



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Chennamaneni, R.: Public Distribution System and New Economic Policy in India: Policy Implications, Implementation Strategies and Challenges for the Future. In: Bauer, S.; Herrmann, R.; Kuhlmann, F.: Märkte der Agrar- und Ernährungswirtschaft – Analyse, einzelwirtschaftliche Strategien, staatliche Einflussnahme. Schriften der Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues e.V., Band 33, Münster-Hiltrup: Landwirtschaftsverlag (1997), S.437-449.

PUBLIC DISTRIBUTION SYSTEM AND NEW ECONOMIC POLICY IN INDIA: POLICY IMPLICATIONS, IMPLEMENTATION STRATEGIES AND CHALLENGES FOR THE FUTURE

by

R. CHENNAMANENI*

1 Introduction

The policy thrust being given to the agricultural sector by the Indian government since the 90s places greater reliance on the free operation of the market forces and the creation of a favourable price and trade regime. The measures that are advocated include removal of all restrictions on domestic trade as well as import and export of agricultural goods, use of incentive prices for raising production, removal of subsidies on agricultural inputs, revamping of the public distribution system and reorganisation of agricultural credit by restricting concessional finance facilities. This new policy package marks a clear departure from the past agricultural policies.

While there is an agreement among a large number of scholars that trade liberalisation combined with exchange devaluation has generated a large potential for agricultural exports, sharp differences exist as to the desirability of completely freeing trade in foodgrains. Because of large fluctuations in international prices of agricultural commodities, the variability in domestic market prices is likely to get accentuated as a result of trade liberalisation. Needless to say that such fluctuations for foodgrains can have adverse affects on food security of the poor.

It is against this background, an attempt is made in this paper to analyse the possible implications for the public distribution system (PDS), its policy and administrative design in India which has been geared to supply predominantly foodgrains at subsidised rates to the poor, who still constitute about 40% of the total population. Besides this, a desirable policy with the basic ingredients of the necessary implementation strategies of the government to strengthen the PDS in the framework of the new economic policies as well as to combat the challenges for the future are worked out to keep for discussion.

2 New Economic Policy and Agriculture: Implications for PDS

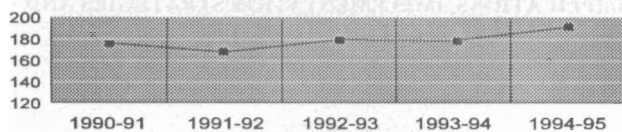
2.1 Performance of Agriculture

While the trend rate of growth of agricultural output over the eighties was more than satisfactory at 3% per annum, in the subsequent four years of normal monsoon since 1990-91, although output seems to have maintained at an higher plateau, there is evidence of a slow-down of growth despite better terms of trade, increasing producer prices and massive procurements by the government (Fig. 1).

Apart from this factor, there are some disturbing tendencies with implications for current output and future growth potential very much relevant for long-term food security goals. Firstly, if agricultural growth continues only a slow growth trend, it would become increasingly difficult to have large surpluses for domestic augmentation and possible trade with foodgrains in future.

* Dr. R. Chennamaneni, Institute for Agricultural Policy, Marketing and Agricultural Development, Faculty for Agriculture and Horticulture, Humboldt University, Luisenstr. 56, 10099 Berlin

Figure 1: Production of Foodgrains in India (1990-91 to 1994-95; in million t)



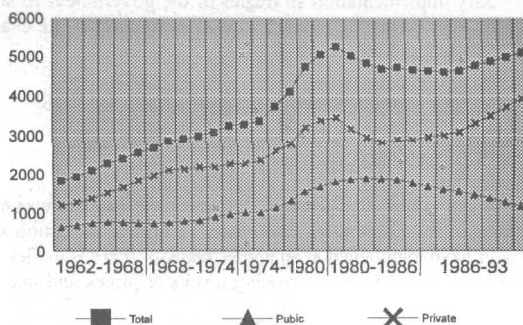
Source: GOVERNMENT OF INDIA (1994a); (1995a)

Secondly, a continued regional concentration of growth in output and marketed surplus is taking place accentuating already existing regional inequalities. Inter-regional disparities in production, a major factor accounting for inter-state variation in cereal consumption and calorie intake, has increased, as shown by the increase in coefficient of variation in per capita cereal production from 0.54 in 1970-71 to 0.84 in 1988-89 (KRISHNAN 1992).

Thirdly, such growth in output, predominantly in the green-revolution belt, has not come from any extension of cultivated area through more intensive cropping. Rather, land-use intensities have remained stagnant or have even fallen, putting all the onus of impetus to growth on yield increases. This is not entirely a positive development as evidences show that due to indiscriminatory use of fertilisers, pesticides, excessive and improper irrigation and improper land and water use, major ecological problems such as water logging, soil salinity, alkalinity and outbreak of pests and diseases are affecting the sustainability of rice production (CHENNAMANENI et al. 1995).

Fourthly, investment in agriculture continues to show a downward trend during the 1990s. This has occurred despite a terms of trade improvement for the agricultural sector, and is mainly attributable to a decline in public investment in agriculture (Fig. 2).

Figure 2: Capital Formation in Indian Agriculture (at 1980-81 Price; Rs in Crore)



Source: GOVERNMENT OF INDIA (1989);(1994b).

2.2 GATT and Prospects for Trade

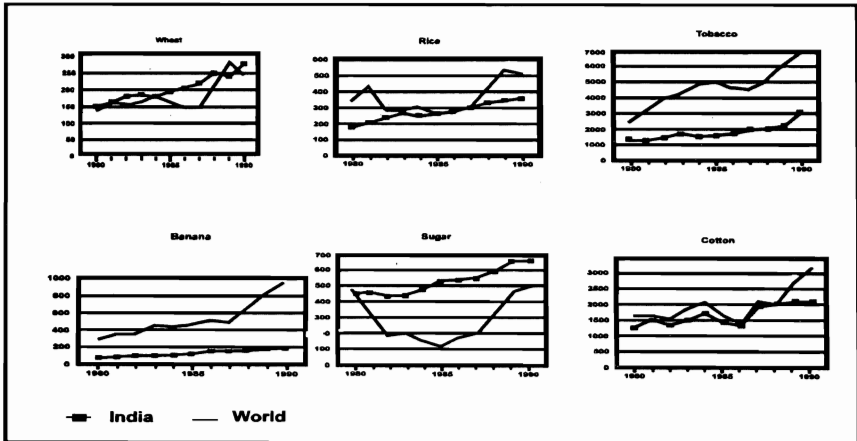
It is generally assumed that under GATT scenario, reduced support levels and rationalisation of trade barriers will increase production and export of various commodities with comparative advantage in India. Similarly, the reduction in import barriers are expected to reduce consumer

prices in those countries where the tariff barriers are very high, which will generate strong demand and will push up imports. A number of empirical modelling exercises, such as Tyers and Anderson model, Static World Policy Simulation Model of USDA, IIASA Model, OECD Model, show that international prices will rise and so will the trade volumes, though the estimates of change in prices and trade vary from study to study (see TYERS et al 1992; USDA 1986; BRANDAO et al 1993; GULATI et al 1994).

An important factor, very relevant for GATT scenario is that the domestic support levels in India are negative for most of the agricultural commodities, which is in sharp contrast to support levels in the developed countries generally more than 10% of the total value of their agricultural output. The product specific and non-product specific Aggregate Measure of Support (AMS) for 17 out of 22 total products for which India maintains market support programmes works out to be negative, i.e. (-)Rupees 196 billion, which forms (-)22.50 % of the value of agricultural output during the base period 1986-87 to 1988-89 and has increased in the last years to (-) 341.45 billion during 1992-93 (GULATI et al 1994, p.1861). This indicates the massive amount of "Taxation" Indian agriculture is subjected to.

During the 1980s and also thereafter, Indian absolute prices were lower than world prices, particularly for rice, cotton, tobacco and bananas (Fig. 3). A crucial question would be, as total cultivable area is almost limited and changes in price ratios would change cropping patterns in favour of crops with comparative advantage, how far foodgrains production and possible trade will have implications for self sufficiency and food security goals of PDS in the country. The area under oilseeds (particularly rapeseed-mustard and groundnut), but also that of coarse cereals is likely to contract, whereas the area under fine cereals, rice, wheat and cotton is likely to expand and may emerge as important export items (GULATI et al 1994).

Figure 3: Indian and World Prices (Rupees per Quintal)



Source: Compiled from NAYYAR et al (1994)

This implies, given that India accounts for a significant share of world output, and that a relatively small proportion of world output enters into world trade for most commodities, a larger participation by India is likely to worsen its terms of trade, particularly for rice and cotton.

India should retain some wedges between domestic and foreign relative prices so as to ensure that the terms of trade loss is not excessive. Further, considering foodgrain trade, as currently world prices are more volatile than domestic prices, it would be desirable to continue with buffer stock policy. Empirical studies, particularly on rice, strengthen these arguments (see REDDY 1992; also VYAS 1994). At the same time, in major rice growing states, the existing inverse relationship between size of farms and area under rice does not promise a substantial marketable surplus (REDDY 1991). It is feared that a small withdrawal from the domestic market and the eventual price rise would affect the living standard of the large vulnerable sections (CHELLARAJ et al 1992; VYAS 1994).

India has a large growing population with a low per capita income. With per capita income growth expected to accelerate, a rapid growth in direct and derived demand for foodgrains is expected. The total food demand estimation by BHALLA (1995), taking apart from population growth and growth of per capita income of 3.0 and 5.5%, income elasticities of demand for different foods, is comprehensive and puts the demand growth rate at 3.6 and 4.3% per annum respectively. According to this estimation, to meet the total food demand in 2000, the country should be producing 243 to 259 million tonnes of foodgrains.

There is a strong argument in the debates going on that there is a distinct change in tastes and consumption habits and that with rising income, consumers are spending a larger proportion on superior food (GOVERNMENT OF INDIA 1993). It is well known that the elasticity of demand for foodgrains is less than one, but if a rise in income is accompanied by income redistribution in favour of the poor, total demand for foodgrains is likely to rise. This is because as compared with a per capita consumption of 22.18 kg for the richest household, the households in the poorest decile in rural India consumed only 10.17 kg of foodgrains per capita. The respective urban figures were 14.02 and 10.62 kg (GOVERNMENT OF INDIA 1991, pp.127 - 138).

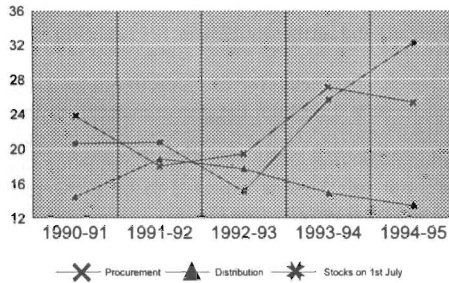
Even in the scenario of no favourable income distribution, whenever consumers shift away from foodgrains, they eat superior food, most important among these being milk, eggs, meat and fish etc. The experience of developed countries and of China shows that with per capita income growth accelerating, the direct household demand for foodgrains did decline, but the total demand registered very sharp increases because of indirect demand for feed for animals (particularly coarse cereals, pulses and oilcakes). Because of such developments, China, which has experienced a per capita income growth of 9% since 1980 was importing about 10 to 13 million tonnes of foodgrains a year. Unless India achieves a major acceleration in food grains growth, it may, as China and other rapidly developing economies has to import foodgrains, in case is income growth accelerates to 7.5 to 8.0% per annum. Therefore, increasing foodgrain production to meet the demand, which is likely to be about 243 to 259 million tonnes by the year 2000, necessitating an average incremental output of 7.5 to 9.0 million tonnes a year during the nineties, compared to about 4.3 million tonnes a year during the eighties, is itself a big challenge to India.

2.3 Price Policies, Poverty Incidence and Food Security

One aspect of the economic policies, where the Indian government is facing intractable structural problems is the management of the food economy of the country. As a result, the situation of plenty coexisting with large-scale poverty and malnutrition is growing steadily worse. Efforts of the government to address the problem within its own limited perspective has led to rapid rise in stocks of foodgrains with the public procurement agencies and reduced offtake from the public distribution system. Foodstocks rose from about 21 million tonnes in 1991-92

to about 32 million tonnes in 1994-95, whereas the distribution of foodgrains fell for the third year in succession in 1994-95 to about 13.2 million tonnes (Fig. 4).

Figure 4: Procurement, Distribution and Stocks of Food Grains (1990-91/1994-95 in mill t)

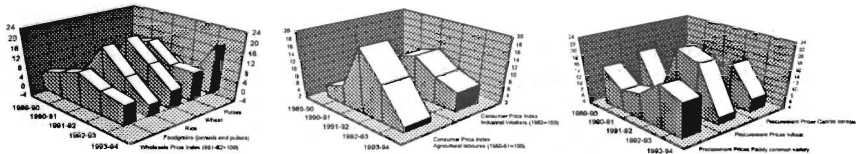


Source: GOVERNMENT OF INDIA (1995c).

The immediate cause of these disquieting developments is the narrowing differential between open market prices and issue prices of the PDS, which in turn has been the outcome of large increases that have had to be made in the issue prices to offset the increases in procurement prices and bring down the government's food subsidy. The irony of the rising stocks of foodgrains with the public agencies is driven home by the fact that simultaneously per capita availability of foodgrains in the country has declined from 510 gm per day in 1991 to 474 gm in 1994. A closer look at the foodgrain production performance, the prices of cereals as influenced by the government intervention in the market for foodgrains and programmes directed towards alleviating poverty in the post-reform period, shows some important reasons in strengthening the arguments put forward by TENDULKAR et al. (1995) that there is increasing evidence to prove that particularly rural poverty has increased since the reforms began, with possible implications for food security.

A dip of 2.5% in the index of agricultural production for all commodities in 1991-92 over 1990-91 was mainly due to a large decline in foodgrain output (Fig. 1). The recovery of agricultural production in 1992-93 was modest in relation to 1990-91. As rural poverty is more directly affected by the foodgrains harvest, because it is the major source of both employment and of the supply of the basic necessity consumed by the poor, these poor harvest conditions could have adversely affected the income generation of agriculturally dependent labour households in 1991 and 1992.

Figure 5: Percentage Change over Previous Year in Price Indices

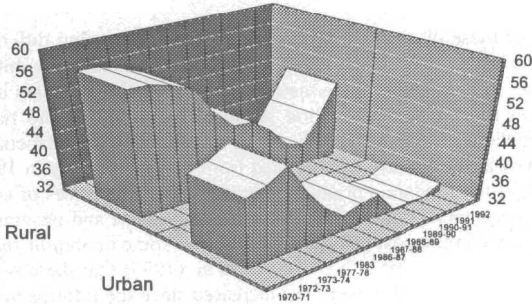


Source: GOVERNMENT OF INDIA (1994c; 1995a)

This situation was further accentuated by a steep hike in the open market prices of wheat and rice: The procurement prices of wheat were raised by 22% in 1991-92 and further by 20% in 1992-93, that of rice were raised by 12% in 1991-92 and by 17% in 1992-93 (Fig. 5). To keep the budgetary subsidies under check, the central issue prices were also raised by 30% for rice and 21% for wheat in December 1991. These actions resulted in a steep rise in the open market prices of foodgrains. The wholesale price index for foodgrains increased by 21% in 1991-92 (mainly because of rice and wheat) and further by 12% in 1992-93 (Fig. 5).

In the absence of comfortable public stocks, for example throughout 1992-93 as shown in Fig. 4, the urban PDS had to be served through the procurement from the below normal harvests, ultimately raising the rural grain prices more steeply as reflected particularly in the consumer price index for agricultural labourers. Combined with a reduction in employment arising from below normal harvests, this price rise is expected to have severely affected the poor households, ultimately increasing rural poverty (see Fig. 6).

Figure 6: Poverty Indicators for 12 Years from 1970-71 to 1992 (Based on Poverty Line - All India Rural and Urban)



Note (1) Poverty indicator refers to its being based on Planning Commission all-India poverty line of monthly per capita total expenditure (MPCTE) of Rs 49.09 (rural) and Rs 56.64 (urban) at 1973-74 prices.

Source: Data compiled from TENDULKAR et al (1995)

Own price elasticity estimates show that the absolute values of price elasticities for rice and wheat for the very poor (expenditure groups below 75% of poverty line) exceed one, indicating that their quantity demanded is proportionately very responsive to price changes and expenditure on these cereals would decline if their price increases (RADHAKRISHNA et al 1992). By and large, elasticities decrease with increased expenditure. This again emphasises that the poor's marginal food choices would be more responsive to food subsidy policies like the PDS than any other policy.

Providing food security to the poor would most probably be one of the unfinished tasks that may persist throughout the decade and most probably beyond the year 2000. While moderate success in combating transitory food insecurity caused by crop failures due to either droughts or floods could be achieved, India has failed to make much dent on chronic food insecurity. Added to the declining per capita foodgrain production, the failure of the PDS to transfer foodgrains to the deficit states of Bihar, Orissa and Madhya Pradesh, with high incidence of poverty and hunger, has resulted in either stagnant or declining trend in cereal and calorie intake (RADHAKRISHNA et al 1994). However, the PDS did improve the food security of the

people in some severely food deficit states with low per capita foodgrain intake such as Kerala, Tamilnadu, Gujarat and Maharashtra.

3 Reforming PDS: Relevant Issues

3.1 PDS Profile and Consumer Changes

Through PDS the government supplies some essential items of daily use to the public at controlled prices via outlets like ration shops and fair price shops. The aim is to ensure stability in the general living standards of the population, particularly the poor, and to insulate them against rising prices. The items sold through PDS outlets are wheat, rice, levy sugar, edible oil, soft coke, kerosine oil and controlled cloth. Of these rice (27%), wheat (10%), sugar (35%) and kerosine (15%) are the most important accounting for 86% of the total PDS sales (Tab. 1).

Table 1: A Profile of Purchase from PDS, All India

	Rice	Wheat	Bajra	Jowar	Other cereals	Pulses	Edible oils	Sugar	Coal	Kerosene	Standard cloth
Percentage Share in Total Rural PDS Purchases	26,63	7,89	0,11	0,34	0,54	0,18	7,37	40,35	0,09	11,79	4,71
Percentage Share in Total Urban PDS Purchases	26,88	15,08	0,03	0,12	0,21	0,23	11,23	22,26	0,81	20,97	2,18
Percentage Share in Total (Rural + Urban) PDS Purchases	26,7	10,08	0,09	0,27	0,44	0,2	8,54	34,84	0,31	14,58	3,94

Source: GOVERNMENT OF INDIA (1991)

While sugar, rice and kerosine are relatively more important items sold in rural sector, rice, sugar, kerosine, wheat and edible oils are the important ones in urban sector. Thus there is some basis for the general impression that the PDS commodity composition is weighted in favour of items supposed to be consumed largely by the relatively richer sections of the society. A study of the composition of commoditywise market dependent population gives us a similar picture (see SURYANARAYANA 1995).

There exist also considerable inter-state variations in the percentage purchases from the PDS between rural and urban areas (see GOVERNMENT OF INDIA 1990). However, on an average, cereals account for more than 85% of the calorie intake of the poorer households particularly in the rural sector (BHATTACHARYA et al 1991). Further cereals constitute about 60% of total consumption expenditure for these groups. Therefore cereal consumption is an important indicator of food security. SHAH (1983), BEHRMAN and DEOLALIKAR (1989) among other studies, show income elasticities of demand for calories are substantially smaller than those for food expenditure implying that marginal food demand choices of relatively poorer households due to income increases are concerned more with commodity attributes than their calorie content. Thus, if the government policy is to reduce malnourishment, which is important for improvement in labour productivity and economic growth, it cannot be achieved by growth per se, instead instruments like the PDS which would influence consumption composition in favour of the nutritious items should be resorted to.

3.2 Performance of PDS

There are in general three major issues discussed concerning the management of food economy relevant to the performance of PDS: better targeting, reduction in buffer stock holdings by greater reliance on imports and involvement of private trade in procurement. Operational problems for effective targeting such as identification, timely supply and transportation could be overcome in states like Kerala, Andhra Pradesh, Tamilnadu and Gujarat. Here various types of targeting schemes have been introduced by a process of selective inclusion of school children, old and destitutes, tribals, retrenched workers etc. and exclusion of income tax payers etc. Good targeting is also possible through massive employment programme assisted by "Food for Work".

Presently nearly 60% of the outlays on major programmes goes to the employed generation (GOVERNMENT OF INDIA 1996). The basic issue is to clear on the fact whether affecting wage transfers to the poor via employment schemes is an end in itself or whether the employed generation is to be viewed as a by-product benefit in the process of creating durable communal assets or assets for individual poor households (such as wells and houses). Though the latter is the goal, Jawahar Rozgar Jojana (JRY) for example, is implemented without being underpinned into local level planning or consultation leading to non-durable, incomplete and works lack of maintenance follow up. GUHAN (1995) has estimated that out of one rupee spent in the JRY only 14 paise are likely to reach the poor via effective net wage transfers.

Central governments revamped PDS gives preference to population living in most difficult areas such as drought prone areas, desert areas, tribal areas, certain designated hilly areas and urban slum areas and is being presently implemented. About 1700 blocks have been covered under revamped PDS (GOVERNMENT OF INDIA 1992). As has already been mentioned, the PDS offtake has fallen steadily since 1991 because central issue prices have been raised closer to their market price levels to reduce the food subsidy bill.

It is being suggested that instead of holding large stocks, the government should export a part, block the foreign exchange earned therefrom and use the same to import foodgrains in years of shortage. However, the experience shows that there exists no balanced international trading regime in foodgrains. It seems therefore that "The world market cannot be relied upon to provide food at stable prices. As a course of normal strategy of development and for food security, developing countries must take account of the extra expenses involved in relying primarily on the world market for food in dealing with emergencies short of famine" (PARIKH 1992). Further, "trade policy, like price policy, and other policies which rely on market mechanism, are not very effective in bringing food to the poor. They will provide food to those who have money to buy it but not to those who lack purchasing power" (PARIKH 1992).

Another suggestion is that commodities needed for public distribution should be obtained through open market purchases. This cannot work because once the market knows that there is a compulsive buyer of a large quantity, say about 16 million tonnes of foodgrains, it will hold back the stocks till the prices skyrocket and enforce "distress" buying. The free market can work only under the condition of free purchasers and free sellers. In principle, PDS is meant to take care of both, distress selling through support prices and distress purchasing through PDS.

Considering the equity aspect, DEV and SURYANARAYANA (1991) found that PDS is pro-rural at the All India level for rice and coarse cereals. JHA (1991) noted that about 40-50% of the population buys subsidised rice and wheat and about half of them are non-poor. It means that a substantial part of the PDS benefits accrues to the non-poor. However, welfare gains to

the poor are substantial wherever PDS supplies are targeted well as in Kerala and Andhra Pradesh (GEORGE 1979; RADHAKRISHNA et al 1988). It is therefore evident that the prospects for greater relief through the PDS depends on its effectiveness sought to be enhanced and fine tuned through many changes in its policy approach, design and implementation.

3.3 Alternative Options and Policy Model

Based on the foregoing analysis, and a study of different alternative options and proposals, an attempt is made here to keep a PDS Policy Model as a part of Food Management Policy. This Model incorporates strategic agricultural and rural development programmes and trade perspectives with proposals for a targeted PDS.

The model presented here has three levels - macro-, meso- and micro (see Fig. 7). Three important macro-level policy decisions, which form the foundations in projecting the future food management policy of the country, relate firstly to *Financing, Credit and Foreign Exchange Requirements of Operational Food Policies*, secondly to the *Agricultural and Rural Development Strategy in Backward, Special Areas with Incentive and Nutrition Policy Guiding These Priorities* and thirdly to the *Trade Policy* (for details see Fig. 7).

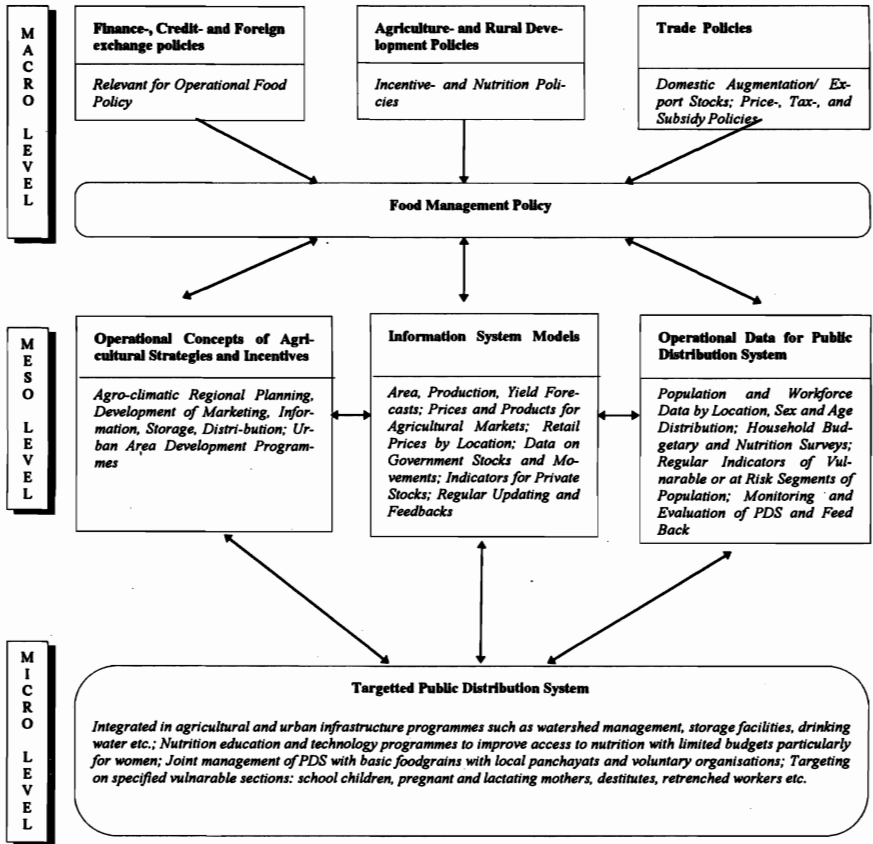
At the meso-level, the level of the state governments, prerequisites for operationalising the macro level strategies are worked out. These include *Operational Concepts of Agricultural Strategy, Information Systems and Operational Data For PDS*. At the micro level the *Targetted Public Distribution System* builds the implementation framework of the programme (see Fig. 7 for details).

4 Summary

Due to the lack of a consistence policy since the reforms began in 1991 to overcome the supply side constraints in agriculture, India, unlike China in the last decade, could not raise aggregate supply response and accelerate its growth and reap full benefits out of favourable incentive environment for agriculture and trade. Besides, the policy of unprecedented raising of procurement and issue prices, consequent inflation and gradual withdrawal of input subsidies is eroding the comparative advantage of agricultural products, apart from worsening intractable structural problems in the management of food economy. However, without a rational relationship to domestic supply augmentation, freeing foodgrain trade may cause undue rise in the domestic prices of essential food items with implications for food security. Based on this analysis, the author discusses policy options and necessary implementation strategies to strengthen the Public Distribution System.

As effective targeting seems to be one of the most important factors in transferring welfare gains to the poor and at the same time keep budgetary subsidy under desired limits, targeted PDS has to fulfil three important requirements in different approaches to be effective at the grass roots level: They should supplement agricultural growth programmes with poverty alleviation employment programmes (urban development) aimed at rural (urban) infrastructure, womens welfare, basic needs etc. in strictly selected areas; be jointly planned and managed by local governments (Panchayats) and voluntary organisations; practice selective inclusion approach towards vulnerable sections such as school children, pregnant and lactating women, destitutes, retrenched workers etc.

Figure 7: Targeted PDS Model In Food Management Policy



Zusammenfassung

Zu Beginn der 90er Jahre begann Indien, seine Agrarpolitik zu reformieren um das Angebot an Agrarprodukten zu erhöhen. Im Gegensatz zu der mit gleichem Ziel eingeführten Reformpolitik Chinas waren die Reformen in Indien jedoch nicht konsequent ausgestaltet, so daß es nicht gelang, die Gesamtleistungen des Agrarsektors auf der Angebotsseite hinreichend zu steigern, das Wachstum der Agrarproduktion zu beschleunigen und Vorteile aus günstigen Rahmenbedingungen für die Landwirtschaft und den Handel zu ziehen. Außerdem wurde eine Strategie der Erhöhung staatlicher Auf- und Verkaufspreise für landwirtschaftliche Agrarprodukte und Lieferpreise für Betriebsmittel eingeführt, in deren Folge die Inflation zunahm. Aufgrund dieser Veränderungen verschlechterten sich die komparativen Vorteile für landwirtschaftliche Produkte und die bereits vorher bestehenden schwierigen Struktur- und Management Probleme der Ernährungswirtschaft nahmen noch zu. Die Freigabe des Handels mit Nahrungsgetreide über die Landesgrenzen hinaus birgt jedoch die Gefahr in sich - wenn sie in keinem angemessenen

nen Verhältnis zum inländischen Angebot steht - daß die inländischen Preise für inländische Nahrungsmittel erheblich steigen und dies sich auf die Ernährung der Menschen nachteilig auswirkt. Basierend auf dieser Analyse diskutiert der Autor verschiedene Optionen der Politik und die notwendigen Implementierungsstrategien zur Verstärkung der staatlichen Verteilungssysteme für Nahrungsmittel (Public Distribution System - PDS).

Da eine effektive Zielorientierung einer der wichtigsten Faktoren zur Übertragung von Wohlfahrtsvorteilen auf die Armen bei gleichzeitiger Haltung der Subventionshöhe auf einem erwünschten Niveau im Haushalt scheint, müßte das gezielte Public Distribution System drei wichtige Voraussetzungen erfüllen, um in den unterschiedlichen Herangehensweisen auf der lokalen Ebene effektiv zu funktionieren: Es muß die landwirtschaftlichen Wachstumsprogramme durch Armutsbekämpfungs- und Beschäftigungsprogramme ergänzen, die gezielt sind auf ländliche und städtische Infrastruktur, Frauenfürsorge, Mindestbedürfnisse etc., in streng ausgewählten Gebieten. Es soll gemeinsam mit den lokalen Regierungen (Panchayats) und Nichtregierungsorganisationen geplant und koordiniert werden. Es soll ferner eine selektive Einbeziehung von schwachen Gruppen in der Gesellschaft - wie Schulkinder, Schwangere und stillende Mütter, Notleidende und Arbeitslose - ermöglichen.

References

- BEHERMAN, J.R.; DEOLALIKAR, A.B. (1987): *Will Developing Country Nutrition Improve with Income? A Case Study for Rural India*. In: Journal of Political Economy 3, pp. 492-507
- BHATTACHARYA, N.; DIPANKAR, C.; PRADIP, M.; ROBIN, M. (1991): *Poverty, Inequality and Prices in Rural India*. In: Sage Publications, New Delhi
- BHALLA, G.S. (1995): *Globalisation and Agricultural Policy in India*. Indian Journal of Agricultural Economics 50 (Jan.-March), pp. 7-26
- BRANDAO, A.S.P.; MARTIN, W. (1993): *Implications of Agricultural Trade Liberalization for the Developing Countries*. In: World Bank Working Paper, WPS 1116
- CHELLARAJ, G.B.; BORSEN, W.; FARRIS, P.L. (1992): *Impact of Rice Subsidy on Food Consumption In India*. Indian Journal of Agricultural Economics 2(April-June), pp. 215-223
- CHENNAMANENI, R.; JANAIHAH, K. (1995): *Sustainability of Rice Production in India: Problems, Prospects and Strategies*. Working Paper, Dept. of Resource Economics, Berlin: Humboldt-University
- CHENNAMANENI, R. (1996): *Changing Incentive Policies and Fertilizer Use: Implications for Environment, Agricultural Production and Food Security*. Paper presented at IAAE Symposium on "Economics of Agro-Chemicals", April 24 - 27, WAU, Wageningen
- DEV, S.M.; SURYANARAYANA, M.H.: *Is PDS Urban Biased and Pro-Rich ? An Evaluation*. In: Economic and Political Weekly 41(October), pp. 2357-2366.
- GEORGE, P.S. (1979): *Public Distribution of Foodgrain in Kerala - Income Distribution Implications and Effectiveness*. In: Research Report 7, IFPRI, Washington D.C.

- GOVERNMENT OF INDIA (1991): *A Note on the Fourth Quinquennial Survey on Consumer Expenditure (Sub-Sample 1)*. NSS 43rd Round (July 1987-June 1988) and *Results of the Fourth Quinquennial Survey on Consumer Expenditure (Sub-Sample 1)*. NSS 43rd Round (July 1987-June 1988), Sarveekshana, 15(July-Sep), pp.127-138
- GOVERNMENT OF INDIA (1994a): *Agricultural Statistics at a Glance*. Directorate of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, New Delhi, p. 8
- GOVERNMENT OF INDIA (1995a): *Agricultural Statistics at a Glance*. Directorate of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, New Delhi, pp.11, 13-26
- GOVERNMENT OF INDIA (1989): Central Statistical Organisation, *National Accounts Statistics, Sources and Methods*. October, Department of Statistics, Ministry of Planning, New Delhi
- GOVERNMENT OF INDIA (1994b): Central Statistical Organisation, *National Accounts Statistics, Sources and Methods*. March, Department of Statistics, Ministry of Planning, New Delhi
- GOVERNMENT OF INDIA (1994c): *Economic Survey 1993-94*. New Delhi, p.121
- GOVERNMENT OF INDIA (1995c): *Reports on Food Stock Position*. Ministry of Food and Civil Supplies, New Delhi (unpublished)
- GOVERNMENT OF INDIA (1993): *Report of the Expert Group on Estimation of Proportion and Number of Poor*. Perspective Planning Division, Planning Commission, New Delhi
- GUHAN, S. (1995): *Social Expenditures in the Union Budget: 1991-96*. In: Economic and Political Weekly 18-19(May), p.1095-1101
- GULATI, A.; SHARMA, A. (1994): *Agriculture under GATT: What It Holds For India*. Economic and Political Weekly 29(July), pp.1857-1863
- JHA, S. (1991): *Consumer Subsidies in India: Is Targetting Effective*. In: Discussion Paper No.64, Indira Gandhi Institute of Development Research, Bombay
- KRISHNAN, T.N. (1992): *Population, Poverty and Employment in India*. In: Economic and Political Weekly 46(Nov), pp. 2479-97
- NAYYAR, D.; SEN, A. (1994): International Trade and Agricultural Sector in India. In: Bhalla, G.S. (Ed.): *Economic Liberalization and Indian Agriculture*, Institute for Studies in Industrial Development, New Delhi, pp. 122-178
- PARIKH, K. (1992): *Food Security: Issues and Options*. In: Papers of the Plenary and Invited Paper Sessions, XXIst International Conference of Agricultural Economists, August 22 - 29, 1991, Tokyo, Japan
- RADHAKRISHNA, R.; RAVI, C. (1992): *Effects of Growth, Relative Price and Preferences on Food and Nutrition*. In: Indian Economic Review, Special Number, pp. 303-23

- RADHAKRISHNA, R.; RAO, K.H. (1994): *Food Security, Public Distribution and Price Policy*. In: Discussion Paper Series No.4., Centre for Economic and Social Studies, Hyderabad
- RADHAKRISHNA, R.; INDRAKANT, S. (1988): Effects of Rice Market Intervention Policies in India: The Case of Andhra Pradesh. In: Asian Development Bank, *Evaluating Rice Market Intervention Policies: Some Asian Examples*, ADB, Manila
- REDDY, V.R. (1991): *Some Estimates of Labour Demand in Rice Cultivation*. In: Indian Journal of Economics 283(April), pp. 9-17
- REDDY, V.R.; NARAYANAN, B. (1992): *Trade Experience of Indian Agriculture: Behaviour of Net Export Supply Functions for Dominant Commodities*. In: Indian Journal of Agriculture Economics 1(January-March), pp. 48-61
- SHAH, C.H.(1983): *Food Preferences, Poverty and Nutrition Gap*. In: Economic Development and Cultural Change 1(Feb), pp. 121-148
- SURYANARAYANA, M.H. (1995): *PDS Reform and Scope for Commodity-Based Targeting*. In: Economic and Political Weekly 13(April), pp. 687-695
- TENDULKAR, S.D.; JAIN, L.R. (1995): *Economic Reforms and Poverty*. In: Economic and Political Weekly 23(June), pp.1339-1376
- TYRES, R.; ANDERSON, K. (1992): *Disarray in World Food Markets: A Quantitative Assessment*. Cambridge, New York
- UNITED STATES DEPARTMENT OF AGRICULTURE (1986): *World Commodity Markets - Government Intervention and Multilateral Policy Reform*. USDA, Washington
- VYAS, V.S. (1994): *Agricultural Policies for the Nineties: Issues and Approaches*. In: Economic and Political Weekly 26(June), pp. 54-63