A closer look at the behaviour of revenue, fiscal and primary deficits as percentages of GSDP of Orissa confirms that the Government of Orissa was in severe fiscal crisis till 2001-02. While revenue deficit as a percentage of GSDP of Orissa increased almost steadily over years till 2001-02, fiscal deficit as a percentage of GSDP exhibited a sharp increase till 2002-03. Due to improved revenue collection and restraint on avoidable expenditure of the government, revenue deficit as a percentage of GSDP decreased starting with 2002-03. Fiscal and primary deficits taken separately as percentage of GSDP each reached their peaks during the fiscal year 2001-02. Since public debt constitutes a component of fiscal deficit, the latter is viewed with a concern. Public debt is normally used to finance the budgetary deficit caused by the excess of the total revenue and capital expenditures over the aggregate of revenue and capital receipts. Regular occurrence of fiscal deficit by any state is undoubtedly an index of unsound finance and the situation gets aggravated if such deficit goes on increasing year after year. Fiscal deficits of permanent type are always active challenges to productivity growth at economy level. In spite of the impending consequences of fiscal deficits, the Government of Orissa continues to incur it under the pressure of an obese and ever-increasing debt burden. The liability on account of interest payment and servicing of public debt is met out of current revenue. Interest payment alone, keeping aside the repayment of principal, of the Government of Orissa increased from Rs.481.05 crore (27.27 per cent of state's total revenue excluding central grants) in 1991-92 to Rs.2889.88 crore (14.86 per cent of state's total revenue excluding central grants) in 2008-09. Not only that such increases were unsystematic which thwarted the smooth process of budget-making and threatened sustainability of the budget, but also put a dead weight on the capacity of the government to meet its current expenses out of its current revenue. Though the interest liability of the Government of Orissa as a percentage of its total revenue excluding central grants has

diminished from 27.27 in 1991-92 to 14.86 in 2008-09, still it continues to be onerous on the state exchequer. Because of the unusual burden of interest liability, it was a hard task on the part of the Government of Orissa to wholly dispense with fiscal deficit. If it was not altogether avoidable, there should have been some reasonable margin within which fiscal deficit had to be contained. With a view to advancing the reform process with all cherished goals, it was felt at the national level that the fiscal operations could be sustainable in the presence of fiscal deficit if it could be brought below 5 per cent of GDP. But the Eleventh Finance Commission (2000-2005) set a permissible limit for fiscal deficit for India at 6.5 per cent of GDP provided the debt/GDP ratio does not exceed 55 per cent and GDP at current prices increases by a minimum of 13 per cent per annum. During 1991-92 – 2008-09, fiscal deficit (with ways and means advances) as a ratio of GSDP has declined from 10.87 per cent in 1991-92 to 1.55 per cent in 2008-09. Debt/GSDP ratio has also declined from 22.52 per cent in 1991-92 to 18.90 per cent in 2008-09. During the same period GSDP of Orissa has increased on an average by 13.15 per cent per annum. A comparison of the performance of Orissa finances in the year 2008-09 on the basis of the three criteria (Debt/GSDP ratio, Fiscal Deficit/GSDP ratio and annual average growth rate of GSDP) with those relating to the year 1991-92, has produced the evidence of an improved fiscal situation of Orissa as compared with that in the pre-1991 period.

The fiscal crisis that the Government of Orissa experienced is basically due to the unsustainable debt liability. During 2008-09, the interest liability (excluding the interest on GPF) alone was 13.64 per cent of state's total revenue expenditure, 18.19 per cent of state's total non-plan revenue expenditure, 90.99 per cent of state's own revenue receipts (excluding state's share in union taxes and grants-in-aid from centre), 11.74 per cent of state's total revenue receipts (including state's share in union taxes and central grants) and 2.16 per cent of GSDP. Public debt from all sources including Provident Fund constituted 27.27 per cent of GSDP during 2008-09. Public debt burden of the state was unsustainable in the sense that its total revenue from all sources was much below the accumulated stock of public debt not only for the concerned year but also for all the years (1991-92 - 2008-09). As a consequence, the Government of Orissa diverted a substantial portion of its gross public debt receipts including net General Provident Fund to bridge up the gap between the total revenue from all sources and the



aggregate of revenue expenditure and repayment of principal. During 1991-92, 46.37 per cent of new gross loans made were diverted against 44.11 per cent during 2005-06, thus the situation of debt trap persisted till 2005-06. Thereafter, no diversion has taken place till 2008-09. Judged from all these angles, the finances of Orissa have substantially improved only from the year 2005-06. This may again be ascribed to the long-run consequences of the austerity measures for fiscal management initiated by the state government including the measures of Debt Swapping.

### TAX REVENUE OF THE GOVERNMENT OF ORISSA

Experimented on the basis of the behaviour of revenue and fiscal deficits, the finances of Orissa have shown significant improvement starting with the year 2002-03. Accordingly, the behaviour of tax revenue of the Government of Orissa has been analysed during 1991-92 - 2008-09 having phased into 1991-92 - 2001-02 and 2002-03 - 2008-09. The annual average growth rates of the total tax revenue and its components of the Government of Orissa have been presented in Table-1.

**TABLE-1**

#### Growth Rates of Total Tax Revenue And Its Components

Phases	Period	Total Tax Revenue	Own Tax Revenue	Share in Central Taxes
I	1991-92 – 2001-02	19.05	19.93	18.30
II	2002-03 – 2008-09	19.19	18.59	19.78
Over All	1991-92 – 2008-09	18.61	19.25	18.04

Sources : Annual Financial Statement 1993-94 – 2010-11, Government of Orissa.

During Phase-I while the annual average growth rate of own tax revenue of the Government of Orissa is higher than that during Phase-II, reverse trend is noticed during Phase-II due to increase in the growth rate in the share in central taxes. The share in union taxes is seen to have been more-than-half of the total tax revenue of the Government of Orissa (Table-2). The share is determined on the basis of the recommendations of the Finance Commissions. Under the awards of the Twelfth (2005-10) and Thirteenth (2010-15) Finance Commissions, Orissa received the shares of 4.89 and 4.60 per cents respectively in

the divisible pool of central taxes and grants-in-aid. The Twelfth Finance Commission's award was little higher than those due to the Thirteenth Finance Commission. This has been basically due to the flow of Non-Plan Revenue Deficit Grants of Rs.488.04 crore for the year 2004-05 (received in 2005-06). The flow of such grants was stopped thereafter as the finances of Orissa exhibited revenue surplus starting with the year 2005-06. The percentage devolution awarded by the Twelfth and Thirteenth Finance Commissions each is much below the award made by the Eleventh Finance Commission of 29.50 per cent of the total of the grants-in-aid and all the divisible central taxes excluding surcharge on income tax. This has been due to the receipt of Non-Plan Revenue Deficit Grants during the entire period of reference of the Eleventh Finance Commission (2000-05).

**TABLE-2**

**Trends in Tax Revenue of the Government of  
Orissa During 1991-92 – 2008-09**

Year	OTR/TTR	SUT/TTR	IT/SUT	BED/SUT	Others/SUT
1991-92	0.448	0.552	0.263	0.737	-
1992-93	0.434	0.566	0.264	0.736	-
1993-94	0.446	0.554	0.314	0.686	-
1994-95	0.436	0.564	0.310	0.690	-
1995-96	0.467	0.533	0.394	0.606	-
1996-97	0.461	0.539	0.338	0.612	-
1997-98	0.476	0.524	0.370	0.630	-
1998-99	0.467	0.533	0.402	0.598	-
1999-2000	0.494	0.506	0.423	0.577	-
2000-01	0.456	0.544	0.152	0.364	0.484
2001-02	0.482	0.518	0.044	0.391	0.565
2002-03	0.506	0.494	0.375	0.592	0.033
2003-04	0.498	0.502	0.433	0.525	0.042
2004-05	0.512	0.488	0.468	0.479	0.053
2005-06	0.506	0.494	0.471	0.455	0.074
2006-07	0.494	0.506	0.502	0.402	0.096

2007-08	0.496	0.504	0.531	0.396	0.073
2008-09	0.491	0.509	0.534	0.358	0.108

Sources : Mohanty and Tripathy (2007)

Orissa Budget 2006-07 and 2010-11 at a Glance, Government of Orissa

Note: OTR: Own Tax Revenue

TTR: Total Tax Revenue

IT: Income Tax

BED: Basic Excise Duties

SUT: Share in Union Taxes

### DISBURSEMENTS OF THE GOVERNMENT OF ORISSA

Experimented on the basis of the behaviour of revenue and fiscal deficits, the finances of the Government of Orissa have shown perceptible improvement starting with the year 2002-03. Accordingly, the composition of public expenditure according to major heads has been analysed during 1991-92 - 2009-10 having phased into two, viz 1991-92 – 2001-02 and 2002-03 – 2009-10. The annual average growth rates of public expenditure in Orissa are shown in Table-3.

**TABLE-3**

#### Growth Rates of Total Expenditure And Its Major Components

Disbursements out of	Major Heads	Phase-I 1991-92 – 2001-02	Phase- II 2002-03 – 2009-10	Overall 1991-92 – 2009-10
Revenue Account	GS	18.79	9.87	13.97
	SS	12.10	16.1	13.30
	ES	8.19	20.06	12.44
Capital Account	GS	20.29	36.74	16.27
	SS	11.77	19.59	14.26
	ES	1.16	18.36	9.24
Aggregate (Revenue A/C+ Capital A/C)	GS	18.81	8.36	13.31
	SS	12.06	16.27	13.34
	ES	5.47	19.47	11.16
No. of Years		11	8	19

Sources: Annual Financial Statement 1993-94, 2003-04, 2004-05 and 2011-12, Government of Orissa.

Note: GS: General Services

SS: Social Services

ES: Economic Services

public investment expenditure. It is because, each portion of plan expenditure has a revenue component. In Orissa, the revenue components in plan expenditure for General Services, Social Services and Economic Services, on an average are 45, 90 and 55 per cents respectively (Mohanty, 2010). Thus the magnitude of public investment expenditure may be evaluated from total plan expenditure by netting out revenue component. The residue so obtained is defined as public investment expenditure which is the same as the aggregate of disbursements made by the government in its annual budgets for General Services, Social Services and Economic Services in its capital account of the Consolidated Fund. This figure has been quoted in budget papers as 'capital expenditure'. Table-4 shows the behaviour of each of the components of the public expenditure both revenue and capital after reforms.

**TABLE-4**

**Growth Rates of Public Expenditure  
in Selective Sectors of the Orissa Economy**

Phases	No. of Years	Interest Payment	Total Expendi- ture on Education	Total Expenditure on Health and Family Welfare	Public Invest- ment
1991-92 – 2001-02	11	19.41	12.25	10.10	3.07
2002-03 – 2009-10	8	2.73	16.54	13.01	19.09
1991-92 – 2009-10	19	11.73	13.68	11.25	10.00

*Sources : Annual Financial Statement 1993-94, 2003-04, 2004-05 and 2011-12, Government of Orissa.*

The interest liability of the Government of Orissa which was increasing at 19.41 per cent per annum during the Phase-I is seen to have exhibited an annual average growth rate of 2.73 per cent during the Phase-II. Though the liability on account of interest payment of the Government of Orissa has increased in absolute magnitude from

The annual average growth rates in expenditure allocations have improved much during the Phase-II as compared with those for the Phase-I both in revenue and capital accounts taken separately except for the General Services out of the revenue account. Among these annual average growth rates, the growth rate in expenditure allocation for General Services out of the capital account catches attention. This is not only the highest but the change over the previous Phase is also the highest. It has shifted from 20.29 per cent per annum during the Phase-I to 36.74 per cent during the Phase-II. This is due to the galloping allocation out of the capital account to 'Public Works' which is a component of General Services in the budget from Rs.11.78 crore in 1991-92 to Rs.163.55 crore in 2009-10. Since allocations out of the capital account are basically meant for building of physical infrastructure at the economy level, for a state like Orissa which lacks in terms of infrastructure facilities, it is indeed a healthy symptom.

The evidence of improved disbursements of the Government of Orissa during the Phase-II (2002-03 - 2009-10) is further drawn from the disbursements to some of the major items in the budgets of the Government of Orissa. These items include (1) interest payment, (2) expenditure on education, (3) expenditure on health and family welfare and (4) public investment expenditure. Interest payment is a major concern for budget making. It is not only an unproductive expenditure but it eats away a perceptible portion of the revenue receipts of the government. Orissa lacks in terms of human development. Any attempt to improve the human development sector of the state, it is unavoidable to go for social sector development. While education and health are two principal items under social sector of the economy, the other items like sanitation, nutrition, housing, water supply etc. are complementary in character. Deficiency in physical infrastructure is one of the fundamental reasons for deep seated economic backwardness of the state. These deficiencies have been a stumbling block for foreign direct investment flows to Orissa in spite of the state's vast stock of natural resource endowments. Market would not be capable of making provision for all such requirements needed to dispense with the crisis of cumulative economic backwardness of the state. Government action particularly in the provision of physical infrastructure is inevitable. This needs government investment in strategic sectors of the Orissa economy. Public investment outlays are distinct from current consumption expenditure of the government. The aggregate of plan grants is not

Rs.481.05 crore in 1991-92 to Rs.3444.24 crore in 1009-10, the speed at which it has increased is seen to have been spectacularly reduced during the Phase-II as compared with that during the Phase-I. The annual average growth rates in total expenditure on education and health and family welfare have shifted from 12.25 and 10.10 per cents during the Phase-I respectively to 16.54 and 13.01 per cents respectively during the Phase-II. These shifts are basically attributed to magnificent increase in outlays to Elementary Education under Sarva Shiksha Abhiyan (SSA) Scheme and to Primary Health Care under National Rural Health Mission (NRHM) Programme. Capital expenditure (public investment) of the Government of Orissa has made a jump from 3.07 per cent growth rate during the Phase-I to 19.09 per cent growth rate during the Phase-II. These indicate improved expenditure allocations after 2002-03.

#### **PUBLIC DEBT OF THE GOVERNMENT OF ORISSA**

This section discusses the debt management in Orissa in the post-reforms period. The period of study has been chosen starting with the year 2002-03. The Government of India allowed freedom of debt swapping to sub-national governments and consequently the Government of Orissa accepted the scheme with effect from the year 2002-03. This scheme was introduced with a view to supplementing the efforts of the state governments to discipline their respective fiscal situation. By debt swapping the states were granted authority to convert high cost loans into low cost loans (through swapping and buy-back). Debt swapping scheme is in a big way the most beneficial to states like Orissa whose most part of revenue was washed away by the discharge of interest and portion of principal. Table-5 exhibits the interest liability of the Government of Orissa during 2002-03 - 2008-09 and Table-6 shows the debt stock of the state as on the 1st day of April of the concerned year.

**TABLE-5**

#### **Interest Liability of the Government of Orissa**

Year	Interest Payment Including GPF (Rs Crore)	Interest Payment as a Percentage of				
		Revenue Expenditure	Non-Plan Revenue Expenditure	State's Own Revenue	Total Revenue	GSDP
2002-03	2885.58	28.81	34.17	75.28	34.19	5.75



2003-04	2860.28	26.33	31.03	65.06	30.30	4.65
2004-05	3332.02	26.93	31.99	60.34	28.12	4.66
2005-06	3697.10	27.18	32.17	56.58	26.25	4.71
2006-07	3188.43	20.22	24.44	36.85	17.68	3.50
2007-08	3169.48	17.88	23.25	33.33	14.43	2.98
2008-09	2889.81	18.99	24.87	45.84	18.53	3.69(Q)

Sources: Orissa Budget at a Glance 2010-11, Government of Orissa

**TABLE-6**

**Debt Stock of Orissa Excluding GPF as on  
1<sup>st</sup> April (Rs. Crore)**

Year	Debt Stock	Interest Payment	Debt Stock as a % of GSDP	Growth of Debt Stock as Compared to Preceding Year (%)	Per Capita Debt Stock (Col.2/ Popula- tion)	Debt Trap (%)
2002-03	17288.05	2220.68	34.78	13.99	4610.15	60.45
2003-04	20213.32	2508.91	33.13	16.92	5333.33	60.54
2004-05	23813.6	2618.97	33.22	17.81	6217.65	57.09
2005-06	25672.74	2337.85	27.01	7.81	6633.78	44.11
2006-07	26730.12	2398.05	28.12	4.12	6836.35	-15.5
2007-08	26925.27	2310.51	22.61	0.73	6799.31	-264.47
2008-09	25587.2	2134.94	19.15	-3.97	6396.80	304.83

Sources: Orissa Budget at a Glance 2010-11, Government of Orissa  
Economic Survey 2009-10, Government Orissa.

Notes : Column 2 (Table-12) - Column 3 (Table-13) = Interest Paid on GPF  
Debt Stock of the Government of Orissa during 2001-02 was  
Rs. 15166.66 Crore

Debt Trap = [Revenue Receipt - (Revenue Expenditure +  
Repayment of Principal)] / Gross Public Debt Receipt including  
GPF for the Concerned Year.

Evaluated in terms of the parameters like interest payment as a  
percentage of state's own- revenue, total revenue and GSDP (Table-5)

and debt stock as a percentage of GSDP, yearly growth of debt stock and per capita debt stock (Table-6), it is true that the burden of public debt in Orissa has lessened after the implementation of the debt swapping method. But in spite of the revenue surplus, the finance of the state has not been free from shackles of the debt trap. The situation is seen to have been aggravated again from the year 2008-09. If this trend continues, Orissa finance is likely to revert to the pre-reforms state.

## CONCLUSION

Though fiscal neutrality is an uncontested issue in market economies, the policy of extreme fiscal neutrality is never advocated. In Orissa, the policy of fiscal neutrality is an unenforceable proposition where all the defined economic and human development indicators are at their lowest rungs. Government finance is believed to be a favourable instrument for social and economic prosperity for balanced growth particularly in less developed regions. Public sector investment expenditure is unavoidable for the creation of physical infrastructure-both economic and social and thereby it will work as a feeder for increasing GSDP and employment in private sector of the Orissa economy. The intervention of the state in resolving particular development related issues invariably involves its financial commitment whose fulfillment depends on the fiscal competence of the government. If the finance of the state is in a very appalling shape basically indexed by the magnitudes of fiscal deficit, its disbursement for developmental expenditure out of current revenue is likely to be adversely affected. In this context, current revenue may be insufficient to meet the disbursement to prioritised items like revenue expenditure one of whose principal components is interest payment. The budgets of Orissa exhibited chronic deficit continuously for twenty three years starting with 1982-83. This has undoubtedly slowed down the involvement of the government in strategic sectors for the development of the state economy like physical infrastructure, poverty alleviation, health, education, sanitation, nutrition etc. Another major concern is the growing share of revenue component in plan expenditure of the state. Though plan expenditure by definition is not the same as developmental expenditure of a state, still the former is greatly demanded to exploit potentiality of an economy to generate more employment and enhance its productive capacity. In Orissa, the 'revenue component in plan expenditure allocated for general services on an average is around 45

per cent, for social services, it is more than 90 per cent and for economic services, the share is around 50 per cent. In view of such vast share of revenue component in plan expenditure, relatively small portion is available actually on plan heads which is referred to as the government investment expenditure. With a view to increasing the fiscal strength, the Government of Orissa has adopted several austerity measures in the post-reforms period along with enacting the Fiscal Responsibility and Budget Management (FRBM) Rules with effect from 2005-06. The implementation of all such measures and the FRBM Rules has brought concrete improvements in the finances of Orissa state. If the Government of Orissa scrupulously follows the FRBM Rules and the other measures of fiscal discipline in future years in respect of the budget formulation and implementation with the same degree of commitment, it can be capable of solving most of its own development related issues out of its own resources.

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## Public Expenditure Management at Sub National Level: A Perspective from the State of Orissa

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*A sound public expenditure management based on the principles of fiscal discipline, strategic resource allocation, and a result oriented operational management system is essential for the State Government given its functional responsibilities spanning over vast expanse of social and economic sectors. A strong budgetary environment, improved expenditure planning and strengthened institutional structure are required to improve the efficiency and effectiveness of public spending. The achievement of fiscal consolidation, in which revenue side played a key role, need to be supplemented by effective expenditure management to improve service delivery and public sector accountability. The reforms should give careful consideration to the existing institutional structure while attempting to bring in result oriented budgeting system, expenditure planning in a multi-year mode, strengthening internal control and audit system, improving transparency in fiscal management and establishing accountability.*

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## 1. Introduction

The wide ranging expenditure responsibilities of the state governments in India call for a robust public expenditure management (PEM) system determining the productivity and efficiency of government expenditure. The state governments bear major portion of expenditure responsibilities, about 55 percent of aggregate government expenditure, in the federal structure spanning over social and economic sectors. They have a predominant role in providing human capital and important role along with the central government in providing physical infrastructure. The public spending requirement in social and physical infrastructure to create enabling environment for attracting investment and raise the level of income and employment in the states remained vast. The poorer states, due to weak fiscal capacity are at a disadvantageous position to cater to the vast requirements in these fields. At the same time the central transfers have failed to offset fiscal disabilities of poorer states entirely (Rao and Jena 2005). The resource constraint faced by the states, viewed from their dependence on central transfers due to relatively higher expenditure responsibilities vis-a-vis the revenue sources, provides compelling reason to plan and design the public spending programmes effectively.

The fiscal correction measures adopted by the State Government in response to the fiscal crisis faced by them during the nineties, which became more pronounced in latter half of nineties with phenomenal rise in deficit in current account and unsustainable debt accumulation, did not deal with issues related to efficiency of public expenditure management. The finances of State Governments, including Orissa, improved considerably during the recent years. However, the difficult year of 2008-09, when the growth of national economy slowed down due to the international economic crisis, has put question mark over the process and strategy of fiscal consolidation in States (Rao, 2009). The Fiscal consolidation at state level in recent years was more due to improvements in revenue receipts. The rise in collection of central taxes played a key role in this as the states received higher share from central taxes. The state governments adopted fiscal responsibility and budget management act (FRBM) to contain their deficit and debt level, the

goal post for which has been extended as per the recommendations of the 13th Finance Commission (TFC). The State of Orissa has attempted improvements in budgeting systems and budget implementation processes in recent years, signaling the intention of the Government in this direction. These processes need to be strengthened to achieve the objectives of the public expenditure management and facilitate improvement in public service delivery.

In this paper an attempt has been made to analyze the public expenditure management systems at state level. The remaining paper is organized as follows. Section 2 discusses the process of fiscal improvement at state level. The conceptual issues relating to PEM and expenditure planning in the existing budgeting system are contained in section 3. Section 4 provides the issue and problem in PEM system in Orissa. Recent reform attempts by the Government Orissa are elaborated in section 5. Concluding remarks are contained in section 6.

## **2. Fiscal Improvement in Orissa**

There has been a significant improvement in the finances of the Government of Orissa in recent years. The turnaround in fiscal situation is seen from the decline in the revenue and fiscal deficits relative to GDP. The impact of Fiscal Responsibility and Budget Management Act (FRBM) adopted by the State Government to reduce deficit and stabilize debt burden, improved tax performance, and growing central transfers are significant factors that facilitated the fiscal consolidation in the State. Public expenditure management in a state like Orissa has to be seen in the context of fiscal challenges. The fiscal consolidation through fiscal reform, paves the way for budgetary reforms, expenditure planning and other management reforms pertaining to resource management.

Towards the end of the Nineties, sharp deterioration in the State finances reflected in increases in the revenue and fiscal deficits and steady accumulation of debt created a destabilising impact on the State finances inviting urgency for reforms (White Paper, GOO, 2001). More recent trends show substantial improvements in State finances (Table-1). There was more than 8 percentage point improvement in the revenue deficit from 6.06 per cent of GDP in 2001-02 to a substantial surplus of 2.56 per cent in 2008-09. The improvement resulted in reducing the fiscal deficit relative to GSDP from 8.49 per cent to a marginal 0.44



per cent during this period which increased space for higher capital expenditure. The fiscal restructuring plan designed by the 12<sup>th</sup> Finance Commission required the State to pass fiscal responsibility legislation to phase out the revenue deficits and reduce fiscal deficits to 3 per cent of GSDP by 2008-09. The progress in the reduction in revenue deficits was also linked to the writing off of the debt repayment to the Central government. While this has provided the direction in which the adjustment should take place, the mechanism to achieve this recommended by the Commission was too general.

The analysis of the various sources of improvements in state finances from 2001-02 to 2008-09 reveals interesting features (Table-2). From the table it is evident that reduction in revenue deficit has been driven by both higher revenue receipts, with central transfers playing a key role, and compression of expenditure. Total revenue receipt relative to GSDP increased by about 3.35 percentage points, where the increase in central transfers (1.74 percentage points) was higher than the rise in own revenue (1.61 percentage points). Compression in revenue expenditure in 2008-09 over 2001-02 is quite substantial, which is of the order of 5.27 percentage points relative to GSDP. Reduction in interest payment due to lowering of average cost of debt and the decline in non-development general service contributed to revenue expenditure compression. However, the expenditure compression measures in the State also resulted in reduction of social sector spending during this period. The improvement in revenue receipts and expenditure compression measures resulted in massive reduction of revenue deficit by 8.62 percentage points in 2008-09 over 2001-02. This reduction in revenue deficit was matched by reduction in the fiscal deficit by similar scale. The State Government could reduce its outstanding debt burden by a half from 51.40 per cent to GSDP in 2001-02 to 27.27 percent in 2008-09, a reduction of 24.13 percentage points relative to GSDP. The fiscal consolidation, however, failed to increase capital expenditure substantially (a meager increment of 0.38 percentage points). The large fiscal space that was created was not put to use in the priority sector spending, as is clear from declining social sector spending and almost constant capital expenditure. The achievement that can be showcased was the decline in debt burden of the State Government.

**TABLE-1****Fiscal Profile of Orissa : An Overview**

(Percent to GSDP)

	2001 -02	2002 -03	2003 -04	2004 -05	2005 -06	2006 -07	2007 -08	2008 -09	2009 -10 (RE)	2010 -11 (BE)
Revenues	15.07	16.98	15.47	16.53	17.95	18.97	18.45	18.42	18.34	18.11
Own Tax Rev.	5.28	5.78	5.41	5.83	6.38	6.38	5.76	5.98	5.91	5.97
Own Non-Tax	1.48	1.93	1.79	1.88	1.95	2.72	2.23	2.38	1.93	1.82
Central Transfers	8.32	9.26	8.27	8.83	9.63	9.87	10.46	10.06	10.50	10.32
Tax Devolution	5.67	5.64	5.45	5.55	6.22	6.54	6.59	6.20	5.63	5.76
Grants	2.65	3.62	2.81	3.28	3.41	3.32	3.87	3.86	4.87	4.56
Revenue Exp.	21.13	20.15	17.80	17.26	17.34	16.59	14.89	15.86	19.37	18.71
Interest Payment	6.06	5.80	4.69	4.65	4.71	3.35	2.66	2.16	2.38	2.28
General Service	10.87	9.96	8.82	9.26	8.89	8.18	6.36	5.50	7.44	7.30
Social Service	6.97	6.96	6.08	5.55	5.96	5.49	5.39	6.20	7.69	7.23
Eco. service	3.29	3.22	2.90	2.45	2.49	2.92	3.13	4.15	4.25	4.19
Capital Outlay	1.9	2.16	1.40	1.47	1.32	1.53	2.39	2.83	2.84	2.68
Revenue Deficit	6.06	3.17	2.33	0.73	-0.61	-2.38	-3.56	-2.56	1.04	0.6
Fiscal Deficit	8.49	5.66	5.86	1.91	0.35	-0.87	-1.11	0.44	3.70	3.34
Primary Deficit	2.42	-0.14	1.17	-2.74	-4.36	-4.22	-3.77	-1.73	1.32	1.06
Debt Stock	51.40	55.92	51.85	47.51	46.47	39.18	30.50	27.27	26.08	24.96

Source (Basic Data) : Finance Accounts and State Budget – 2010–11

Note: The GSDP figures are of 1999–00 series given by CSO; Negative signs in deficits indicate surplus

**TABLE-2****Fiscal Improvement since 2001-02**

	Percent to GSDP		Percentage Points Improvement
	2001-02	2008-09	
Total Revenue Receipts	15.07	18.42	3.35
Own Tax Revenues	5.28	5.98	0.71
Own Non-Tax Revenues	1.48	2.38	0.90
Central Transfers	8.32	10.06	1.74
Tax Devolution	5.67	6.20	0.53
Grants	2.65	3.86	1.21
Revenue Expenditure	21.13	15.86	-5.27
Interest Payment	6.06	2.16	-3.90
General Services	10.87	5.50	-5.37
Social Services	6.97	6.20	-0.77
Economic Services	3.29	4.15	0.86
Capital Expenditure	2.43	2.81	0.38
Revenue Deficit	6.06	-2.56	8.62
Fiscal Deficit	8.49	0.44	8.05
Primary Deficit	2.42	-1.73	4.15
Outstanding Debt	51.4	27.27	24.13

*Note : Improvements in deficit figures are shown as reduction in deficit in 2008-09 over 2001-02. The positive figures in deficit indicate the level of reduction.*

The slowdown in the national economy in 2008-09 adversely affected the finances of the State Governments due to decline in central transfers and slower growth of own revenue. From the Table-1, it is evident that the growth of own revenue and central transfers had declined after 2008-09 for Orissa. In addition to the slowdown in growth of revenues, the revenue expenditure of the State increased due to the impact of higher wages and salary payments based on the Sixth Pay Revision Commission recommendations. As a result the revenue account shows a deficit of 1.04 per cent to GSDP in 2009-10 revised estimates

and 0.60 per cent in 2010-11 budget estimates. The fiscal deficit also crossed the FRBM target of 3 percent of GSDP in 2009-10. Given the fact that the States were allowed to run fiscal deficit of 3.5 percent of GSDP in 2008-09 and 4 per cent in 2009-10, the deterioration of fiscal situation in the State is not alarming. The challenge remains to reduce the fiscal deficit to less than 3 per cent keeping the recommendations of the 13th Finance Commission in consideration. The 13<sup>th</sup> Finance Commission (TFC) has recommended a revised roadmap for fiscal reforms in which the target for fiscal consolidation has been shifted till 2014-15 (Report of the 13th FC, 2010).

### **3. Public Expenditure Management : Conceptual Issues in Linking Policy, Planning and Budgeting**

A sound public expenditure management based on the principles of fiscal discipline, strategic resource allocation and a result oriented operational management system is essential for the State Government given its functional responsibilities spanning over vast expanse of social and economic sectors. While the focus of fiscal trends has been on burgeoning deficits and its reduction, not much attention has been paid to the volume and composition of developmental expenditures, the strategy of resource allocation and achieving results from the public spending. Thus, it is essential to recognise the importance of expenditure strategy to contribute to the sustainable fiscal consolidation and improve the service delivery by the state governments.

The budgeting system reflecting the society's economic and social choices, involves both collection of sufficient resources from the economy in an appropriate manner as also allocating and use of these resources responsibly, efficiently and effectively (Salvatore Schiavo-Campo and Daniel Tommasi, 1999). Public expenditure management pertains to the second objective. Good expenditure management calls for expenditure control, allocation of resources according to policy priorities and good operational management, which implies minimizing cost per unit of output and achieving outcome for which output is intended. Optimal resource allocation involves distribution among programmes on the basis of priorities determined at the policy level, which should get reflected in the budget. As policy goals are required to be met within resources likely to be available in medium term, multi-year programme bringing out the cost implications is important in this

context. Effective PEM system is also a key component of good governance, which rests upon four pillars of accountability, transparency, predictability and participation.

A PEM system in any country is an integrated system of complex subsystems covering a vast expanse of budgeting cycle involving the process of strategic budget making, budget preparation and presentation in legislature, resource management during the budget implementation, internal control and audit systems, accounting and reporting systems, and external audit. Each of these components complements each other and any reform in PEM requires a comprehensive action. A sound PEM system requires a comprehensive budget assuring that resources are allocated to priority programs and good planning for public investment programmes. A clear distinction between capital and recurring expenditures, and multi-year spending projections are important components of sound PEM system. The other components that merit mention are accounting for commitments, decentralized procurement system through a competitive process, sound cash management system, good reporting system to assess the performance of the government in terms of budgetary integrity, effective management control, or internal control, assuring the economic, efficient and effective achievement of the government objectives, and an external audit to review and identify weaknesses in internal controls.

Improving PEM among other things requires strengthening institutional frameworks. The analytical background for the institutional reform relating to PEM stems from two important theories, first is the principal-agent relationship between voters (the principals) and politicians (the agents), and the second, the common pool problem of public finances (Hagen, 2007). These problems lead to excessive levels of public spending. With large number of politicians involved in the bargain the tendency toward excessive spending, deficits, and debt increases. Appropriate designing of institutions governing the decision making in public finances is a way to address these adverse consequences. The institutional strengthening process involves improving the environment of the budgeting system, establishing rule based fiscal management, determining resources and expenditure composition through a broad macro framework, instilling comprehensiveness and transparency, putting a hard budget constraint to address populist demands, improving

prioritization for allocative efficiency, and improving capacity technical efficiency in the government organizations (Campos, and Pradhan 1996).

The budgeting process remains as a core in overall PEM system and reforms in it acts as driving force for bringing in other reforms in financial management. In the context of budgetary reforms, it was generally held that the budgeting in the public sector, which addresses wide range of public objectives, is fundamentally different from budgeting in the private sector due to lack of single objective measure of making profit by which trade-offs are made. Decision making in public budgeting depends to a great extent on political dynamics, where the resource allocation to various programmes are basically political choices (Folscher, 2007). It is for this reason a hard budget constraint is recommended to control the aggregate level of spending to avoid unsustainable deficits and debt. Another point made in the context of strategic resource allocation was that the transactions costs associated with mapping expenditures to the perceived preferences are very high (Campos and Pradhan, 1996). Information asymmetry also plays a crucial role as the spending agencies, which have better information on how best to allocate resources within their sectors to achieve given objectives, usually prefer not to divulge this information in the competitive environment with fear of losing out on resources. In such a situation, the governments manage by satisfying and sufficing all within the resources available to them, instead of taking decisions to achieve the value for money; the term is called "satisfying by Wildavsky and Caiden (1997).

Traditional approach to budgeting, which is usually practiced by the countries, has been input based where expenditure allocation is done on the basis of expenditure items -line item. This is a relatively simple system with detailed specification of inputs and suitable for financial compliance. Line item budgeting endured in practice due to emphasis accorded to controlling public expenditure. However, this conventional budgeting system does not have performance orientation as it does not deal with key issues of government objectives, their links to the budget and the services to be delivered in most efficient manner. The major identifying characteristic of this system is incrementalism, where the budget of the last year serves as the basis on which the budget for the ensuing year is prepared (Wildavsky and Caiden, 1980). The early attempt dates back to the introduction of programme budgeting in US



in 1940's. The introduction of Planning Programming and Budgeting System (PPBS) in 1970's, use of Zero Based budgeting (ZBB), more result oriented budgeting systems known as performance budgeting based on the philosophy of New Public Management are some of the budget reforms introduced by many countries. Modern budgeting techniques emphasize the result orientation, managerial flexibility and management principles based accountability and efficiency and effectiveness in spending.

In this context of improving expenditure planning, specification of objectives determined by the policy making, indicating organizations and financial instruments to carry out specific tasks, and devising a detailed activity plan covering tasks, processes and responsibilities of every unit engaged in the activity, are key requirements. The implementation of Medium Term Expenditure Framework (MTEF) is increasingly recognized to provide such a framework (World Bank, 1998). Efficient and effective implementation of a programme to achieve the desired objectives thus depends, apart from funding, on specification of strategy to carry out the programme and operational and management process (Premchand, 2008). While resource allocation remains the principal focus, other major objectives of PEM such as aggregate fiscal discipline and operational efficiency are expected to be addressed through the MTEF depending upon the execution of the budget.

The other elements of PEM, technical elements like accounting and reporting systems, management tool such as internal audit to spruce up internal control, and external audit are extremely important. These aspects have been developed to improve efficiency, effectiveness and accountability in PEM. The accounting basis for the government has undergone changes from traditional cash accounting system to accrual accounting system. While the benefits of accrual accounting in revealing true cost of provision of public services and getting the actual picture of assets and liabilities of the Government have been acknowledged, the cost of implementing such advanced system of accounting and required capacity development remains daunting (Diamond, 2002). Similarly, the importance of internal audit as a management tool to assist the government organization in achieving the results and correctly keeping the accounts has gained importance and advanced standards have been devised for this. In the case of external audit, in addition to improving the audit techniques based on risk analysis and timely detection

of irregularities, what remains important is the clear follow-up of the audit observations by the government departments.

#### **4. Issues in PEM Systems at the State Level**

The PEM systems at the state level are similar to those of the central government and at an operational level extensive administrative and financial interface exist (Jena, 2010). The functional responsibilities and consequent expenditure requirements of states far outweigh their revenue sources for which their dependence on central transfers is large. This has wider repercussion in the budgeting practice and public expenditure management design depending upon the flow of funds. Many programmes included in the central government budget, known as centrally sponsored schemes (CSS), are implemented by the state governments or state level autonomous agencies and local governments (both rural and urban). Given the long performance chain due to involvement of many levels in implementation of central programmes, the aspects of productivity and efficiency of public expenditure needs to be reflected in the state budgetary process. While the PEM system at the level of State governments is similar, the innovations to fine tune the system and impart efficiency could be at different stages. Thus it is pertinent to examine the existing system in Orissa keeping in view the fiscal federal structure in India. The features of existing institutional structure in the State do reveal many disquieting aspects while judged from the requirements of a sound PEM system. However, it needs to be mentioned here that the State Government does not have all the powers to change the institutional features in the context of the federal structure.

The budgeting system at state level continues to be conventional input based, more concerned with basic financial compliance, which was sought to be achieved through budgetary specification of inputs and detailed procedures designed for expenditure control (General Financial Rules (GFR) 52(3)). The expenditures are listed according to objects of expenditures and often the amounts to be spent on line items are specified in a detailed manner. The system does not provide any information on performance aspects in terms of output or outcome of the money spent, i.e., the efficiency and effectiveness of the programmes. The expenditure planning in the budget at the state level does not emphasize on programmes to achieve the policy objectives as

the expenditures are listed according to objects of expenditures. Focus on programmes in the expenditure planning assists in identifying spending objectives, and treating budget as a means of attaining the policy goals (Robinson et al, 2007). In actual budgetary practice the programmes referred to as schemes are diffused under various heads and sub-heads and did not provide a comprehensive perspective as to their link with government objectives. Further, the cash based accounting system did not have the capacity to reveal the full outlays either on a programme or a project.

Comprehensive expenditure ceiling (in a medium term) was not transmitted to departments in terms early in the budget process facilitating the departments to plan in advance under a resource constraint. Such a practice encourages the tendency of the departments to follow an incremental approach while preparing the budget for the ensuing year. The incremental budgeting makes it difficult to achieve changes in resource allocation, and under this system decentralized decision making at the agency or department level results in isolated programs rather than comprehensive programmes to achieve specific goals (Musso et. al., 2008).

Multi-year perspective in expenditure planning and budgeting, a key requirement for integrating planning and budgeting, is absent. A single year is not always sufficient to complete any particular project which spreads over to future years. The new policies undertaken during the year have recurrent expenditure commitments in terms of maintenance and running costs that were not usually calibrated in the current budget. With a single year focus, the budgeting process was unable to control commitments, thus imposing financial burden in the future year budgets. It was maintained that the five year plans provide the basis for a multi-year perspective for resource allocation. However, the economic planning and budget differ looking at their scope and time span. While plans provide conceptual framework by focusing on various sectors in the economy, the budget is more concerned with systems of control over the use of funds by government and pay more attention to financial aspects (Premchand, 1983). There are divergences between plan and budget in the resource mobilization and allocation and organizational structure. New investments may be funded when there are insufficient recurrent costs to operate and maintain the new infrastructure. It is not uncommon to initiate major projects and schemes

which were not provided for in the plan. It is difficult to link the plan objectives of various schemes/projects to budgetary practice of allocating resources under various heads.

The state government has also to deal with the complexities brought in by the process of transfer of funds and the implementation design of centrally sponsored schemes (CSS). Complications arise as some of the CSS bypass the state budgets and are routed through implementing agencies such as missions or autonomous societies created under the provision of the specific schemes, DRDAs, and local bodies. A comprehensive picture regarding the expenditures in various sectors in states is difficult to be found from the state budgets due to off-budget CSS. There are overlapping and multiplicity in expenditure pattern as planning and implementation of off-budget CSS are carried out separately by the designated implementing agencies.

While efficient use of public money is the major theme of any budgeting system, large amount of unspent money have been surrendered every year at the lapse of the financial year. The year-end savings arise not due to adopting economy measures, rather in most cases due to failure in preparing realistic budgets and institutional bottlenecks in programme management. Large-scale unspent provisions are indicative of lack of efficiency in programme management at departmental level in an annual budget cycle. In Table-3 the unspent provisions of the ministries of State Government as reported by the CAG in their audit report of appropriation accounts are shown. The overall savings was of the tune of Rs 4577.20 crore. Out of the overall savings of Rs 4577.20 crore during the year, major savings of Rs 3310.13 crore (72 per cent) occurred in six grants. The audit report points out that all the 38 Grants and three Appropriations showed savings indicating lack of accuracy in budget preparation including provisions under supplementary demands. The Departments stated that the surrender of savings was due to non-filling of vacant posts, less requirement by the executing agencies, delay in finalization of tenders and non-receipt of Central Assistance etc. Savings in a Grant or Appropriation indicate that the expenditure could not be incurred as estimated or planned. It points to poor budgeting or shortfall in performance depending upon the circumstances under which and the purpose for which the Grant or Appropriation was provided. The budget presented to the State Legislature often is not final as it is augmented by supplementary

demands for additional expenditures during the year' (Art. 115, Constitution of India). Although, the objective of presenting supplementary demands is to meet unforeseen factors, in practice, large part of them has become routine affair. This practice has undermined the sanctity of annual budget as a policy instrument and the concept of hard budget constraint

The expenditure pattern is not evenly balanced during the year and the year-end lapse provision leads to rush of expenditure at the end of the financial year. During the implementation of the budget rush of expenditure in the last quarter of the financial year and more specifically in the month of March has remained a persistent problem. The problem of rush of expenditures towards end of the financial year in states is shown in Table-4. It is therefore difficult to surmise that the funds released in the last month could have been put to use constructively for the purposes for which they were authorized. The release of central funds to the state governments resulted in similar rush of expenditure at their end towards end of the financial year and has contributed to greater prevalence of personal ledger accounts where the funds are parked pending their utilization. Even flow of expenditure during the year is a primary requirement of Budgetary Control. The drawal and release of fund at the fag-end of the financial year is indicative of deficient financial management to utilize the provision at the close of the year. The CAG reports points out that an examination of monthly account revealed that during 2007-08 under 12 Major Heads of Accounts, 72 to 100 per cent of the total expenditure was incurred in March 2008.

**TABLE-3**

**Orissa : Actual Expenditures against grants / appropriations**

Grant / Appropriation	Original Provision	Supplementary Provision	Total grant	Actual Expenditure	Saving
Grant No. 3 - Revenue (Voted)	937.52	313.84	1251.36	809.52	441.84
Grant No. 5 - Finance Revenue (Voted)	2218.64	negligible	2218.64	1895.22	323.42

Grant No. 12 - Health and Family Welfare Revenue (Voted)	799.86	31.43	831.29	703.56	127.73
Grant No. 17 - Panchayati Raj Revenue (Voted)	1144.69	21.98	1166.67	972.32	194.35
Grant No. 23 - Agriculture	479.86	73.53	553.39	374.2	179.19
Grant No 36 - Women and Child Development	1109.17	232.52	1341.69	1103.56	238.13
2049-Interest Payment	4049.11	-	4049.11	3169.48	879.63
Appropriation-6003 Internal Debt of the State Government Capital (Charged)	2337.65	-	2337.65	1411.81	925.84
Total	13076.50	673.30	13749.80	10439.67	3310.13

Source : Audit Reports of Appropriation Accounts of State Governments - 2007-08, CAG, GOI

TABLE-4

## Orissa : March Rush

(Rupees in lakh)

Sl. No.	Major Head of Account	Total Expenditure up to the month of March 2008	Expenditure for the month of March 2008	Percentage of expenditure during March 2008 to total expenditure.
	<b>Revenue Section</b>			
1	2204-Sports and Youth Services (CSP)	116.16	116.16	100%
2	2205-Art and Culture (SP)	1822.59	1412.33	77%
3	2435-Other Agricultural Programme (SP)	97.04	96.04	99%



4	2875-Other Industries (SP)	35.00	25.05	72%
	<b>Capital Section</b>			
1	4055-Capital Outlay on Police (NP).	25.79	19.73	77%
2	4202-Capital Outlay on Education, Sports, Arts and Culture (CP)	272.58	196.92	72%
3	4210-Capital Outlay on Medical and Public Health (NP)	1115.22	1115.22	100%
4	4425-Capital Outlay on Cooperation (SP)	553.04	553.04	100%
5	5452-Capital Outlay on Tourism (CP)	8.66	8.66	100%
	<b>Loans and Advances</b>			
1	6405-Loans for Fisheries	12.26	12.26	100%
2	6851-Loans for Village and Small Industries	1.00	1.00	100%
3	6885-Other loans to Industries And Minerals	9370.00	9370.00	100%

Source : Audit Reports of Appropriation Accounts of State Governments - 2007-08, CAG, GOI

Further, fund releases may not be predictable and harmonious with the implementation needs. In this context the spike in expenditure pattern during the last quarter of the financial year due to sudden spurt of releases to avoid year-end lapse raises questions regarding the capacity of the spending agencies to use the funds constructively for the purposes for which they were authorized. One undesirable consequence of such a funding pattern has been frequent resort to diversion of funds into personal deposit accounts or the creation of special reserve funds to allow drawing money beyond the year. The cash management system should be streamlined along with a properly designed borrowing calendar to make funds available to the administrative departments in timely manner to avoid unevenness of spending pattern and improve the capacity of the spending agencies in executing the budget.

Budget credibility remains an important parameter to assess the performance of PEM system that shows the ability of the government in implementing the expenditure voted by the legislature and to deliver the public services based on the government policy statements and programmes. The pattern of revenue and expenditure out-turn as against the budget estimates given in Table-3 shows this parameter. Table 5 shows that revenue projections have remained a challenge for the state government. The revenue out-turn has exceeded the budget estimates since 2006-07, with a decline in variation. The improvement in growth of the economy and adoption of Value Added Tax (VAT) have facilitated higher realisation of revenue in the state. The rise in share in central transfers also helped the states in revenue augmentation in recent years (Rao and Jena, 2008). However, it is clear that the revenue projection was not realistic and the actual revenue out-turn depended more upon movement of the economy and pattern of central tax collection. The macro-fiscal projections, therefore, need to be strengthened to get a realistic assessment of availability of revenues and broad expenditure pattern that depends on such forecasts. In the expenditure side the revenue expenditure estimates were more than what was actually achieved by the State Government. This indicates the lack of proper programming and efficient financial management.

**TABLE-5**

**Orissa : Comparison of Revenue and Expenditure Out-turns  
with Budget Estimates**

Rs. Lakh

	2006-07			2007-08			2008-09		
	Act- ual	Bud- get	Varia- tion	Act- ual	Bud- get	Varia- tion	Act- ual	Bud- get	Varia- tion
Total Revenue	1803263	1546508	16.60	2196719	1946720	12.84	2461001	2327042	5.76
Own Revenue	865319	645299	34.10	950967	819630	16.02	1117135	940727	18.75
Central Transfers	937944	901209	4.08	1245752	1127090	10.53	1343866	1386315	-3.06
Total Expenditure	1722352	1728910	-0.38	2056668	2033524	1.14	2496929	2572618	-2.94
Rev. Expenditure	1577203	1593988	-1.05	1772327	1842147	-3.79	2119013	2270655	-6.68
Capital Outlay	145149	134,922	7.58	284341	191377	48.58	377917	301963	25.15

Source : State Finances : Study of Budgets, RBI, Relevant Issues

Efficient budget implementation requires a robust internal control system and an effective internal audit system, which are considered to be foundations for sound financial management in government. These systems provide management control systems with a view to ensuring compliance, with rules and regulations, reliability of financial data and reports, and to facilitate efficiency of government operations. A sound internal control framework is required to assure that government operations attain some basic fiduciary standards in guarding against misuse and inefficient use of resources; for safeguarding government assets; countering fraud and error; checking maintenance of satisfactory accounting records; and whether budgetary objectives set out in the government policies are being achieved (Ghosh and Jena (2008)).

The internal audit at the state level is conducted in a routine manner and the impact of this audit on improving the financial management is insignificant. One of the main weaknesses of the financial management in state governments in India emanates from the fact that the system of internal audit and internal control in financial management have not been updated over several decades, nor has the government given due importance to it in securing 'value for money' and accountability. The internal audit in India, both at central and state levels, has a restricted mandate due to non-evaluation of risks associated with government transactions and many autonomous bodies remaining outside its scope. There were no standards evolved for internal audit in India. The internal audit did not have the required independence for its effective functioning as the officials involved in the oversight of internal audit are also responsible for accounting and payment functions.

The legislature exercises control over the budget process by approving the departmental demands, allowing expenditures and approving the tax proposals. This provides checks and balances in the expenditure management system. The members of the state legislature get ample opportunity to discuss the budget proposals and governmental processes. However, this control over public expenditure has been diluted in recent times due to reduced legislative debate over the budget proposals. The Constitution also provides for post budget evaluation by various legislative committees. The prominent among them is the Public Accounts Committee (PAC), which examines the external audit reports of the Comptroller and Auditor General and gives its recommendations.

While the State Government has little control over the scope and standards of external audit carried out by the CAG, it has key role in supervising the follow-up of the audit observations through the working of PAC and action taken by the departments. The functioning of state PACs over the years has shown that the percentage of audit paras discussed in PAC is reducing. The Action Taken Reports of the concerned departments on the PAC recommendations have become formal rather than substantive and there were no accountability for not taking timely action on audit observations.

### **5. Reform Initiatives in PEM in Orissa**

Government of Orissa, in recent years has taken some initiatives to strengthen the PEM system. Although a comprehensive reform is required to gain from the PEM system, the attempts made by the Government underlines the importance accorded to achieving efficiency, effectiveness and economies in government spending to improve service delivery.

The Fiscal Responsibility and Budget Management Act (FRBM), adopted by almost all the State Governments and the Central Government, to stabilize debt and eliminate revenue deficit within a timeframe, opened up new vistas for improving transparency and bringing in an element of medium term planning. While this is true for all the States, a point certainly can be made in the context of Orissa as the State successfully reduced debt burden and deficit. However, the expenditure framework adopted during this period did not enhance the ability of the Government establishing a growth oriented fiscal policy as the fiscal space created was not used judiciously. The recommendations of the 13<sup>th</sup> Finance Commission, which called for improving the quality of expenditure and making the FRBM related documents, most notably the MTFP a statement of commitment rather than intent, is an improvement compared to the earlier practices. The MTFP will have better disclosures of governments' fiscal operation and include the assumptions underlying the projections of fiscal variables while preparing the MTFP. This will give opportunity to the State Government to present its fiscal stance in a more transparent manner. Thus the focus will be more on a government's policy regarding its resource position and utilization of these in furthering policy agenda, not a mechanical reduction of expenditures to achieve the fiscal targets.

The Government of Orissa has taken a very important step to make the State budget more performance oriented by introducing outcome budget in 2010-11 for several departments - Works, Rural Development, Water Resources, Panchayati Raj, and Women & Child Development Departments (Budget Circular, GoO, 2010). The Government has indicated that provision of outlays in the budget does not automatically yield the designed and targeted outcomes and effective mechanism needs to be institutionalized in order to link outlays with targeted outcomes for myriad Government programmes and schemes. This is in line with the attempts by Governments world over to adopt programme and performance budgeting in which the core theme is to link the funding with the results. The Government of India adopted performance budgeting in 1970s and the central departments continued preparing these documents. The experience from the performance budget of the Government of India was very dismal as it was found that the framework was not useful in establishing a close link between outlays and outcomes. To move beyond the line item budgeting and to make the budget more result oriented the central government adopted outcome budget in 2005, which was further streamlined in 2007. The Government of Orissa has followed this framework while deciding to introduce outcome budget in the State.

As the outcome budget of Orissa broadly follows the practice at the central level, a review of the latter is in order. The budget reforms over the year emphasized the need for moving beyond the traditional budgeting system where central focus is on inputs to programme performance budget which is output/outcome oriented and establishing organizational and individual accountability framework. The inputs refer to the resources used to produce a service, the output is the service itself and outcome is the purpose achieved by producing the service (Schiavo-Campo et al, 1999). While the outputs are basically the goods and services produced that can be measured physically and quantitatively, the outcomes are impacts in terms of achieving the goals. The introduction of outcome budget at Central level in 2005-06 has revived the themes of obtaining budgetary outcomes as distinct from inputs - stated as converting outlays to outcomes.. In the guidelines issued for preparation of the outcome budget the objective or the outcome intended, proposed outlays for the year, quantifiable deliverables/physical outputs, projected outcomes, processes and

timeliness and remarks and risk factors. The guideline also defines these performance indicators. Preparation of outcome budget involves the following steps- defining measurable outcomes, standardizing the unit costs of delivery, benchmarking standards, capacity building for attaining the requisite administrative capacity ensuring necessary funding, effective monitoring and evaluation and making the system far more intrusive through the participation of the community and the stakeholders (GoI, 2007).

Establishing a direct link between funds and outcome is rather difficult (Shah and Shen 2007). This is reason for which it is argued by many that the governments should target outputs rather than the outcomes, which are difficult to achieve. While, the outputs could be measured in quantifiable terms, measuring outcomes is difficult proposition given the fact that proposed outcomes of a specified programme could be influenced by many other extraneous factors. In practice the measurement of outputs and outcomes, looking at outcome budgets of various departments, seems to have been mixed up. This also holds true in the case of outcome budget in Orissa. The outcome budgets of many departments merely reproduce the outputs targets to be outcomes and in many other places general intents of the programmes are passed off as outcomes. The outcome budgets in practice do not clearly enunciate the fiscal year goals that would facilitate securing accountability from the implementing agencies in amounts spent and performance measures and in economy in resources use, efficiency in operation and effectiveness in the results.

In the steps involved in the preparation of outcome budget, in addition to defining the outcomes in measurable terms, other important elements are standardizing unit costs of delivery and benchmarking the standards/quality of outcomes and services. The objective of these processes is to adapt management process in the public sector management for converting outlays into outputs and outcomes and addressing the value for money concerns. Benchmarking the standards/quality of outcomes and services in terms of target versus actual, or in terms of historical series, or in terms of comparable activities needs to be specified and unit cost of delivery to be worked out for budget purpose. Formulation of standards and related unit costs should be specified properly to achieve the programme outcomes efficiently under overall budget constraint. To adapt such management processes a robust



financial management system is required and administrative capacity needs to be strengthened to formulate outputs and outcomes. However, these aspects were not given sufficient attention all these years. The accountability framework needs to be established to make organizations and individuals responsible for the delivery of intended outputs or outcomes, which will contribute to its success.

The outcome budget in Orissa, notwithstanding its objectives, seems to be a supplemental document to the main budget, rather than a system to base the budgetary decisions. However, the efforts are important and show the direction of further reforms. The concept of presenting outcome budgets are relevant in the present context to evaluate the budgetary spending in terms of outcomes rather than only achieving financial compliance under the traditional inputs budgets. The practice needs to be taken further by strengthening the processes and activities to infuse performance orientation in the budgeting system by building a proper performance information system that would influence the expenditure decisions and evaluate performance.

Given the unevenness seen in the pattern of expenditure resulting in large unspent budget provision at the year end and rush of expenditure in March, the Government of Orissa has taken initiatives by introducing a modified cash management system. The State Government has introduced cash management system on the line of modified exchequer control based expenditure management and restrictions on expenditure during the last quarter of the financial year which has been practiced by the Central Government. The 2<sup>nd</sup> Administrative Reforms Commission has recommended introduction of Monthly Expenditure Plan (MEP) taking note of the skewed expenditure pattern of the States (ARC Report No. 14). The new system has the objectives of reducing rush of expenditure during last quarter, effective monitoring of the expenditure pattern and removing the tendency of parking of funds outside Government Account. The effectiveness of the system depends upon the compliance of the departments and effective control by the Finance department.

The Government of Orissa also has taken initiatives to enhance accountability and transparency in financial Administration. These are going to help internal control system in the context of public financial management in the State. These include increased verification and

reconciliation of expenditure and receipt with Auditor General, regular review of compliance to the observations of CAG, streamlining the programme implementation by ensuring timely submission of utilization certificates, and improving transparency in budgeting by providing comprehensive financial information in the regular 'Budget at a Glance' document. While follow-up of the audit observations of the external auditor has remained a problem area in India, the steps taken by the State Government to review the compliance of the departments is noteworthy. Provision of large amount of information on financial transactions in Budget at a Glance is a welcome measure as public access of information on financial transactions of the Government is a key requirement for a sound PEM system.

Computerization of treasury system, called Orissa Treasury Management System (OTMS), through which a web-based treasury management system is put in the State, is another improvement that has many positive aspects. The computerization aims at strengthening the treasuries in the State and also to ensure better financial management and accountability with the help of real time information on financial transactions generated through the system. A computerized treasury system with web connectivity enables the Finance Department to have access to the system for required financial MIS. The system is expected to provide information on real-time detailed expenditure and receipts of the State as a whole and at a decentralized level also. A real challenge is to optimize the flow information and use these in the process of decision making. The computerization of treasury is a positive step towards establishing an Integrated Financial Management Information System (IFMIS) in the State. However, there are still many transactions that have remained outside the purview of the treasury system. The computerization should be followed up in right earnest to remove any discrepancies and establish an operational IFMIS.

## 6. Conclusions

The fiscal indicators show that there have been appreciable improvements in fiscal situation in Orissa. The expenditure management aspect needs to be emphasized in the process of fiscal consolidation and improving public service delivery. When judged from the perspective of the three main objectives of an effective public financial management system—namely, aggregate fiscal discipline, strategic allocation and the

efficient delivery of services—many problems exist in the State. While efforts of the government and the role of legal and institutional mechanisms in strengthening the financial management systems are evident in many areas, the actual practice leaves much to be desired. The role of PEM systems in contributing to fiscal discipline, strategic resource allocation through better programme management and improving service delivery has gained attention in recent years. The government policies in expanding social sector spending has made it necessary to look at ways to improve programme management and actual service delivery

The adoption of rule based fiscal management by enacting the Fiscal Responsibility and Budget Management Act helped in monitoring aggregate fiscal indicators, but its impact on the actual practice of financial management is not clear. The budgeting system in Orissa is conventional input-based and more concerned with basic financial compliance; but this has not resulted in establishing effective fiscal discipline. The introduction of outcome budget for several departments designed on the basis of Central Government practice, does not seem to have infused a performance orientation in the budgeting system. Absence of a multi-year perspective in expenditure planning, lack of robust macro-economic forecasting on which to base the budget, and inherent weaknesses in adhering to the procedures laid down in Constitutional and legal provisions have negatively affected PEM outcomes.

With respect to aggregate fiscal discipline, although an elaborate expenditure control mechanism exists in Orissa and rules and regulations are developed the results are not satisfactory. The absence of a multi-year perspective in the expenditure planning that indicates future year commitments, the unevenness and the late spike in the annual spending pattern, surrender of money at the end of the fiscal year in an annual lapsable budget cycle due to a lack of effective programme management in budget implementation, an absence of a hard budget constraint, and weak internal control and internal audit system are important weaknesses of the PEM system that limit fiscal discipline. Strategic resource allocation in Orissa is affected by the lack of well-developed sector strategies based on government objectives, developing and costing of programmes to achieve those objectives and linking the resource allocation to the priorities specified in sector strategies.

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## **Sustainability of Fiscal Performance of Orissa**

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**&**

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Orissa was one of the poorest and the most fiscally stressed state of India but it has made remarkable progress after 2000 in improving the financial health of the state. It has been able to lift some 3 million people out of poverty and marking the strongest fiscal turnaround of all Indian states over 2000-10. Among all Indian states, Haryana, Orissa, Chhattisgarh, Tamil Nadu and Karnataka are regarded as better performing states so far as state finances are concerned. The improvement means that the state now has freed huge amount of resources to invest in better healthcare, education and basic infrastructure and services for its people. Significantly, over the past seven years, the state's primary fiscal balance has been converted from a deficit of 5.9 percent of Gross State Domestic Product (GSDP) to a surplus of 2.8 percent— a correction by 8.7 percentage points. The World Bank study, "Orissa in Transition: From Fiscal Turnaround to Rapid and Inclusive Growth" highlighted that the poverty headcount ratio, after rising during 1993-99, has declined significantly during 2000-2005 by more than 8 percentage points in rural areas and 2.5 percentage points in urban Orissa, compared with 5 and 2 percentage points respectively in India as a whole.

As a matter of fact, Orissa's economic growth has been most rapid in the southern region, which was one of the poorest parts of India. Indeed, Orissa, with over 45 percent of its people still living in poverty, faces several challenges. It is the second poorest state in the country and its large population of scheduled tribes live in isolated areas, with minimal access to basic infrastructure and services. Although, according to latest available National Sample Survey data on household consumption expenditures, large portions of the state's population,

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including scheduled castes, have improved their incomes since 2000, the poorest 40 percent of the population has gained much less than the better-off 60 percent. Most of the state's scheduled tribes are part of this poorest 40 percent and continue to lag behind. If the state can consolidate the gains of its fiscal turnaround and devote more public resources to development, it may be able to address these challenges effectively. In this context the objective of this paper is to analyse the revenue and capital receipts, pattern of state expenditure and indicators of fiscal performance of Orissa.

### Fiscal performance of Orissa

Since 2000-01, there has been visible improvement in the financial position of Orissa. The ratio of tax revenue to GSDP has improved from 5 per cent in 2000-01 to 6 per cent in 2008-09 and fiscal deficit has remained within 3 per cent of GSDP from 2004-05 onwards. Similarly the ratio of debt to GSDP of the state has declined from 55.92 per cent in 2002-03 to 27.27 per cent in 2008-09 which is within prudential norm of 28 per cent prescribed by 12<sup>th</sup> Finance Commission and the ratio of interest payment to revenue receipt has declined from 40.22 per cent in 2001-02 to 11.74 per cent in 2008-09. The facts stated clearly indicate marked improvement in finances of state government of Orissa.

**TABLE-1**

### Total Receipts of Government of Orissa

(in Rs crore)

Item	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Tax revenue	8154.26	9879.03	12285.48	14702.59	16275.16	17049.38
Non tax revenue	3695.93	4205.69	5747.14	7264.60	8334.85	9500.71
Total revenue receipts	11850.19	14084.72	18032.62	21967.62	24610.01	26550.09
Capital receipts	5979.22	2442.56	2331.71	862.20	1387.87	4422.43
Total receipts	17829.41	16527.28	20364.33	22829.38	25997.88	30972.52

Source- Economic Survey, Orissa, 2009-10

Fiscal performance of a state can be assessed from the share of tax and non-tax revenue. As economic development takes place, it is found that share of tax revenue increases over time. But in Orissa, the

share of tax revenue has remained more or less constant over time. In 2001-02, the share of tax revenue was 78.10 per cent and it is 78.53 per cent in 2009-10. During last ten years, the share was lowest (70.09 per cent) in 2006-07 and it varies slightly in other years. The share of non-tax revenue was highest (29.91 per cent) in 2006-07 and the variation over the years is shown below in Table-2.

**TABLE-2**

**Share of Tax and Non-tax Revenue in  
Total Own Revenue of Orissa**

Year	Share of tax revenue	Share of non-tax Revenue
2001-02	78.10	21.90
2002-03	74.92	25.08
2003-04	75.10	24.90
2004-05	75.63	24.37
2005-06	76.56	23.44
2006-07	70.09	29.91
2007-08	72.10	27.90
2008-09	71.57	28.43
2009-10	78.53	21.47

Source : Economic survey, Orissa, 2009-10.

### Pattern of expenditure in Orissa

Government spends its funds on plan and non plan items. The efficiency of a government depends on the proportion of plan expenditure. A substantial proportion of plan expenditure is utilized for financing developmental projects. In Orissa, the proportion of non-plan expenditure is rapidly reducing over time from 2004 to 2010 as shown below in Table-3. In 2004-05, the non-plan expenditure was 82.63 per cent of total expenditure which was reduced to 69.77 per cent in 2009-10 and it is an encouraging trend so far as pattern of expenditure of government of Orissa is concerned. The plan expenditure substantially increased in 2007-08 to 30.84 per cent in comparison to previous year. The total plan expenditure of Government of Orissa is Rs 9913.48 crore

in 2008-09. The proportion of revenue expenditure was 71.36 per cent in 2004-05 which increased to 88.17 per cent in 2009-10. It is noticed that there is substantial increase in revenue expenditure in 2009-10. The proportion of capital expenditure is continuously reduced over time from 28.74 per cent in 2004-05 to 11.83 per cent in 2009-10. For rapid development of Orissa, it is necessary that the capital expenditure should also rise over time. The proportion of capital expenditure declined in 2005-06 and in 2006-07 but increased in 2007-08. It is noticed that revenue and capital expenditure are fluctuating over years in Orissa.

**TABLE-3****Expenditure of Government of Orissa**

(in Rs Crore)

Item	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Non plan Expenditure	14324.98 (82.63)	12670.49 (80.47)	15141.19 (78.63)	15798.45 (69.16)	17989.86 (66.82)	22884.07 (69.77)
Plan Expenditure	3011.28 (17.37)	3075.87 (19.53)	4204.80 (21.37)	7045.88 (30.84)	8933.00 (33.18)	9913.48 (30.23)
Total expenditure	17336.26 (100.00)	15746.36 (100.00)	19345.99 (100.00)	22844.33 (100.00)	26922.86 (100.00)	32797.55 (100.00)
Total Rev. expenditure	12372.49 (71.36)	13603.52 (86.39)	15772.02 (81.53)	17723.27 (77.58)	21190.12 (78.71)	28919.18 (88.17)
Total capital expenditure	4963.78 (28.74)	2142.84 (13.61)	3573.97 (18.47)	5121.06 (22.42)	5732.74 (21.29)	3878.37 (11.83)

Source : Economic Survey, Orissa, 2009-10, Annexure-9.1.

**Proportion of revenue and expenditure in Orissa**

Since the publication of white paper and introduction of fiscal reforms by the state government in 1999-2000, the fiscal performance of Orissa has improved substantially. The ratio of salary to own revenue was 65.25 per cent in 2005-06 which was reduced to 52.60 per cent in 2006-07 and to 57.53 per cent in 2008-09. The government of Orissa had incurred huge amount of loans from internal and external sources.

The interest payment is an unproductive expenditure every year. The ratio of interest to revenue receipt was 26.25 per cent which was reduced to 11.74 per cent in 2008-09 and it can be regarded as a remarkable improvement in state finance structure of Orissa. The ratio of debt stock to gross state domestic product was 46.47 per cent in 2005-06 which was reduced significantly to 27.27 per cent in 2008-09 (Table-4). Similarly, the ratio of committed expenditure to own revenue was as high as 142.32 per cent which reduced to 106.60 per cent in 2006-07 and to 101.97 per cent in 2008-09.

**TABLE-4****Expenditure and Revenue Ratio**

( in percentages)

Item	2005-06	2006-07	2007-08	2008-09
Committed Exp/ Own revenue	142.32	106.60	107.75	101.97
Salary/Own revenue	65.25	52.60	55.48	57.53
Interest/revenue receipt	26.25	17.68	14.43	11.74
Debt Stock/GSDP	46.47	39.18	30.50	27.27

Source : *Economic Survey, Orissa, 2009-10.*

**The Fiscal Challenges**

In spite of good fiscal performance of government of Orissa and despite this phenomenal fiscal turnaround and economic acceleration, the state has many challenges. While some inequalities have narrowed, the scheduled tribes continue to lag behind. Geographical seclusion with negligible outmigration has limited their access to new income earning opportunities. Severe infrastructural gaps, unless addressed, will hinder Orissa's progress. Capacity constraints in the railways have diverted goods traffic to roads and similarly constraints in port capacity have diverted cargo to ports in other states. In order to sustain such rapid growth and to make it more inclusive, especially for the geographically secluded tribal communities, the study suggests unleashing the potential

of agriculture, fishery and forestry, on which most of the poor depend. This requires policy reforms to address problems of excessive trade intermediaries in agriculture and forest produce, lack of connectivity, and a ban on land leasing that has resulted in informal and illegal share-cropping arrangements, which are harmful for the cultivators.

Orissa has entered the second phase of reforms. Addressing infrastructure gaps should be its most urgent priority for sustaining rapid growth. Human development needs require institutional changes as a prior condition for allocating additional public resources. If this plan focuses on infrastructure, along with human development, it would make Orissa a better than- average Indian state by 2020 with poverty at or below 10 per cent. Much also needs to be done in education and health service delivery. At existing learning levels in elementary schools, a large section of youth will grow up without the skills necessary for employment or higher education. Recent studies show that students in Grade Nine have only mastered the learning skills required at Grade Four. Innovative and flexible approaches to healthcare delivery will be also required in order to deliver critical health services to geographically isolated villages.

### **Conclusion**

The soundness of a state's finances depends on the development and structure of the economy. The finances of government of Orissa are now on a sound footing. The developmental activities are gradually expanding and state is approaching towards debt sustainability. There is now enough fiscal space for undertaking developmental expenditure which was very much squeezed in the recent past due to higher salary and pension burden. There is need for fiscal consolidation in the state by revenue maximization by realizing the full tax potential and raising non-tax revenue in the long run. The state government should aim at generating substantial revenue surplus for capital investment. Public expenditure should be reoriented to provide better output through robust planning . Investment in public infrastructure and augmenting resources through public private partnership can be useful for rapid economic development of the state. An ideal situation for the finances of Orissa is that state should generate adequate revenue for its own development needs and incurs as little debt as possible and borrowings are only made for productive purposes.

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# **Remodeling Property Taxation in Municipal Bodies - A Case Study of Bhubaneswar Municipal Corporation in Orissa**

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## **1. Conceptual Background**

Municipal property tax in India is more than a century-old. Property tax is a local tax on buildings, along with appurtenant land, and imposed on owners. It resembles US-type wealth tax and differs from UK type excise rate. In India it is the owners of property who are liable for the payment of municipal taxes whereas in countries like the United Kingdom, the occupier is liable. The tax power vests in the states and it is delegated by law to the local bodies, specifying the valuation method, rate band and collection procedures. The tax base is the Annual Rental Value (ARV) or area based rating. Owner-occupied and other properties not producing rent are assessed on cost and then converted into ARV by applying a percentage of cost. This mode of assessment has many drawbacks—the manner of assessment is opaque and provides a lot of discretion to assessing officials and it is inelastic and non buoyant. Poor collection and low service standards form a vicious circle, each leading to the other. With the abolition of Octroi, Property Tax is the most important source of revenue for municipal governments now. There have been substantial reforms in Property Tax administration in recent years. Besides, rationalization of the tax system of Urban Local Bodies (ULBs) has become mandatory under the Jawaharlal Nehru National Urban Renewal Mission and Thirteenth Finance Commission.

The earliest prognosis of sickness of municipal property tax was made by the Local Finance Enquiry Committee (1951) and was reiterated by other all-India commissions and committees from time to time since then, such as the Taxation Enquiry Commission (1955), Committee on Augmentation of Financial Resources for Urban Local Bodies (1963)

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and the Rural- Urban Relationship Committee (1966). The Taxation Enquiry Commission dwelt at length on the issue of the nexus between rent control and property taxation and rejected the pleas that: (i) the municipal bodies should be allowed to fix 'reasonable' rent for tax purposes that is higher than controlled rent, and (ii) the rent control legislations be amended to permit the passing-on of the increased tax burden to the tenant, on the ground that a municipal authority cannot alter the statutory level of rental prescribed by the state government. The expression 'reasonable' rent contained in local government legislations has been subjected to divergent interpretations in India. The clarification of the Indian case law has come about through a series of State High Court (HC) and Supreme Court (SC) decisions. Finally for all practical purposes, 'reasonable' rent in India has now come to mean 'standard' or controlled rent. The Government of India formulated and circulated the Guidelines for Property Tax Reforms in 1998. Urban Local Bodies (ULBs) need to improve legal basis of property assessment as well as improve the tax administration. But strangely enough, it is noticed that local bodies take a lukewarm attitude towards imposing new taxes or revising the existing tax structures for better civic life resulting in financial bankruptcy of most of the urban local bodies. Without finance, like the central government, the governments at local level have come to a standstill. This happens in each and every municipality of Orissa for which studying financial viability through property tax and prospect of finances of municipal bodies in Orissa is a necessity. Orissa consists of 30 districts with 123 towns and 36 municipalities. This paper briefly describes principles of property taxation prevailing in municipal bodies of Orissa, identifies issues and suggests an approach for enhancement of property taxation in future.

## **2. Status of Property Tax in Municipal Corporations of Orissa**

In Orissa the property tax is levied as per provisions in section 131 and 132 of Orissa Municipal Act, 1950. Under section 131 (B) of the Orissa Municipal Act certain categories of government holdings used as court, police station, fire station, educational, medical, public health and cultural institutions are also exempted from the levy of holding tax. Holding Tax has got the nomenclature of Property Tax in the Orissa Municipal Corporation Act, 2003. But since Rules and by-laws regulating the Property Tax is in the pipeline, for the time being as per Orissa Municipal Act, 1950 Holding Tax is being collected. The current trend

in Municipal Corporation notification shows that in case the house is let out on rent, the tax is calculated on the basis of gross annual rent at which the holding may reasonably expect to let. Given the inbuilt limitations, it results in lower valuation leading to a shortfall of around 50 percent in mobilization, which incidentally is the largest source of revenue for the municipal body. None of the two Municipal Corporations viz. Cuttack and Bhubaneswar was able to levy property tax as per section 192 of Orissa Municipal Corporation Act 2003. Even after more than 5 years of implementation of the Municipal Corporation Act, they are not able to levy the property tax and continue to collect holding tax as per the existing Orissa Municipal Act, 1950. The present data shows any holding within Bhubaneswar Municipal Corporation (BMC) limits having clear right, title, interest of the holder is liable to pay Holding Tax @ of 17.5 per cent of the annual value of the holding depending on the nature of holding, i.e. either residential or commercial. Section 131 of Orissa Municipal Act, 1950 empowers the ULBs to impose holding tax, light tax, drainage tax and water tax etc. based on annual value of holdings. As per Section 146 of Orissa Municipal Act 1950, the ULBs are required to revise the annual value of the holdings at an interval of every 5 years. As revision of rate of taxes takes effect prospectively i.e. from the next quarter as per Section 147 of the act, the delay in revision leads to loss of revenue to the ULBs. In test checked ULBs the annual value of holdings was not revised at the prescribed intervals as per the following details, which had entailed loss of revenue to them.

<u>Name of the ULBs</u>	<u>Year in which last revision was made</u>
NAC Chatrapur	1989
NAC Sunabeda	1995
NAC Koraput	1996
Municipality Bhadrak	1996
Municipality Bhawanipatna	1996

*Source : Civil Audit Report till 1<sup>st</sup> December 2008 (Principal Accountant General, Bhubaneswar)*

From above, it is evident that the annual value of the holdings basing on which the taxes are levied remained unchanged for periods

ranging between 12 and 19 years. The reasons attributed by the ULBs for the delay is non assessment of the annual value by the valuation wing of Housing & Urban Development (H & UD) department of Government of Orissa. In this connection, it was observed that dependence of ULBs on the government department for the revision of the annual value has led to the loss. No effective and appropriate steps were taken by the ULBs to alter and amend the list wherever they considered necessary as per Section 147 of the Orissa Municipal Act, which authorized the Executive Officers of the ULBs to revise the rate of taxes during the interim periods. As observed by the Finance Commission, the performance of the ULBs for raising revenue is very dismal and the statutory avenues of raising revenue remained either unexplored or under explored because the elected Local bodies do not want to invite displeasure by increasing the rate of tax and levy of new tax during their tenure. A recent survey indicated that only 70,000 of 2 lakh houses in the capital city of Bhubaneswar paid property tax.

### **3. Procedure of Assessing Holding Tax in Bhubaneswar Municipal Corporation (BMC)**

The disaggregated analysis of holding tax of BMC shows the following steps followed during assessment.

#### **(A) Residential**

The Annual Value of a Holding for residential purpose is calculated as per following procedures.

##### **Step I**

Plinth area of the holding in Sq. Meter x Rs 13.65 = say X

##### **Step II**

Deduct 15 per cent of "X" towards repair & maintenance

##### **Step III**

Add 0.5 per cent of the land cost where the holding is located (Land cost to be determined as per G.A. Department Notification dated 01.05.1998)

Hence Annual Value Amount arrived through = (Step I + Step III – Step II)

Holding tax is levied per annum @ 17.5 per cent of the Annual Value whose break up is as follows :

• Holding Tax	-	10%
• Latrine Tax	-	2.5%
• Street Light	-	5%
<b>Total</b>		<b>17.5%</b>

### **(B) Commercial Holding**

The Annual Value of Holding of a Commercial unit is calculated by the following Procedure :

#### **Step I**

Add Civil Cost of the building + the cost of P.H & Electric fitting

#### **Step II**

Take 7.5 per cent of the value arrived through step I

#### **Step III**

Add 0.5 per cent of the land cost with Step II

#### **Step IV**

17.5 per cent of the Cost arrived at Step III is the Holding Tax payable per annum

### **(C) Residential Holding Used on Rent**

Tax to be fixed on holdings given on Rent is calculated on the basis of the following procedure.

#### **Step I**

Monthly rent of the building  $\times 12 = X$

#### **Step II**

Deduct 15 per cent of X towards maintenance cost

#### **Step III**

Add 0.5 per cent of the Land Cost where the building is located

#### **Step IV**

Hence annual value of the building is (Step I + Step III – Step II)

Holding Tax is levied @ 17.5 per cent of the Annual Value arrived at Step IV

Govt. buildings, Govt. Hospitals, Govt. educational institutions, Govt. cultural institutions only pay 7.5 per cent towards latrine tax & light tax and such institutions are being exempted from paying 10 per cent Holding Tax as per the Act.

The inherent defects of the system can be visualized. Firstly, it is based on rateable value linked to annual rent reasonably expected. Secondly, there is a wide variation between similarly placed properties and incidence of tax in old regular colonies lower than in new unauthorized colonies. Thirdly, reasonable rent is considered as standard rent causing faulty assessment and under valuation. In addition, poor collection efficiency, excessive litigation and long term tenancies (freezing of valuations) with harassment by inspectors results in loss of revenue.

#### **4. Inter-State Comparison of Property Tax**

Generally, the property tax is levied on the basis of reasonable rent at which the property might be let from year to year. The reasonable rent can be actual rent if it is found to be fair and reasonable. In the case of un-let properties, the rental value is to be estimated on the basis of letting rates in the locality. Different cities in India follow a variant system for the levy of property tax.

In Patna, local properties have been categorized into three groups, (i) Reinforced cement concrete (RCC) buildings; (ii) Pucca building; and (iii) Pucca buildings with A.C or C.I. sheet roof. The rental value per square meter for every building has been fixed according to their status, location, type of construction and user etc. This system has been upheld by the Supreme Court and has been appreciated by international bodies.

In Delhi, property tax of un-let properties is based on rental value, which is arrived at on the basis of capital investment in land and buildings. In the case of rented properties, the rent recovered is taken as the base. As a result of the Rent Control Act, the income of the municipal corporations has become static. The municipal corporations are, therefore, in favour of an alternative method of levying of property tax which will de-link it from rent.



The Municipal Corporation of Greater Mumbai commissioned the Tata Institute of Social Sciences to undertake a study to recommend an alternate system for levy of property tax. The study has recommended a capital value based system of taxation. The advantages of this system are : (i) It results in revenue buoyancy, i.e. tax revenue can keep pace with inflation and cost of living since capital value can be revised after five years based on the market value of the residential properties given in the Government ready reckoner for stamp duty, (ii) The system is transparent and simple, (iii) Its objective is to eliminate/reduce the element of discretion, (iv) It provides equitable assessment among different property owners. The study has also developed a formula to work out the capital value and amount of tax : Capital Value= Market value (MV) \* Carpet area of the property \* Weight for type of construction \* Weight for age. So Tax = Capital Value \* tax rate \* weight for user category. While assigning weights, concessions have been given to buildings like chawls, semi permanent structures, those constructed prior to 1985 and those falling in the category of tenements having less than 225 square feet carpet area and belonging to the economically weaker sections. Similarly, weights have also been assigned to the user category in a progressive manner.

### **5. Major Challenges of Property Tax**

Property tax is levied on buildings and lands where the basis of taxation is the annual rental value or market rent. Any attempt to make an upward revision of the base of the tax (Annual Rental Value (ARV)) is generally feared to have adverse effects on the poll fortunes of ULB representatives. Basically there are two problems in administering this tax. These are a) political interference and b) the Rent Control Act (RCA). While political interference is reflected in not making tax revisions effective, the RCA tends to freeze rental values. In either case, the consequence has been the low yield from the tax and inequalities in the tax burden.

In addition, it is also observed that proper assessment of property tax and its enforcement is a problem to the municipalities. It suffers from the problem of persistent under valuation, high tax rates, poor collection efficiency etc. By taking the case of Bhawanipatna Municipality of Orissa (from 1991-92 to 2000-2001) it is observed that the amount of collection of holding taxes in each year is much below

than the annual tax demanded. From the disaggregated analysis it is found that the increase in the number of properties is more, resulting in widening the tax base, but simultaneously, since the efficiency in recovering property tax diminishes, the advantages for revenue gets nullified. Hence by considering the Annual Holding Tax demanded, its collection (current + Arrear) in each year is much below and calls for a strong enforcement mechanism (Majhi: 2010). For urban infrastructure development, substantial amount of funds must be generated locally. However, it is seen that 30 to 60 per cent of urban properties are not at all assessed. Most of the studies conducted in the municipalities of Berhampur, Cuttack and Puri had revealed that owners of "many structures are not in the holding tax net. There is a sizeable group which is paying less tax than what they should".

#### **6. The Patna Model of Property Taxation in Orissa**

Now property tax valuation is set for a radical change in Orissa. Very soon the inelastic Annual Rental Value (ARV) based holding tax estimation will give way to transparent Unit Area Method estimation popularly known as "Patna Model" across the South Asian region. Both UN-HABITAT and Supreme Court have already termed the Patna Model as transparent, elastic and holder-friendly. Removal of the disparity in assessment- of similar properties is inherent to it. As per NIUA (National Institute of Urban Affairs), this 'reasonable' price also leads to corruption and arbitrariness on the part of property tax collectors leading to high tax evasion. But the new model will estimate how much the holding is going to fetch for a period of one year based on the 3×3 model rate. Under this model, the basic rate is related to plinth/carpet area and it is based on the principle of simple classification of location, construction and use. "As per the model, the assessment module is a matrix of three multiplied by three that means three indicators carrying three sub-indicator of location, it will delineate the entire city into three sub-categories like holdings on major highways, main roads and feeder roads" (Panda: 2010). Switching to this assessment would definitely augment the revenue and at the same time it will bring BMC's property taxation system in uniformity with the national practice. As per NIUA, this model has brought down the effective tax rate in Patna but augmented the Patna Corporation's revenue by nearly two and half times. The holding tax rate in Patna is less than the effective tax rate of 17.5 percent in Bhubaneswar but the mobilization is 200 percent of

the target against a deficit of around 50 percent here. But so far the Urban Development Department has not come out with the likely new effective rate and estimation chart based on 3×3 model.

#### **7. BMC's Proposed New Property Tax Regime/Patna Model :**

Property tax in the Municipal Corporation of Bhubaneswar would be assessed on the basis of a city map drawn with the help of satellite images to enable authorities to monitor tax collection and curb corruption. In this method, each house or dwelling unit would be considered as a unit and according to its location, approach, size and civic amenities, the value of its property tax would be assessed (Unit Area Method). However, to avoid any confusion, the whole process would be monitored through images captured by satellites so that the officials of the Bhubaneswar Municipal Corporation (BMC), equipped with remote sensing technology, can get to know whether the owner of the property is paying the right amount of tax. The photographs generated through high-resolution satellite images will be fed into computers to know the exact nature, size and location of the property. The resolution of the satellite camera would be enough to detect an object of the size of half a meter. After the images are obtained, the BMC officials will also do physical inspection to compare the data. As the system is web-based, one will know what the owner is paying for the property and what others are paying. This web-based system will make the system transparent. The project would be implemented in a phased manner. An appellate authority will be set up to hear appeals from corporations while this will be done by district collectors in case of municipalities. The system of self-assessment of value of property and filing of return is also proposed to be introduced. This will give property owners the option to make voluntary disclosures and people failing to do so will be fined. In the proposed system use of GIS-based technology is incorporated in the comprehensive development plan for the city developed by Indian Institute of Technology, Kharagpur.

#### **8. Concluding Remarks**

Thus many problems of property tax could be tackled with ease as they are within the statutory domain of the local bodies. Ensuring correct physical measurement of the area of the property or making the landlord/tenant supply data on the area/use could be well implemented. Fixing zonal rates, by use/location, nature of occupancy, based on external

factors/local advantages, could remove the mistakes that are inadvertently committed by assessors. The four facets of property tax administration, identification of properties, record keeping, assessment, and collection-must all be improved to make the property tax more productive. Improving collection efficiency alone will increase revenues in the short run but will not provide the broader base necessary for long-run growth (Datta: 1992).

(The United Nations Human Settlements Programme, UN-HABITAT, is the United Nations agency for human settlements.)

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# **Horizontal Devolution And Regional Disparities Under XIII Finance Commission**

**Dr. Satyabrata Mishra\***

## **1. Introduction**

The inter governmental transfers, their rationale, and relative merits and demerits have gained wide currency in the literature of fiscal federalism. The reasons commonly advocated in the theory of public finance to justify revenue transfer from the centre to the federal units may be schematized into three categories. Firstly, transfers are imperative to redress the vertical imbalance or the fiscal gap that stems from the asymmetric organization of functions and tax powers among different jurisdictions. Secondly, matching grants are provided by the central Govt. so that public goods are produced to the socially optimal level. Thirdly, transfers from the centre are mandated to ensure fiscal equalization among the states in the interest of both equity and efficiency.

The present paper is a modest attempt to examine the last category of transfers designed to moderate the horizontal imbalance- the equalization grants which constitute the bulk of the transfers in many federations including India. Such transfers are supposed to be more controversial as they involve the perceived conflict between equity and efficiency and inter se sharing, instead of being progressive, often becomes more regressive and accentuates regional disparities.

The Thirteenth FC was constituted on 13th Nov. 2007 to make recommendations for the period 2010-15. The Commission submitted its Report on 30th Dec. 2009. The overall approach of FC-XIII is to foster "inclusive and green growth promoting fiscal federalism". As against the level of 75 per cent targeted by 12th FC, the combined Debt-GDP ratio was 82 per cent in 2009-10. The 13th FC focused on anchoring the fiscal consolidation process in a medium term debt

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reduction framework. It proposes reducing the combined debt-GDP ratio to 68 per cent by 2014-15 with the centre's Debt-GDP ratio declining to 45 per cent. It recommended a calibrated exit strategy from the expansionary fiscal stance of 2008-09 and 2009-10.

The FC-XIII has recommended fiscal consolidation through the elimination of revenue deficit as the long term target for both the centre and states. It indicated a normative discipline for both centre and states with equal treatment which entailed no automatic priority for any level of Govt. and focuses on equalization. It implies that states and local bodies have the fiscal potential to provide comparable level of public services at reasonably comparable level of taxation. The principle does not guarantee uniformity in public services across the country but it addresses the fiscal requirement of each jurisdiction to enable such uniformity.

Goods and Services Tax (GST) as a game changing tax reform measure will significantly contribute to the buoyancy of tax revenue and accelerate growth as well as generate positive externalities. FC-XIII proposed a grand bargain. The six elements of grand bargain for GST included (i) the design, (ii) operational modalities, (iii) binding agreement between the centre and states with contingencies for change in rates and procedures, (iv) disincentives for non compliance, (v) the implementation schedule and (vi) the procedure for states to claim compensation. For this purpose the FC-XIII recommended the sanction of Rs.50,000 crore as compensation for revenue losses of states on account of the implementation of GST. This amount would shrink to Rs.40,000 crore if implemented on / after 18th April 2013 and further to Rs.30,000 crore if implemented on / after 18th April 2014.

## **II. Major recommendations of FC-XIII**

1. The share of states in net proceeds of shareable central taxes shall be 32 per cent every year for the period of the award.
2. Revenue accruing to a state is to be protected to the level that would have accrued to it provided Service Tax, a part of sharable central taxes, if 88<sup>th</sup> Amendment to constitution is notified and followed up by a legislation enabling states to levy service tax.
3. Centre to review the levy of cesses and surcharges with a view to reducing their share in its gross tax revenue.



4. The indicative ceiling on overall transfer to states on revenue account may be fixed at 39.5 per cent of gross revenue receipts of the centre.
5. The Medium Term Fiscal Plan (MTFP) should be a statement of commitment rather than intent.
6. New disclosures have been specified for the Budget/MTFP including tax expenditure, public Private Partnership liabilities and the details of variables underlying receipts and expenditure projections.
7. Fiscal Responsibility and Budget Management (FRBM) Act needs to specify the nature of shocks that would require relaxation of the targets there under.
8. States are expected to be able to get back to their fiscal correction path by 2011-12 and amend their FRBM Acts to that effect.
9. State governments are to be eligible for the general performance and special area performance grants only if they comply with the prescribed stipulations in terms of grants to local bodies.
10. National Calamity Contingency Fund (NCCF) should be merged with National Disaster Response Fund (NDRF) and the Calamity Relief Fund (CRF) with the State Disaster Response Funds (SDRFs) of the respective states.
11. A total non-plan revenue grant of Rs.51,800 crore is recommended over the award period for 8 states. A performance grant of Rs.15,000 crore is recommended for three special category states that have graduated from a non-plan revenue deficit situation.
12. An amount of Rs.19,930 crore has been recommended as grant for maintenance of roads and bridges for 4 years (2011-12 to 2014-15).
13. An amount of Rs.24,068 crore has been recommended as grant for elementary education.
14. An amount of Rs.27,945 crore has been recommended for state specific needs.

15. Amount of Rs.5,000 crore each as forest, renewable energy and water sector management grants have been recommended.

16. A total sum of Rs.3,18,581 crore has been recommended for the award period as Grants in aid to states.

**Horizontal Sharing** FC-XIII has used equity and efficiency as two guiding principles while recommending inter se shares of states in tax devolution. The principle of equity addresses the problem of differences in revenue raising capacity and cost disabilities across states. The principle of efficiency is intended to address this issue and to motivate the states to exploit their resource base and manage their fiscal operations in a cost effective manner criteria for horizontal sharing, as per Table-1.

**TABLE-1**

**Criteria and Weights for Tax Devolution**

Criteria	FC-XII Weight	FC-XIII Weight
Population (1971)	25.0	25.0
Area	10.0	10.0
Fiscal Capacity Distance	50.0	47.5
Fiscal Discipline	7.5	17.5
Tax effort	7.5	—
Total	100.0	100.0

Source : Reports of 12<sup>th</sup> and 13<sup>th</sup> Finance Commissions

The criteria are explained below

Population is an indicator of the expenditure needs of a state. It is a transparent indicator that ensures predictability. This criterion ensures equal per capita transfers to all states, not taking into account cost disabilities across states because of differences in the geographic spread of population. Both FC XII and XIII have assigned weightage of 25 per cent to population. 1971 census population figures have been considered as National Population Policy has extended 1971 population

base upto 2026 with the objective of incentivising states having better performance in population control and discouraging states with no command over population control.

Area as a criterion in the devolution formula was first introduced by FC-X on the ground that a state with larger area has to incur additional administrative cost to deliver a comparable standard of service to its citizens. The differences in the cost of providing services may increase with the size of a state but only at a decreasing rate and that beyond a point of incremental cost may become negligible. It is one neutral indicator. Both FC XII and XIII assigned 10 per cent weight age to area.

In the Indian context the ratio between the per capita income of the highest and lowest income states based on average comparable per capita GSDP for the period 2004-05 to 2006-07 stands at 10:1. There is rationale for equity component in the determination of relative fiscal need and rightly this has been recognized by every FC since FC-VI. The intent of the equity component in the devolution formula is to ensure that all states have the fiscal potential to provide comparable level of public services to their residents at reasonably comparable level of taxation. The equity component is justified not merely to ensure equal treatment of citizens by Govt. but also for economic efficiency reasons to minimize fiscally-induced migration. The equity component in the devolution formula is an enabling provision that does not by itself guarantee uniformity in public service delivery across the states. The income distance criterion used by FC-XIII measured by per capita GSDP is a proxy for the distance between states in tax capacity. The procedure implicitly applies a single average tax- GSDP ratio to determine fiscal capacity distance between states. FC-XII recommends the use of separate average for measuring tax capacity, one for general category states and another for special category states. The justification for doing this is that between the two categories, a single average applied implicitly to GSDP does not accurately capture the taxable base for two reasons. Firstly, the sectorial composition of GSDP varies across the states and the sectors are not uniform in their taxability. For example agriculture is not effectively taxable in states except where there are plantations. Secondly, GSDP estimates presently available are at factor cost and therefore exclude income such as that accruing in the form of

remittances. The cross state average Tax-GSDP ratio is higher for general category states than for the special category ones, where this difference encapsulates the combination of factors underlying the relative fiscal capacity of the two groups. Thus group specific averages are applied to the two categories to obtain a closer approximation to the distance in fiscal capacity between states. FC XIII has assigned 47.5 per cent weightage to fiscal capacity distance criterion as against 50 per cent assigned by FC XII for per capita income distance. The use of average tax-GSDP ratio specific to each category neutralizes to an extent the fiscal disadvantage of special category states in terms of tax capacity. Cost disability governing the norm of devolution conforms to equity based fiscal need, modified by differing cost of service delivery. Cost disability affects both general and special category states. Within the general category there are many states with spatially dispersed human habitations, which raise the cost of equivalent service provision.

Fiscal discipline as a criterion for tax devolution was used by FC-XI and FC-XII to provide an incentive to states managing their finances prudently. Both the commissions assigned weight of 7.5 per cent to this criterion. The FC-XIII has enhanced this weight to 17.5 per cent emphasizing more on fiscal prudence. The index of fiscal discipline is calculated by relating improvement in the ratio of own revenue receipts of a state to its total revenue expenditure to average ratio across all states. The own revenue receipts of a state include own tax revenue and thus the criterion of fiscal discipline also captures the tax effort of states. Therefore FC-XIII has dropped the application of tax effort as a separate criterion. The combined weight assigned by FC-XII to these two criteria was 15 per cent. There is a strong case to incentivize states following fiscal prudence with thrust on fiscal correction. If all states have improved their respective ratios of own revenue to total revenue expenditure then the states with relatively higher improvement than the average receive higher transfers. Similarly if the ratio has deteriorated in all states, then states with lower deterioration than the average receive higher transfers.

The recommendations on tax devolution are based on the considerations of need, fiscal deficiency and adequate incentivisation for better performance. Transfers recommended by Finance Commissions are given in Table-2.

**TABLE-2****Transfers Recommended by FC (Rs. in Cr.)**

Comm- ission-	Grants in Aid (Amount)	Per cent Share	Share in Taxes (Amount)	Per cent Share	Total (Amount)
VII	1609.92	7.72	19233.05	92.28	20842.97
VIII	3769.43	9.55	35682.58	90.45	39452.01
IX	11030.38	9.96	99667.64	90.04	110698.02
X	20300.30	8.96	206343.00	91.04	226643.30
XI	58587.39	13.47	376318.01	86.53	434905.40
XII	142639.60	18.87	613112.02	81.13	755751.62
XIII	318581.00	18.03	1448368.53	81.97	1766949.53

*Computed from FC-XII and FC-XIII Reports*

If we compare some of the recommendations of some of the Finance Commissions, we find that the amount of Grants-in-Aid transferred to State Governments has increased from Rs.1609.92 crore under FC-VII to Rs.318581 crore under FC-XIII. The share of Grants-in-Aid increased from 7.72 percentage under FC-VII to 9.96 in FC-IX but declined to 8.96 under FC-X. It increased to 18.87 under FC-XII but decline to 18.03 under FC-XIII. The amount of tax devolution increased from Rs.19233.05 crore under FC-VII to Rs.1448368.53 crore under FC-XIII. The share of State Government in tax devolution declined from 92.28 per cent to 81.13 from FC-VII to FC-XII but increased marginally to 81.97 under FC-XIII. Total amount of transfer from Center to State Government increased from Rs.20842.97 crore under FC-VII to Rs.1766949.53 crore under FC-XIII.

### **III. Equity Efficiency Trade off**

FC-XIII has undermined the equity aspect as the weightage on fiscal capacity distance has been fixed at 47.5 per cent as against 50 per cent weight assigned by FC-XII. FC-XIII has assigned greater thrust on efficiency aspect as 17.5 per cent weight as against 15 per cent (fiscal discipline and tax effort combined) by FC-XII. Equity efficiency trade off has resulted in accentuating regional disparities as low per

capita income states such as Orissa and Bihar and having fiscal deficiency have appropriated lower chunk out of divisible pool (FC-XIII) vis-a-vis to that of FC-XII.

### How Progressive is the Devolution formula ?

An important issue relating to the inter se distribution of tax revenue is the progressiveness of the formula applied for determining the shares of the states. A progressive formula based on equity considerations awards more resources to the poorer states enabling them to overcome the differential in revenue capacity and better meet the needs for public goods and services. The formula introduced by FC-XIII do not appear to have adversely affected the degree of progressiveness associated with FC-XII and infact seems to have marginally improved in terms of gain to low income states. Relevant data are given in Table-3.

**TABLE-3**

#### Inter Se Shares of States

State	FC-XII Share	FC-XIII Share	FC-XII Share in Service Tax	FC-XIII Share in Service Tax
Andhra Pradesh	7.536	6.937	7.453	7.047
Arunachal Pradesh	0.288	0.328	0.292	0.332
Assam	3.235	3.628	3.277	3.685
Bihar	11.028	10.917	11.13	11.089
Chhatisgarh	2.654	2.470	2.689	2.509
Goa	0.259	0.266	0.262	0.270
Gujrat	3.569	3.041	3.616	3.089
Haryana	1.075	1.048	1.89	1.64
Himachal Pradesh	0.522	0.781	0.529	0.793
J & K	1.297	1.551	—	—
Jharkhand	3.361	2.802	3.405	2.846
Karnataka	4.459	4.328	4.518	4.397
Kerala	2.665	2.341	2.700	2.378
MP	6.711	7.120	6.799	7.232

Maharastra	4.997	5.199	5.063	5.281
Manipur	0.362	0.451	0.367	0.458
Meghalaya	0.371	0.408	0.376	0.415
Mizoram	0.239	0.269	0.242	0.273
Nagaland	0.263	0.314	0.266	0.318
Orissa	5.161	4.779	5.229	4.855
Punjab	1.299	1.389	1.316	1.411
Rajasthan	5.609	5.853	5.683	5.945
Sikkim	0.227	0.239	0.230	0.243
Tamil Nadu	5.305	4.969	5.374	5.047
Tripura	0.428	0.511	0.433	0.519
U.P.	19.264	19.677	19.517	19.987
Uttrakhand	0.939	1.120	0.952	1.138
W.B.	7.057	7.264	7.150	7.379
All States	100.00	100.00	100.00	100.00

Source : FC-XII and FC-XIII Report

A detailed examination of the awards shows that the poor states have received much less than the prosperous states. It is evident that UP is having the maximum share of 19.677 per cent as against minimum of 0.239 per cent by Sikkim. States gaining from FC-XIII awards are Arunachal Pradesh, Assam, Goa, Himachal Pradesh, J & K, M.P., Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, U.P., Uttrakhand and W.B. States losing from FC-XIII awards are Andhra Pradesh, Bihar, Chhatisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Orissa and Tamil Nadu. 18 states are gainers from FC-XIII awards of devolution of resources whereas 10 states are losers from the awards relative to FC-XII. The losing states have to improve their fiscal prudence / discipline to appropriate increased share from FC-XIII.

For a better understanding of devolution to states we have computed average devolution as per cent of GSDP and relevant information are presented in Table-4.



**TABLE-4****Average devolution as per cent of GSDP**

States	FC-XIII	FC-XII	Difference (FC-XIII-FC-XII)
Andhra Pradesh	3.34	2.80	0.54
Arunachal Pradesh	14.24	8.91	5.33
Assam	7.79	5.16	2.63
Bihar	19.44	13.57	5.87
Chhatisgarh	5.47	4.55	0.92
Goa	2.14	1.74	0.40
Gujrat	1.48	1.44	0.04
Haryana	1.10	0.93	0.17
Himachal Pradesh	3.59	1.83	1.74
J & K	6.66	4.23	2.43
Jharkhand	5.44	5.15	0.29
Karnataka	2.69	2.21	0.48
Kerala	2.13	1.94	0.19
MP	8.61	5.61	3.00
Maharastra	1.36	1.04	0.32
Manipur	12.92	7.24	5.68
Meghalaya	7.64	5.20	2.44
Mizoram	13.77	8.31	5.46
Nagaland	9.20	4.95	4.25
Orissa	6.73	5.69	1.04
Punjab	1.92	1.22	0.70
Rajasthan	5.52	3.88	1.64
Sikkim	18.05	12.08	5.97
Tamil Nadu	2.58	2.07	0.51
Tripura	9.31	4.74	4.57
U.P.	10.09	6.79	3.30
Uttrakhand	5.35	3.40	1.95
W.B.	3.67	2.82	0.85

*Source : FC-XIII Report.*

- Notes :** 1. *Average devolution is determined over the five year period of the two FCs as projected.*  
 2. *Comparable GSDP has been used for 2005-06 and 2006-07.*  
 3. *Comparable GSDP projected over the period 2007-08 to 2014-15 has been used.*

It can be observed that Sikkim having the lowest percentage of share from FC-XIII awards has the lowest differential in terms of average devolution as per cent of GSDP relative to FC-XII. Gujarat which is a loser from FC-XIII awards has the lowest differential in terms of average devolution as percent of GSDP.

Comparison of gain and loss to states due to change in devolution formula is presented in Table-5.

**TABLE-5**

**Gain / loss in shares of states due to change in formula  
between FC-XII and FC-XIII Awards**

States	FC-XII Share	FC-XIII Share	Gain (+) Loss (-)
<b>High Income States</b>	10.940	10.677	-0.263
Maharashtra	4.997	5.199	+0.202
Gujarat	3.569	3.041	-0.528
Punjab	1.299	1.389	+0.090
Haryana	1.075	1.048	-0.027
<b>Middle Income States</b>	26.842	25.839	-1.003
Tamil Nadu	5.35	4.969	-0.336
Karnataka	4.459	4.328	-0.131
Kerala	2.665	2.341	-0.324
Andhra Pradesh	7.356	6.937	-0.419
West Bengal	7.057	7.264	+0.207
<b>Low Income States</b>	47.773	48.346	+0.573
Rajasthan	5.609	5.853	+0.244
M.P.	6.711	7.120	+0.409
Orissa	5.161	4.779	-0.382
U.P	19.264	19.677	+0.413
Bihar	11.028	10.917	-0.111

*Computed from FC-XII and FC-XIII Reports*

From the above table it is revealed that out of 14 major states higher income states are net losers to the extent of 0.263. Maharashtra and Punjab are gainers whereas Gujarat and Haryana are losers. Middle income states are losers to the extent of 1.003. Except W.B. all middle income states are losers by FC-XIII devolution relative to FC-XII. Low income states have gained to the extent of 0.573 out of FC-XIII devolution relative to FC-XII. But Orissa and Bihar having higher poverty ratio are net losers out of FC-XIII devolution of resources. From high and middle income states there has been diversion of resources to the low income states for which FC-XIII has attempted to redress the horizontal imbalances. Orissa and Bihar have to improve their fiscal prudence / discipline to appropriate increased share from FC awards.

### Conclusion

As equity criterion has been undermined by 2.5 per cent and fiscal discipline has been prioritized by the prorata percentage, both Orissa and Bihar are losers from FC-XIII devolution of resources. Out of 14 major states 6 states are gainers and 8 states are losers and out of 28 states 18 states are gainers and 10 states are losers. The present FC-XIII has calibration of equity criterion with efficiency criterion. The loser states have to improve their fiscal efficiency to appropriate higher shares from FC awards.

The question that may be raised is that if the share of the poorer states in central revenues is enlarged as much as normative approach would require and that of richer states reduced, will that not be discriminatory against the better performing states and thus be detrimental to the growth of the economy? While the argument looks persuasive, it overlooks the possibility that improvement in the regions that are lagging behind may unleash the growth potential of the country. Keeping these regions backward also may not be in the larger interests of the nation or even the best interest of the states that are already advanced. It would of course not be reasonable to expect all regions to attain the same level of development irrespective of their endowment. However fiscal equalization is imperative to prevent migration lured by better living conditions in the richer states and also as a matter of 'categorical equity' as Musgrave (1999) insists. The better off states should not complain the flow of larger central funds to the poorer states.

The task of fiscal transfer is therefore to provide a level playing field. What is required is not giving less to the poor because they are poor but to contemplate that they improve their efficiency by channelising the transferred amount properly.

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### FUNCTIONAL COMPOSITION OF REVENUE EXPENDITURE IN TOTAL EXPENDITURE

(Rs.in crore)

Year	General Services	Social Services	Economic Services	Others	Total Revenue Expenditure
1980-81	134.10	240.50	168.50	3.70	546.90
1985-86	282.50	431.40	280.20	6.80	1000.90
1990-91	682.00	842.20	648.10	18.20	2190.50
1995-96	1603.20	1834.70	1247.10	12.90	4697.90
1999-00	2888.11	4002.10	158.02	20.59	8458.82

Source : R.B.I. Bulletin and finance accounts Govt of Orissa, various issues.

In the service sector half of the expenditure is on education, leaving an insignificant share for capital expenditure. This is also true for the social welfare and the security. In case of medical and sanitation though there is some provision for capital expenditure, still the share of revenue expenditure in total expenditure varies between 92 percent to 96 percent. In housing and urban development the expenditure share also increases day by day. Hence almost all the social service sector constitutes more than 90 per cent of the revenue expenditure. So the significant increase in the share of the revenue expenditure leads to the low share growth of the capital expenditure. This only reduces the quality of the social services and creates the fiscal imbalances.

### EXPENDITURE ON EDUCATION

Provision of free and compulsory education to the children in the age group of 6-14 years has been made a fundamental right under the 86<sup>th</sup> constitutional amendment act. In order to carry out these provisions, the government of Odisha has framed policies, strategies and programmes for universal elementary education as well as for higher studies and training. In spite of fiscal constraints, the state govt has not restricted nor neglected the educational sector and the state expenditure on this provision has been increased over the years. As a result of this, the literacy rate of the state has improved steadily over the past decade which shows that it was only 15.8 per cent in 1951 and has become 63.08 per cent in the year 2001.

The expenditure on general education which was Rs.1850.70 crore in the year 2001-2002 has gone up to Rs 2264.70 crore in the year 2005-06 and 7051.05 in the 2010-11 budget estimate. The expenditure on education constituted 16.07 per cent of total revenue receipt of the state in 2005-06 and 22.43 per cent in 2010-11. Similarly the ratio of revenue expenditure on education to total own revenue of the state which was 35.04 per cent in 2004-05 has now risen to 48.85 per cent in 2010-11. Expenditure on the primary education constitutes around 55.00 per cent to 37.03 per cent of the total expenditure on education during the period of 2003-04 to 2010-11, which indicates the primary education have been given greater importance in the state. Besides this a portion of the expenditure on education is also not routed through state budget, which is funded by the assistance of the donor agencies and government of India. Such expenditure was Rs 252.65 crore in 2003-04 and 493.35 in 2005-06. It has gone up to Rs. 839.33 crore during the year 2007-08, and Rs 2388.21 crore in 2009-10.

Total salary expenditure on education has gone up from Rs 1749.14 crore in 2003-04 to Rs 2451.82 crore in 2007-08. It has further increased to 5181.24 crore in 2010-11. Grant in aid for salary which was only Rs .377.51 crore in 2006-07 has risen to Rs.1134 crore in 2010-11. Salary expenditure on education is around 80 per cent - 90 per cent of total expenditure on education. Grant in aid salary on education constitutes nearly 90 per cent of total grant in aid salary of the state.

#### **HEALTH CARE SERVICES AND STATE'S EXPENDITURE**

Health care is the prime requirement and is a major concern for the people in a welfare state. However Odisha is progressing impressively in the health care sector and the health care expenditure has also been increased over the last few decades. As a result of this, life expectancy at birth in the state has increased. The birth rate of the state was 24.3 per cent in 2000 and declined to 21.4 per cent in 2008 while the national average was 22.8 per cent in 2008. The death rate was 10.5 per cent in 2000 and declined to 9 per cent in 2008 against the all India average of 7.4 per cent. The infant mortality rate also comes down from 124 in 1991 to 83 in 2003 and 64 in 2010. The state government has also introduced panchabyudhi scheme from July 2001 for free and guaranteed treatment of Malaria, Leprosy, Scabies etc. which are available in almost all the health centres and medical college hospitals of the state.



The expenditure on healthcare services which was Rs 567.68 crore in 2003-04 has gone up to Rs 630.90 crore in 2004-05. Per capita health expenditure has gone up from Rs 147.73 in 2003-04 to Rs.378.53 in the year 2010-2011. Besides the allocation made by the government, a substantial amount is being spent on EAPs outside the budget in health sector every year. While a sum of Rs.37.18 crore was spent in the year 2003-04 and Rs 523.16 crore was spent during 2009-10 outside the budget, Rs. 51.50 crore has been provided in 2010-11.

In the area of medical education and training, initiative has been taken by the state govt in the recent years. There are three medical colleges in the state with facilities for study of the courses like post graduation in different branches, MBBS, BDS and being attached with the colleges for nursing, pharmacy and laboratory technicians.

## CONCLUSION

Social sector is the most essential and emerging sector of a growing economy. This sector is the backbone of an economy's foundation and therefore needs to be strengthened for the larger socio-economic sectors of the society. The state of Odisha still lags behind in respect of an expanding, healthy and progressive social sector. Therefore a lot of private and public investment as well as enthusiasm and public awareness are highly significant. A highly progressive and vibrant social sector can only make the growth process more proactive to create dynamic, balanced and inclusive which is the essence of a strong and growing economy.



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1968	Ravenshaw College	Cuttack	Prof. Sadasiv Misra
1969	Dhenkanal College	Dhenkanal	Prof. Devendra Ch. Misra
1970	Khallikote College	Berhampur	Prof. Bidyadhar Mishra
1971	Utkal University	Vani Vihar	Prof. Baidyanath Misra
1972	Bhadrak College	Bhadrak	Dr. Chakradhar Mishra
1973	Panchayat College	Bargarh	Prof. R.C. Patnaik
1974	O.U.A.T.	Bhubaneswar	Prof. S.P. Gupta
1975	Kendrapara College	Kendrapara	Prof. H.K. Mishra
1976	S.C.S. College	Puri	Prof. Devendra Ch. Misra
1977	Nimapada College	Konark	Dr. S. Tripathy
1978	Berhampur University	Bhaja Vihar	Prof. Nilakanth Rath
1979	Utkal University	Vani Vihar	Prof. Kisan Kanugo
1980	G.M. College	Sambalpur	Prof. Pravat Ku. Patnaik
1981	O.U.A.T.	Bhubaneswar	Prof. Dayanidhi Mohapatra
1982	Municipal College	Rourkela	Prof. Bibekanada Das
1983	Ravenshaw College	Cuttack	Prof. Ghanashyam Das
1984	Berhampur University	Bhanja Vihar	Prof. Basudeb Sahoo
1985	Vikram Deb College	Jeypore	Prof. Sanatan Mohanty
1986	Banki College	Banki	Prof. B.C. Parida
1987	Kendrapara College	Kendrapara	Prof. Benudhar Bhuyan
1988	S.C.S. College	Puri	Prof. Gyana Chandra Kar
1989	M.P.C. College	Baripada	Prof. N.P. Patro
1990	Not Held	—	—
1991	Utkal University	Vani Vihar	Prof. Khetra Mohan Patra
1992	Sambalpur University	Jyoti Vihar	Prof. Trilochan Satpa

<u>Year</u>	<u>Host</u>	<u>Venue</u>	<u>President</u>
1993	Ravenshaw College	Cuttack	Prof. Surendra Nath Mishra
1994	B.B.Mahavidyalay	Chandikhole	Prof. Adwait Ku. Mohanty
1995	P.N.College	Khurda	Prof. Benudhar Mishra
1996	Paradip College	Paradip	Prof. Gajendra Nath Das
1997	Municipal College	Rourkela	Prof. Jyoti Prakash Patnaik
1998	Govt. Women's College	Keonjhar	Prof. Ajit Ku. Mitra
1999	Talcher College	Talcher	Prof. Binayak Rath
2000	Govt. Women's College	Sambalpur	Prof. Satya P.Das
2001	D.A.V.College	Koraput	Prof. Kumar B.Das
2002	Bhadrak College	Bhadrak	Prof. Bhabani P.Dash
2003	S.V.M. College	Jagatsinghpur	Prof. R.P.Sarma
2004	NCDS	Bhubaneswar	Prof. S.N.Mishra
2005	Christ College	Cuttack	Prof. N.B. Pradhan
2006	F.M. College	Balasore	Prof. R.M. Mallick
2007	U.N.S. Mahavidyalay	Mugapal	Prof. Bedabati Mohanty
2008	Kendrapara College	Kendrapara	Prof. Kishore C. Samal
2009	Utkal University	Vani Vihar	Prof. R.K. Panda
2010	North Orissa University	Baripada	Prof. Pulin B. Nayak
2011	U.N. College of Science & Technology	Adaspur	Prof. Sudhakar Panda
2012	L.N. Sahu Mahavidyalay	Jagatpur, Cuttack	Prof. Manoj Panda

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