

Food Crisis Induced Swings in the Role of Public Interventions in Indian Food Markets: Recent Experiences

Introduction

Prices of agricultural commodities witnessed a low and stable trend since the world food crisis of 1972-75 (Blein and Longo, 2009). Several national and international organizations such as UNCTAD had during the crisis advocated an interventionist approach such as international commodity agreements, building up of buffer stocks and the creation of an integrated fund to stabilize prices and maintain these within a predetermined band (Stryker, 2008). As prices receded during 1975 free market regime (integrated later with the WTO regime) paved a way to provide more food aid under the various Food Aid Conventions (Ibid). Thereupon quantitative barriers on trade had been replaced by tariff equivalents with bounds on tariffs, disciplines were imposed upon export and domestic subsidies while sanitary and phytosanitary (SPS) measures were brought within its preview. In the recent decade prices started rising moderately during 2004 and 2005 while rapidly since 2006 that continued till summer 2008 (Ibid). Increase in the food price index that stood at 12% during 2005 and 2006 increased to 24% during 2007 while 50% during 2008 (till July) (FAO, 2008). This price rise included nearly all the major basic foodstuffs and feed stocks (prices of staples such as wheat, soy, vegetable oils, rice witnessed the highest increase) that distinguished it from the earlier such booms (UNCTAD, 2008). According to FAO estimates food problem was not one of supply but of getting it to the people because of higher prices (Singh and Blanc, 2009). Even though prices for several of the food items had declined dramatically since August 2008 but prices of the items such as sugar, oils and fats, and cereals started rising since the late 2009 that surpassed its peak during 2008. About 75 million people were thrown below the hunger threshold during 2007 and another 40 million during 2008 and thereupon the number of undernourished touched 963 million (FAO, 2008). Rising prices increase the food costs for consumers and impact the public finances even though these benefit the producers.

Present food crisis resulted from factors such as droughts and climatic changes in the producing countries, growing meat consumption particularly in Latin America and Asia, cereals imports by countries hitherto self-sufficient, reduction in land cultivated area and declining grain reserves in national systems dismantled during the late 1990s (Hernández, 2008; Holt-Giménez, 2008). Other factors included an increase in oil prices thereby increased investments in bio fuels,

speculative investment in raw materials, export bans particularly of rice in several countries, etc. (Jacques, 2008; Toussaint, 2008 and Nadal, 2008). In addition, several long-term factors that contributed to this phenomenon included low and declining agricultural productivity in several developing countries, reduced institutional support for extension services and input subsidies, and the availability of cheap imports (UNCTAD, 2008). There was also a decline in investment in agriculture, transport and logistic infrastructure, inadequate international aid to the developing countries, for example, multilateral institutions slashed aid from US\$ 3.4 billion during 1980 to US\$ 500 million during 2002 whereas bilateral donors slashed it from US\$ 2.8 billion to US\$ 1.7 billion during this period. Financial sector also got involved with the global food system because of financial crisis that emanated from the crisis of high risk mortgages. As a result, investors started seeking safer investments particularly in oil and agricultural products (about 55% investments in the agricultural sector are speculative)

Food markets comprise of a composite set of the local and regional markets. Regional markets are the key for developing value chains and relevant sectoral policies. Trade policy measures can be created/enforced to support these chains thereby regulate and control prices (Blein and Longo, 2009). Food price volatility is linked to the organization of local and domestic markets that may be exacerbated by the volatility ‘imported’ from regional and/or global commodity markets (Ibid). This is because markets transmit timely information about the changing demands and new business opportunities whereas competition helps ensure appropriate pricing thereby efficient allocation of resources, goods and services (Kuroda, 2011). Efficient markets are important to transmit effective price signals to producers for taking judicious decisions relating to the input purchases as well as production, sale and storage of their products thereby move closer to consumer. Such markets also protect consumers through competitive prices.

The pace at which current prices have risen is a characteristic of the market imperfections arising due to inadequate market information, irrational expectations and “herd effect” (Stryker, 2008). With the erosion in market confidence governments are tempted to revert to the notion of “self-sufficiency”. Therefore, agricultural and food security policies become critical for an effective functioning of the markets and shaping these. To reduce food price volatility its various domains include those relating to the removal of supply-side constraints such as access to credit particularly to the small sized farmers, adequate and timely availability of agricultural inputs, supply management by creating storage and transportation facilities, value-addition and public purchases as well as distribution of subsidized/free food. Besides this, role of government is also imperative for making

investment in public goods, introducing competition in markets, providing sufficient flow of market information, ensuring reasonable returns for attracting private investment and facilitating the integration of small sized farmers with global markets (Kuroda, 2011). Government intervention is also required for protecting the poor. Being an herculean task that requires massive investments so with gradual liberalization of economies since the WTO regime governments have invited private sector participation in the food markets. Experiences suggest that global capital tends to flow to those countries that have market-friendly policies and institutions.

Several developing countries are presently facing crisis to ensure the deliveries of basic foods to its population at reasonable prices. However, domestic markets of Asian countries have been cushioned from the transmission of severe food crisis due to relatively stable supplies, regulated markets and lesser dependence on food imports (Ibid). Several of these countries have succeeded in managing structural transformation from the predominantly agrarian and subsistence economies to industrial and open economies that has also reduced poverty. For example, Thailand has with a shift in its emphasis upon the exports of fruits and vegetables (both fresh and processed) drastically reduced its incidence of poverty from 38% to less than 10% (Ibid). Several countries such as Philippines have also declared food self-sufficiency in the staples particularly rice as its strategic objective (Blein and Longo, 2009). Thus country specific in depth studies are required to delineate a variety of the public policy instruments used to tackle the food crisis due to distinctive features of the economic structures, socio-economic cultural characteristics of the population, nature of food markets and the forms of public intervention . So the present study has been focused upon India. This is because India is among the leading producers for the food crops such as rice, wheat, groundnut, sugarcane and several fruits and vegetables as well as home to the large chunks of poor. so her food security and food policy assumes importance at the international as well as domestic levels.

In India, public intervention in the food markets has existed since the inception of planning. However, its role since the 1990s with the liberalization of economy has shifted towards market orientation. Thereupon, private entry (MNCs and corporate sector) in the food markets has been encouraged at various levels. This includes manufacturing as well as trading both external and internal (wholesaling and retailing) and the domestic markets have also been exposed to external influences. On the demand side, growth in per capita incomes has contributed to food demand diversification. This study has been carried out to understand the

nature of food markets, forms of public intervention in the food markets and developments witnessed therein with the liberalization of economy and the nature of recent food crisis.

Methodology

The study is based upon secondary data obtained from published sources. These included various issues of Economic Surveys, Agricultural Statistics at a Glance and India's Census. According to the national classification based upon land holding sizes all cultivators have been classified into five categories - marginal (up to 1 hectare), small (1-2 hectares), semi-medium (2-4 hectares), medium (4-10 hectares) and large (above 10 hectares). Simple tools of percentage changes and proportionate shares have been used to analyze the data.

Results and Discussion

Food Markets' Dimensions and Sized

In the Indian economy, owing to the predominance of agricultural sector thereby large concentration of population in rural areas, rural segment has a larger share in the food markets. Rural areas also being the centers of production of primary items so rural markets can be categorized into two: consumer and producer markets. Consumer markets are tiny sized, widely dispersed, stock primarily local products and exhibit numerous taste preferences due to varying agro-climatic conditions and cultural diversity across the country. Producers' markets in the major producing areas are not only seasonal in character but particularly in the hilly, desert and remote areas quite often operate also on a barter basis. In contrast, urban markets of the metropolitan cities are dramatically distinctive to that of the small to medium sized towns and small cities. For example, in Delhi and Mumbai wholesale markets for primary produce particularly food grains, fruits & vegetables, etc are highly concentrated, specialized and equipped with market infrastructure to accommodate supplies from diverse regions. Such markets establish linkages with the global markets both for exports and imports. So these markets stock larger volumes of various items as well as several varieties of each. These markets are regulated and operate through the commission agents/traders who build up networks with their upstream and downstream chain partners. This is to source a regular flow of the supplies to maintain year round availability and add variety of the items they deal with as well as its distribution to the various market segments through different channels to add value and quick disposal to minimize wastage thereby losses particularly of fruits & vegetables (Goel, 2011, 2006). This is because such cities have heavy concentration of migrant population belonging to

the various socio-economic groups and regions with diverse taste preferences and purchase capacities. So in these cities consumer markets are large sized and comprise of several segments that can absorb supplies of each grade. Such cities also generally have semi-wholesale markets that link the wholesale markets with retail markets particularly fruits & vegetables. This pressurizes the urban market systems for making prompt adjustments to match the ongoing changes in food demands pattern with a consistent flow in the supplies of each item in an efficient manner to minimize wastage and losses. To do so, various market agents maintain a continuous flow of the market information in their supply chain networks that percolates down at the farm level due to fragmented nature of the supply chains.

In the country population size (table 1) has consistently increased from 361.1 million during 1951 to 1210.2 million during 2011 i.e., 3.35 times. During this period size of the rural population has increased from 298.6 to 833.1 million i.e., 2.79 times while of urban population from 62.5 to 377.1million i.e., 6.03 times. As a result, share of urban population has increased from 17.31% to 31.16%. Increase in the population sizes has contributed to an expanded food market size in the rural as well as urban areas because food is an essential item of consumption. However, its size has widened comparatively rapidly in the urban compared to rural areas. Rural areas are also the centers of primary items of food production. This implies that with the growing sizes of urban population thereby undergoing changes in the food consumption patterns farmers' dependence upon the sectoral markets for the flow of correct market signals has increased.

Table1: Status of Population Distribution in India

Number: Million

Year	Population			Shares		Rural Population			
	Total	Urban	Rural	Urban	Rural	Cultivators		Agricultural Labour	
						No	Share*	No	Share*
1951	361.1	62.5	298.6	17.31	82.69	69.9	23.41	27.3	9.14
1961	439.2	78.9	360.3	17.96	82.04	99.6	27.64	31.5	8.74
1971	548.9	109.8	439.1	20.00	80.00	78.3	17.83	47.5	10.82
1981	685.2	159.7	525.5	23.31	76.69	92.5	17.60	55.5	10.56
1991	844.3	217.2	627.1	25.73	74.27	110.6	17.64	74.6	11.90
2001	1027.1	285.4	741.7	27.79	72.21	127.3	17.16	106.8	14.40
2011	1210.19	377.11	833.09	31.16	68.84	na	---	na	---

* In rural population; na -not available

Source: Agricultural Statistics at a Glance, Ministry of Agriculture, GOI; Census India, 2011

Number of cultivators as well as agricultural labourers has also increased with an increase in the size of rural population during the period 1951 to 2001. Number of cultivators increased from 69.9 to 127.3 million i.e. 82.12% while agricultural labours form 27.3 to 106.8 million i.e., 2.91 times. However, share of cultivators in the rural population during this period has declined from 23.41% to 17.16% whereas agricultural labourers have increased from 9.14% to 14.44%. This implies that about 6% of the cultivators have sold land and joined the rank of agricultural labours or shifted to non-agricultural employment

Number of operational holdings in the country (table 2) has increased rapidly from 48.88 million during 1960-61 to 129.22 million i.e., 1.64 times during 2005-06. Land operated area increased from 131.46 million hectares during 1960-61 to 165.51 million hectares during 1990-91 i.e., 25.90% but declined to 158.32 million hectares i.e., 4.34% during 2005-06. Land cultivated area with the liberalization of economy declined due to spur in the non-agricultural activities. Average size of operational holdings has declined consistently from 2.69 during 1960-61 to 1.23 hectares during 2005-06. During this period among the five categories of holding sizes, number of operational holdings increased for the three, i.e., marginal (19.9 to 83.69 million), small (10.88 to 23.93 million) and semi-medium (9.22 to 14.13 million) while it has declined for the medium (6.57 to 6.38 million) and large (2.33 to 1.10 million). Land operational area has declined both under the medium and large sized holdings but was moderate for the medium sized (40.07 to 37.90 million hectares i.e., 5.42%) whereas drastic for the large sized holdings (40.36 to 18.72 million hectares i.e., 53.62%). However, average sizes of operational holdings have declined for each individual category.

Existence of miniscule sizes of operational holdings for a larger majority of the growers implies that they on their own may find it difficult to integrate themselves with the markets either due to imperfections in the functioning of markets or non-existence of markets. No doubt recent entry of the organized sector in food sub sector at the retail as well as wholesale levels has helped in linking growers directly with consumers (Goel, 2011b). However, it has not yet been able to attract all sized farmers because it is guided primarily by the profit motive. Hence public intervention in the agricultural markets has continued to exist since the inception of planning. It has assumed several forms such as removal of production and supply constraints, creation of market infrastructure and competitive market environment, integration of farms with the markets, etc.

Table 2: Number, Area and Sizes of Operational Holdings in India

Holding Size	Land Holdings No (Millions)						Cultivated Area (Million hectares)						Average Holding Size (hectares)					
	1960-61	1970-71	1980-81	1990-91	2000-01	2005-06	1960-61	1970-71	1980-81	1990-91	2000-01	2005-06	1960-61	1970-71	1980-81	1990-91	2000-01	2005-06
Marginal	19.90	35.68	50.12	63.39	75.41	83.69	8.78	14.55	19.74	24.89	29.81	32.03	0.44	0.41	0.39	0.39	0.40	0.38
Small	10.88	13.43	16.07	20.09	22.70	23.93	16.00	19.28	23.17	28.83	32.14	33.10	1.47	1.44	1.44	1.43	1.42	1.38
Semi medium	9.22	10.68	12.46	13.92	14.02	14.13	26.23	30.00	34.65	38.38	38.19	37.90	2.84	2.81	2.78	2.76	2.72	2.68
Medium	6.57	7.93	8.07	7.58	6.58	6.38	40.07	48.23	48.54	44.75	38.21	36.58	6.10	6.08	6.02	5.90	5.81	5.74
Large	2.31	2.77	2.17	1.65	1.23	1.10	40.36	50.06	37.71	28.66	21.07	18.72	17.47	18.07	17.41	17.33	17.13	17.08
Combined	48.88	70.49	88.88	106.64	119.93	129.22	131.46	162.12	163.80	165.51	159.44	158.32	2.69	2.30	1.84	1.55	1.33	1.23

Poverty Status

During the Post-independence Period skewed pattern of the country's economic development failed to percolate down its benefits to alleviate poverty so it continued to persist both in the rural and urban areas. Planning Commission has defined the poverty line in terms of monthly per capita consumption expenditure (MPCE) corresponding to a calorie intake of 2400 for rural and 2100 for urban areas (GOI, 1981). It stood at Rs49.63 and Rs56.96 at 1973-74 prices for the rural and urban areas that have been increased to Rs.356.30 and Rs538.60 during 2004-05 after adjusting with suitable price indices to ensure the same purchasing power. 61st round of the National Sample Survey Organization (NSSO) contained two different estimates, i.e., Uniform Recall Period (URP) and Mixed Recall Period (MRP). URP is based upon consumer expenditure data collected using a 30 day recall period for all the items while MRP is based upon data collected using a 365-day recall period for the five non-food items, i.e. clothing, footwear, durable goods, education and institutional medical expenses and a 30-day recall period for the remaining items (GOI, 2007). Most commonly used poverty index is 'Head Count Ratio' (HCR).

Incidence of poverty in the country (table 3) stood at 54.88% during 1973-74 that declined gradually to 26.10% during 1999-00 and further to 21.8% during 2004-05 (based upon MRP method) but increased marginally to 27.5% (based upon URP method). Number of poor (estimated using the MRP method) stood at 170.30 million for the rural and 68.20 million for urban areas. And, across the various states wide disparities exist in the incidence of poverty. Incidence of poverty stood above 50% in fifteen of the twenty three states during 1973-74 and a similar situation persisted also during 1977-78: declined only marginally below it during the 1980s and 1990s. . Its incidence during 2004-05 (based upon MRP method that moved in harmony also using the URP method) stood above 30% for six states, namely, Orissa (39.9%), Jharkhand (34.8%), Bihar (32.5%), Madhya Pradesh (32.4%), Chhattisgarh (32%) and Uttarakhand (31.8%). It ranged from 20% to 30% for three states, namely, Uttar Pradesh (25.5%) Maharashtra (25.2%) and West Bengal (20.6%); 10% to 20% for twelve states, namely, Tamil Nadu (17.8%), Rajasthan (17.5%), Karnataka (17.4%), Assam (15%), Nagaland (14.5%), Tripura (14.4%), Meghalaya (14.1%), Arunachal Pradesh (13.4%), Manipur (13.2%), Gujarat (12.5%), Kerala (11.4%) and Andhra Pradesh (11.1%) while remained below 10% for the remaining five states, namely, Haryana (9.9%), Mizoram (9.5%), Himachal Pradesh (6.7%),

Punjab (5.2%) and Jammu & Kashmir (4.20%). All the nine states having incidence of poverty above 20% depicted similar incidence also of rural poverty. Widespread disparities in the incidence of rural poverty across the various states have persisted because the process of agricultural development in the country has not been uniformly spread (Prakash and Goel, 1986).

Table 3: State wise Status of Poverty (%) in India

States	1973-74	1977-78	1983-84	1987-88	1993-94	1999-00	2004-05		URP		MRP	
							URP	MRP	Rural	Urban	Rural	Urban
Orissa	66.18	70.07	65.29	55.58	48.56	47.15	46.4	39.9	46.8	44.3	39.8	40.3
Jhar	---	---	---	---	---	---	40.3	34.8	46.3	20.2	40.2	16.3
Bihar	61.91	61.55	62.22	52.13	54.96	42.60	41.4	32.5	42.1	34.6	32.9	28.9
MP	61.78	61.78	49.78	43.07	42.52	37.43	38.3	32.4	36.9	42.1	29.8	39.3
Chhattis	---	---	---	---	---	---	40.9	32.0	40.8	41.2	31.2	34.7
Uttara	---	---	---	---	---	---	39.6	31.8	40.8	36.5	31.7	32.0
U P	57.07	49.05	47.07	41.46	40.85	31.15	32.8	25.5	33.4	30.6	25.3	26.3
Maha	53.24	55.88	43.44	40.41	36.86	25.02	30.7	25.2	29.6	32.2	22.2	29.0
WB	63.43	60.52	54.85	44.72	35.66	27.02	24.7	20.6	28.6	14.8	24.2	11.2
TN	54.94	54.79	51.66	43.39	35.03	21.12	22.5	17.8	22.8	22.2	16.9	18.8
Rajas	46.14	37.42	34.46	35.15	27.41	15.28	22.1	17.5	18.7	32.9	14.3	28.1
Karnataka	54.47	48.78	38.24	37.53	33.16	20.04	25.0	17.4	20.8	32.6	12.0	27.2
Assam	51.21	57.15	40.47	36.21	40.86	36.09	19.7	15.0	22.3	3.3	17.0	2.4
Nagaland	50.81	56.04	39.25	34.43	37.92	32.67	19.0	14.5	22.3	3.3	17.0	2.4
Tripura	51.00	56.88	40.03	35.23	39.01	34.44	18.9	14.4	22.3	3.3	17.0	2.4
Megh	50.20	55.19	38.81	33.92	37.92	33.87	18.5	14.1	22.3	3.3	17.0	2.4
ArP	51.93	58.32	40.88	36.22	39.35	33.47	17.6	13.4	22.3	3.3	17.0	2.4
Manipur	49.96	53.72	37.02	31.35	33.78	28.54	17.3	13.2	22.3	3.3	17.0	2.4
Gujarat	48.15	41.23	32.79	31.54	24.21	14.07	16.8	12.5	19.1	13.0	13.9	10.1
Kerala	59.79	52.22	40.42	31.79	25.43	12.72	15.0	11.4	13.2	20.2	9.6	16.4
AP	48.86	39.31	28.91	25.86	22.19	15.77	15.8	11.1	11.2	28.0	7.5	20.7
Haryana	35.36	29.55	21.37	16.64	25.05	8.74	14.0	9.9	13.6	15.1	9.2	11.3
Mizoram	50.32	54.38	36.00	27.52	25.66	19.47	12.6	9.5	22.3	3.3	17.0	2.4
HP	26.39	32.45	16.40	15.45	28.44	7.63	10.0	6.7	10.7	3.4	7.2	2.6
Punjab	28.15	19.27	16.18	13.20	11.77	6.16	8.4	5.2	9.1	7.1	5.9	3.8
J&K	40.83	38.97	24.24	23.82	25.17	3.48	5.4	4.2	4.6	7.9	2.7	8.5
All-India	54.88	51.32	44.48	38.86	35.97	26.10	27.5	21.8	28.3	25.7	21.8	21.7

Jhar- Jharkhand, Chhattis-Chhattisgarh, Uttara - Uttarakhand, Maha-Maharashtra, Megh- Meghalaya, Rajas-Rajasthan, TN -Tamil Nadu, UP -Uttar Pradesh, MP-Madhya Pradesh, WB -West Bengal, ArP-Arunachal Pradesh, AP- Andhra Pradesh, HP-Himachal Pradesh, J &K- Jammu & Kashmir.

Adequate availability of cereals, being the most important source of energy, can go a long way in reducing hunger and poverty thereby ensuring food and nutritional security (Nawani, 1994). Inter-Ministerial Working Group (based upon average net production of cereals for three years i.e. 1991- 93) observed that cereals alone provided per capita per day 1501 kcal of energy and 37.4gms of protein that constituted about 68% of the total energy and 74.8% of the total

protein requirements (Ministry of Agriculture, 1994). Hence public intervention in food grain markets particularly staple crops has existed for its distribution.

Public Interventions in Food grain Markets

Role of public intervention in the food grain markets gradually increased since the 1950s and it resorted to several policy initiatives.

Domestic Markets

Both the central and state governments have intervened in the foodgrain markets through a variety of policy instruments. As a result, the country has emerged not only from a situation of food deficient but also an occasional exporter of several basic crops. Government initiated land reforms and made investments for the development of irrigational and other infrastructure during the 1950s and 1960s. This paved a way for technological breakthrough in the agricultural sector during the mid sixties particularly for wheat and paddy (unhusked rice) crops. To augment production thereby its market supplies governments provided input subsidies for fertilizers, power and irrigation as well as extension services to farmers for these two crops in the major producing areas. Public investments in the agriculture sector during the earlier two decades contributed to enhanced crop yields and widespread dissemination of technology for these crops during the 1970s and 1980s. Government also provided incentives for the creation of physical infrastructure for the storage and shipment of these crops and linked the rural areas with metalled roads for an easy access to markets. Development of the transport and communication infrastructure led to spatial integration of the markets since the 1970. Along with this the system of public procurement came into existence. It operates through the central agency, namely, Food Corporation of India (FCI) along with the state agencies. Fundamental objective of the country's food policy that had hitherto been to provide low-priced food to the poor also came to support growers by guaranteeing them minimum support prices (MSPs). Procured food grains are distributed through the public distribution system (PDS) at the subsidized rates. PDS is not intended to make available the entire requirements of any commodity rather it is supplementary in nature. It supplies commodities such as wheat, rice and sugar while some States/UTs also distribute other items such as pulses, salt, baby food, butter, palmolein, milk and milk products, edible oils, tea etc. PDS is operated under the joint responsibilities of the central and state governments. Central government is responsible for the bulk allocation of food grains to state governments at the uniform Central Issue Prices (CIPs). State governments identify the poor families below the poverty line, issue them ration cards and supervise the functioning of fair price shops (FPS). Retail prices are fixed

by the states/UTs after taking into consideration margins for wholesalers/retailers, shipment charges, levies, local taxes etc.

Agricultural markets had been regulated under the Agricultural Produce and Marketing Committee (APMC) Acts of the state governments. There exist about 222 legislative measures to regulate the agricultural markets (Acharya, 2006). An important feature of the regulated markets is that the sales and purchases of agricultural commodities outside these markets are prohibited. National Policy on Agriculture was introduced to initiate market reforms for improving the performance of the domestic markets during July 2000. As the APMC Act had become deterrent for the development of competitive marketing system so the 'Model Act on Agricultural Marketing' came into existence. It contained a provision to enable the private and cooperative sectors to set up private markets and operate these (including the levy of service charges) as well as for the development of marketing infrastructure and its supportive services. Its other provisions included direct marketing from farm; contract farming by the processing/marketing firms, granting of tax concessions on market fees, cess, duties, taxes; rationalization of the market fee structure and input subsidies, operations of futures trading and the promotion of marketing infrastructure (Chadha, Davenport and Elumalai, 2008). Government also introduced during February 2002 Specified Foodstuffs Order for the removal of all restrictions and licensing on dealers relating to the purchase, storage and movement of specified commodities such as wheat, paddy/rice, coarse grains, sugar, edible oil seeds and edible oils (Ibid). Since several state governments have reformed the APMC acts that have paved a way for the entry of MNCs and the corporate sector such as Cargill, Reliance, ITC etc. for the purchase of several crops direct from farms.

Procurement

FCI procures wheat and paddy from farmers from wholesale food grain markets through the commission agents (CAs) while rice under the levy system from rice millers/dealers at the pre-announced prices. During the Post liberalization Period the scheme of Decentralized Procurement of food grains was introduced during 1997- 98 to reduce food subsidy, enhance efficiency and extend the benefits of MSPs to local farmers. Under this scheme, state governments undertake direct purchases of wheat and paddy (also levy rice) on behalf of the central government. Central government monitors the quality of food grains and reviews for the various arrangements as well as meets its expenditure.

MSPs both of wheat and paddy have consistently been revised upwards with the liberalization of economy i.e., 1990-91 to 2010-11 (table 4) except for two years i.e., 2002-03 and 2004-05 for wheat and one year i.e., 2003-04 for paddy. Increase in the MSPs for paddy compared to that of wheat remained comparatively higher except for four years i.e., 1993-94, 1998-99, 2000-01 and 2007-08. Increase in MSPs for paddy stood above 30% during 2008-09; ranged from 10-20% for six years i.e., 1992-93 (17.39%), 1993-94 (14.81%), 1991-92 (12.20%), 2009-10 (11.73%), 1999-00 (11.36%) and 2007-08 (11.21%); ranged from 5%-10% for six years

Table 4: Minimum Support Prices (Rs/quintal) of Wheat and Paddy

Year	Wheat	Increase (%age)	Paddy@	Increase (%age)
1990-91	215	---	205	---
1991-92	225	4.65	230	12.20
1992-93	250	11.11	270	17.39
1993-94	330	32.00	310	14.81
1994-95	350	6.06	340	9.68
1995-96	360	2.86	360	5.88
1996-97	380	5.56	380	5.56
1997-98	415	9.21	415	9.21
1998-99	550	32.53	440	6.02
1999-00	580	5.45	490	11.36
2000-01	610	5.17	510	4.08
2001-02	620	1.64	530	3.92
2002-03	620	---	550	3.77
2003-04	630	1.61	550	---
2004-05	630	---	560	1.82
2005-06	640	1.59	570	1.79
2006-07	650#	1.59	580&	1.75
2007-08	750\$	33.33	645%	11.21
2008-09	1000	8.00	850*	31.78
2009-10	1080	1.85	950*	11.76
2010-11	1100	1.82	1000	5.26
2011-12	1120	1.82	---	---

@ Common variety

includes incentive bonus @ Rs50 per quintal during the period 20.3.06 to 30.6.06. & Includes incentive bonus @ Rs.40 per quintal till 31.3.2007, extended later to 30.9.2007 for the States of Andhra Pradesh, Tamil Nadu, Orissa, West Bengal and Chhattisgarh while Bihar and Kerala upto 31.5.2007; \$ incentive bonus @ Rs100 per quintal for the entire season; % incentive bonus @ Rs100 per quintal for the entire season; * & ** An incentive bonus @ Rs 50 per quintal during each season.

i.e., 1994-95 (9.68%), 1997-98 (9.21%), 1998-99 (6.02%), 1995-96 (5.88%), 1996-97 (5.56%) and 2010-11 (5.26%) whereas it remained up to 5% for the remaining eight years. Increase in the MSPs for wheat stood above 30% for three years i.e., 1993-94 (32%), 1998-99 (32.53%) and 2007-08 (33.33%); ranged from 10%-20% for two years i.e., 2006-07 (15.38%) and 1992-93 (11.11%); ranged from 5-10% for six years i.e., 1997-98 (9.21%), 2008-09 (8%), 1994-95 (6.06%), 1996-97 (5.56%), 1999-00 (5.45%) and 2000-01 (5.17%) while it remained up to 5% for the remaining six years.

Assured and higher prices for the two major staples provided an incentive for growers to shift their cultivated area towards these crops. Paddy cultivated area (table 5) has stood relatively higher to that of wheat during the period 1960-61 to 2010-11. This is because it is a major staple for most of the states in the country whereas wheat is so primarily in the North Western region. Ratio of the cultivated areas under wheat and paddy has declined from 1:2.64 to 1:1.47 during this period. This is due to faster dissemination of technology for wheat vis a vis paddy because paddy is grown in several agro-climatic zones. Cultivated areas under paddy and wheat increased rapidly from 34.1 and 12.9 million hectares during 1960-61 to 40.1 and 22.3 million hectares during 1980-81 but thereafter this increase slowed down for both in the next two decades. In the recent decade the area under wheat has increased consistently while it has fluctuated and come down under paddy. Total cultivated area during the period 1990-91 to 2010-11 under wheat has increased (17.76%) whereas under paddy it has marginally declined (2.11%). Combined share of the cultivated area under these two crops in the total area under food grains increased from 52.35% during 1990-91 to 57.96% during 2010-11. Productivities of both these crops have witnessed a steep increase during this period. This increase for wheat and rice was from 1013 kg/ha and 851kg/ha during 1960-61 to 1740kg/ha and 2281kg/ha during 1990-91 while it was modest i.e., 2130kg/ha and 2830kg/ha during 2010-11. Both the increase in cultivated area and productivity gave an impetus to paddy and wheat production that increased rapidly from 34.6 and 11.0 million tones during 1960-61 to 74.3 and 55.1 million tones during 1990-91 (i.e., 1.15 and 5.01 times) and further to 89.1 and 80.7 million tones during 2009-10 (i.e., 1.20 and 1.46 times). As a result, combined shares of the two crops in food grain production increased dramatically from 55.61% during 1960-61 to 73.36% during 1990-91 but modestly to 77.82% during 2009-10.

Table 5: Cropped Area, Production and Procurement of Wheat and Rice in India

Quantity - million tones, area - million hectares, yield - kg/ha

Year	Gross cropped area			Production			Yield		Procurement		Procurement**	
	Paddy	wheat	Share*	Paddy	wheat	Share*	Paddy	Wheat	Paddy	Wheat	Paddy	Wheat
1960-61	34.1	12.9	40.66	34.6	11.0	55.61	1013	851	---	---	---	---
1970-71	37.6	18.2	44.89	42.2	23.8	60.89	1123	1307	3.10	5.40	7.35	22.61
1980-81	40.1	22.3	49.25	53.6	36.3	69.37	1336	1630	4.89	6.93	9.12	25.12
1990-91	42.7	24.2	52.35	74.3	55.1	73.36	1740	2281	12.05	10.04	16.22	18.22
2000-01	44.7	25.7	58.18	85	69.7	78.61	1901	2708	21.80	16.30	25.65	23.39
2005-06	41.9	26.4	56.87	91.8	69.4	77.28	1984	2602	27.66	15.27	30.13	22.00
2006-07	43.7	26.5	57.73	93.4	75.8	77.86	2102	2619	25.11	9.23	26.88	12.18
2007-08	43.8	28.0	58.04	96.7	78.6	75.95	2131	2708	26.12	11.19	27.01	14.24
2008-09	43.9	28.0	57.94	99.2	80.7	76.75	2202	2802	30.22	26.04	30.46	32.27
2009-10	45.5	27.8	59.69	89.1	80.7	77.82	2178	2907	26.82	27.94	30.1	34.62
2010-11	41.8	28.5	57.96	---	---	---	2130	2830	---	22.08	30.13	22.00

*Shares in food grains; ** share in production

Increased production of both these crops led to a tremendous increase in the procurement of two. It increased rapidly from 12.05 and 10.04 million tones during 1990-91 to 27.66 and 15.27 million tones during 2005-06 and further to 26.82 and 27.94 million tones during 2009-10 for paddy and wheat respectively. Volume of wheat procurement has fluctuated widely since 2005-06 despite an increase in its production. This is because of the entry of corporate sector that lures farmers by offering prices higher to the MSPs to switch over wheat supplies from public agencies. However, shares of public procurements in total production both of wheat and paddy have gradually increased and recently crossed 30%.

Contributions in total procurement during 2008-09 from the two states, namely Andhra Pradesh and Punjab stood 52.29% for rice while of Punjab and Haryana 66.88% for wheat. Total procurement of rice from the States that have adopted a decentralized pattern increased from 4 million tones during 2002-03 to 10.9 million tones during 2005-06 and further to 12.88 million tones during 2008-09 with its share of 38.23% in total procurement (it stood 6.06 million tones for wheat with its share of 26.71% in total production). This indicates that benefits from the existence of public procurement system reaped by farmers have still been heavily concentrated.

Increased production of wheat and paddy had led to its increased availability (fig. 1) during 1991 but thereafter it fluctuated and moved marginally downwards for each.

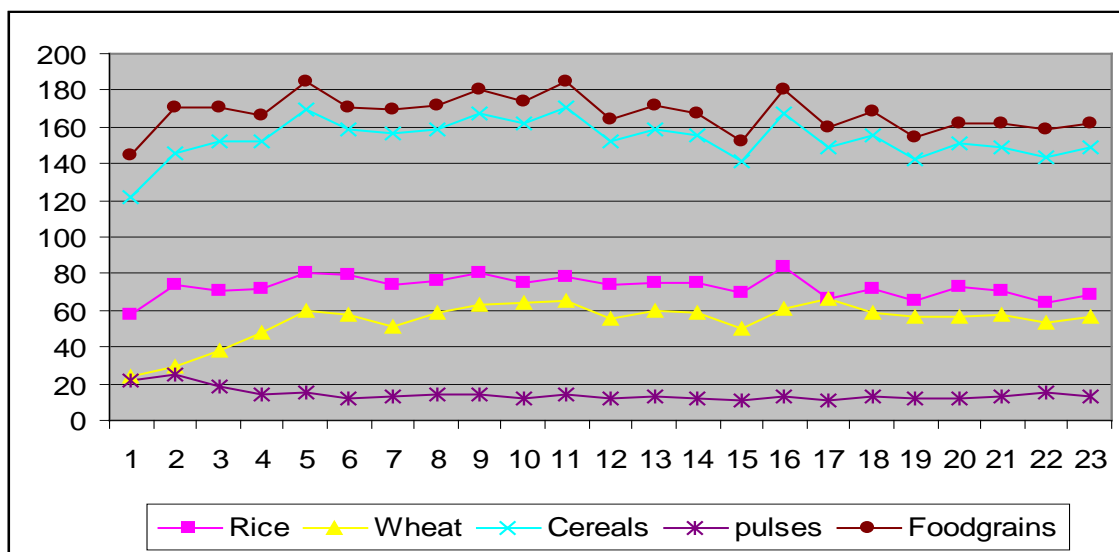


Fig1: Per Capita Availability during 1951 to 2009

Distribution

PDS with its focus in urban areas that had emerged during 1950s was extended to the tribal blocks and areas of high incidence of poverty during the Post-green Revolution Period but it remained a general entitlement scheme. Revamped Public Distribution System (RPDS) during June, 1992 was launched in 1775 blocks to enhance its reach to the far-flung, hilly, remote and inaccessible areas. Later, Targeted Public Distribution System (TPDS) was introduced during 1997 that distinguished households into two categories viz., above poverty line (APL) and below poverty line (BPL). Government provides food grains to BPL families at 50% of the economic cost while to APL families at 100% of economic cost. Per family monthly allocation to the BPL families was increased from 10 kg to 20 kg from 1st April, 2000 and 25 kg from July, 2001 whereas for the APL families its allocation was retained at the level it was at the time of introduction of TPDS i.e., 10 kg. Antyodaya Anna Yojana (AAY) during 2000 was launched for poorest of the poor 10 million families (identified from the BPL families) and thereafter its coverage was extended to about 25 million families with its successive expansions during 2003-2004, August 2004 and 2005-06. CIPs for these families since the introduction of this scheme have been kept fixed constant at Rs3 per kg. for rice and Rs2 per kg for wheat. Government also introduced Open Market Sale Scheme (OMSS) for wheat and rice during October, 1993 to check inflation and adopted several pricing patterns such as State-wise, Center wise, Zone wise etc.

Central government allocates procured food grains under the TPDS, various welfare schemes and open sale. Allocation of food grains under the TPDS is done on the basis of 1993-

94 poverty estimates projected from the population estimates of Registrar General of India on 1st March, 2000 or the number of families actually identified and ration cards issued by the state government, whichever is less (GOI, 2009-10). Shares of food grains allocated under the TPDS, welfare schemes and open sales during 2009-10 (up to December) stood at 90.37%, 8.29% and 1.34%. Shares of the BPL, APL and AAY families under the TPDS stood at 34.71%, 34.49% and 20.68% respectively while the quantity of food grains issued to the three categories was increased from 1st April, 2002 to 35 kg to enhance household food security.

CIPs of rice for the BPL families had been revised (table 6) from Rs350 per quintal since 1997 to Rs590 per quintal during April, 2000 (showing an increase of 68.57%) but reduced later from July to Rs565 per quintal. CIPs for the APL families had been increased from Rs550 during December, 1997 to Rs 700 per quintal during January, 1999 (showing an increase of 27.27%) and further to Rs1135 per quintal during April, 2000 (showing an increase of 62.14%). Thereafter CIPs had been reduced thrice i.e., to Rs1087 per quintal during July 2000, Rs795 per quintal during July, 2001 and Rs695 per quintal during April, 2002 but raised again to its previous level from July. CIPs of wheat for the BPL families had been revised from Rs250 per quintal during June, 1997 to Rs450 per quintal during April, 2000 (showing an increase of 80%)

Table 6: Central Issue Prices of Rice and Wheat

With Effect From	(Rs. per quintal)			
	APL		BPL	
	Common	Increase %age	Common/Grade A	Increase % age
Rice				
1.12.1997	550	---	350	---
29.01.1999	700	27.27	350	---
1.04.2000	1135	62.14	590	68.57
25.07.2000	1087	-5.11	565	-5.93
12.07.2001	795	-26.86	565	---
1.04.2002	695	-12.58	565	---
1.07.2002	795	14.39	565	---
Wheat				
1.06.1997	450	---	250	---
29.01.1999	650	44.44	250	---
1.04.1999	682	4.92	250	---
1.04.2000	900	31.96	450	80.00
25.07.2000	830	-7.78	415	-7.78
12.07.2001	610	-26.51	415	---
1.04.2002	510	-16.39	415	---
1.07.2002	610	19.61	415	---

but reduced to Rs415 per quintal from July. CIPs for the APL families during this period were increased from Rs450 to Rs900 per quintal. Later, these had been reduced during July, 2000 to Rs830 per quintal, during July, 2001 to Rs610 per quintal and during April, 2002 to Rs510 per quintal but raised again during July to Rs610 per quintal. CIPs both for rice and wheat for the BPL and APL families have not been revised since July, 2002. Continuous increase in the CIPs particularly for the APL families both for wheat and rice brought these closer to the open market prices.

Allocation as well as offtake both of wheat and rice from the PDS (table 7) has kept fluctuating during the period 1990-91 to 2009-10. As the CIPs for them moved closer to market prices offtake from the PDS declined sharply. Share of offtake in its allocation for wheat declined from 78.64% during 1998-99 to 55.55% during 1999-00 and further to 35.18% during 2000-01 whereas rice from 81.43% during 1999-00 to 49.02% during 2001-02. This led to the piling up of public stocks for both these crops. Offtake for both the crops jumped again during 2002-03 to its normal level that remained above 70% thereafter.

Table 7: Allocation and Offtake of Major Staples through PDS

Year	Wheat			Rice		
	Allocation	Off take	% share	Allocation	Off take	% share
1990-91	9.50	7.09	74.63	9.61	7.87	81.89
1991-92	10.36	8.83	85.23	11.36	10.17	89.52
1992-93	9.25	7.85	84.86	11.48	9.69	84.41
1993-94	9.56	5.91	61.82	12.41	8.87	71.47
1994-95	10.80	4.63	42.87	13.32	8.03	60.29
1995-96	11.31	5.29	46.77	14.62	9.46	64.71
1996-97	10.72	8.52	79.48	15.16	11.14	73.48
1997-98	10.11	7.08	70.03	12.83	9.90	77.16
1998-99	10.11	7.95	78.64	12.93	10.74	83.06
1999-00	10.37	5.76	55.54	13.89	11.31	81.43
2000-01	11.57	4.07	35.18	16.26	7.97	49.02
2001-02	13.14	5.68	43.23	17.23	8.16	47.36
2002-03	9.40	7.45	79.26	18.84	13.75	72.98
2003-04	9.08	7.20	79.30	17.72	13.49	76.13
2004-05	7.35	5.92	80.54	20.14	15.41	76.51
2005-06	4.72	3.63	76.91	17.78	13.64	76.72
2006-07	4.38	3.50	79.91	17.22	13.05	75.78
2007-08	5.30	4.41	83.21	19.98	13.93	69.72
2008-09	4.78	4.37	91.42	21.48	15.82	73.65
2009-10	4.90	3.41	69.59	22.85	13.51	59.12

Public Stocks

Public stocks of rice and wheat (table 8) started increasing rapidly since the mid nineties. This increase for rice was from 9.63 million tones during 1991 to 11.95 million tones during 1994 and further to 17.42 million tones during 1995. These declined for the following three years but rose again since 2000 from 14.18 million tones to 25.62 million tones during 2002 that declined to 19.37 million tones during 2003. On the other hand, stocks of wheat declined from 9.38 million tones during 1991 to 3.47 million tones during 1993 but jumped to 11.10 million tones during 1994 and touched 13.15 million tones during 1996. These were reduced rapidly to 7.08 million tones in the following year and further to 6.76 million tones during 1998 but jumped

Table 8: Public Stocks of Major Cereals

(Million tones)									
As on	Rice			Wheat			Total		
January 1 st	Min	Actual	Change	Min	Actual	Change	Min	Actual	Change
1981	---	6.63	---	---	5.00	---	---	11.74	---
1991	---	9.63	45.25	---	9.38	87.60	---	19.13	62.95
1992	---	9.29	-3.53	---	5.43	-42.11	---	14.73	-23.00
1993	---	9.48	2.05	---	3.47	-36.10	---	13.13	-10.86
1994	---	11.95	26.05	---	11.10	219.88	---	23.52	79.13
1995	7.7	17.42	45.77	7.7	12.88	16.04	15.4	38.00	61.56
1996	7.7	15.50	-11.02	7.7	13.15	2.10	15.4	36.35	-4.34
1997	7.7	12.94	-16.52	7.7	7.08	-46.16	15.4	27.72	-23.74
1998	6.0	11.49	-11.21	10.6	6.76	-4.52	16.6	28.85	4.08
1999	6.0	11.68	1.65	10.6	12.70	87.87	16.6	34.98	21.25
2000	6.5	14.18	21.40	11.6	17.17	35.20	18.1	42.95	22.78
2001	6.5	20.70	45.98	11.6	25.00	45.60	18.1	45.70	6.40
2002	8.4	25.62	23.77	8.4	32.41	29.64	16.8	40.89	-10.53
2003	8.4	19.37	-24.40	8.4	28.83	-11.05	16.8	48.20	17.88
2004	8.4	11.73	-39.44	8.4	12.69	-55.98	16.8	25.02	-48.09
2005	8.4	12.76	8.78	8.4	8.93	-29.63	16.8	21.70	-13.27
2006	11.8	12.64	-0.94	8.2	6.19	-30.68	20.0	19.26	-11.24
2007	11.8	11.98	-5.22	8.2	5.43	-12.28	20.0	15.50	-19.52
2008	11.8	11.47	-4.26	8.2	7.71	41.99	20.0	19.18	23.74
2009	11.8	17.58	53.27	8.2	18.21	136.19	20.0	36.19	88.69
2010	11.8	24.35	38.51	8.2	23.09	26.80	20.0	47.69	31.78

Note: New buffer norm are effective from April 2005

to 12.70 million tones during 1999 and touched 32.41 million tones during 2002. Thereafter, stocks came down to its normal level i.e., about 12 million tones for rice and 6-7 million tones for wheat. But stocks jumped again during 2009 that touched 17.58 million tones for rice and 18.21 million tones for wheat. These increased further during 2010 to 24.35 and 23.09 million tones for rice and wheat respectively.

Government provides food subsidy to meet the difference between the economic cost of food grains and its sales realizations under the PDS. With a continuous upward revision in the MSPs of wheat and rice food subsidy bill expanded (table 9) from Rs9.20 billion during 1999-00 to Rs582.42 billion during 2009-10 showing an increase of about 63 times. Annual increase in food subsidy bill stood as high as above 35% for three years i.e., 2001-02 (45.66%), 2008-09 (39.69%) and 2002-03 (38.2%); lied between 30%-35% for another three years i.e., 2000-01 (30.54%), 2007-08 (31.19%) and 2009-10 (33.37%) while remained moderate i.e., below 5% for the remaining three years.

Table 9: Food Subsidies Bill

Year	Food subsidy Rs billion	
	Total	Change %age
1999-00	9.20	5.75
2000-01	120.10	30.54
2001-02	174.94	45.66
2002-03	241.76	38.2
2003-04	251.60	4.07
2004-05	257.46	2.33
2005-06	230.71	-10.39
2006-07	238.28	3.28
2007-08	312.60	31.19
2008-09	436.68	39.69
2009-10	582.42	33.37

Economic Survey 2010-11

Open markets have performed inefficiently because government controlled most of its activities (Jha and Srinivasan 2004).

External Sector

With the liberalization of economy trade policy reforms had been introduced to facilitate integration of the agricultural sector with global markets. Thereafter, list of commodities canalized through the State Trading Enterprises was trimmed. However, country's share in world trade remains miniscule that crossed one per cent only recently.

Exports

Export policies that included relaxations in export quotas, abolition of minimum export prices (MEPs) and increased credit availability had been liberalized during 1994 (Chadda, Davenport and Elumalai, 2008). Government opened up exports of rice during 1994-95 and wheat during 1995 (Gulati and Mullen, 2003). As the domestic prices of wheat started rising government had to put a ban on its exports and also abolished import duty. However, exports lost attractiveness as the world prices of cereals particularly since 1998 started declining. To offload the accumulated stocks during 2002 government had to subsidize exports at a price 50% below its procurement costs.

Value of total exports increased from Rs2090.18 billion during 2001-02 to Rs11481.70 billion during 2010-11 thereby showing an increase of about 5.49 times. Share of agricultural sector in total exports (table 10) declined from 14.22% to 10.47% during this period. Value of food items during this period increased from Rs132.27 billion to 527.09 billion while its share in agricultural exports from 44.49% to 61.32%. Among the various food items major items were basmati rice, oil meals, spices and meat & preparations that constituted a combined share of 59.61% during 2008-09. However, no single item was leading exports during this period. Non-basmati rice was the leading export item during the period from 2002-03 to 2007-08; basmati rice during 2001-02, 2009-10 and 2010-11 while oil meals during 2008-09.

Exports of rice and wheat had been banned from August, 2003 whereas commercial exports from 1st October, 2004. Later, exports of non-basmati rice were banned from October, 2007. Thereafter Minimum Export Price (MEP) was fixed from 12th December, 2007 at US\$ 425 per tone (US\$ 500 per tone from 27th December) that was increased to US \$650 per tone from 5th March, 2008 (US\$ 1000 from 27th March). Government prohibited rice exports from 1st April, 2008 from the private account and wheat exports from February, 2007. Later exports were allowed from public stocks on diplomatic basis with a quantitative limit of one million tones from August, 2009. Exports of the basic wheat products such as whole wheat flour, wheat flour

Table 10: India's Exports of Agricultural Products

Quantity: Million tones

Value: Rs billion

Item	2001- 02		2002-03		2003 - 04		2004 - 2005		2005 - 2006		2006 - 2007		2007 - 2008		2008 - 2009		2009 - 2010		2010-11	
	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V
Basmati rice	0.6	18.43	0.7	20.58	0.7	19.93	1.1	28.24	1.1	30.43	1.0	27.93	1.1	43.45	1.5	94.77	2.0	108.3	2.1	105.82
	7		1		7		6		7		5		8		6		2	9	9	
Rice (non basmati)	1.5	13.31	4.2	37.73	2.6	21.75	3.6	39.45	2.9	31.78	3.7	42.43	5.2	74.10	ne	16.87	0.1	4.15	0.0	
	4		6		4		2		2		0		9		g		4		9	
Oil meals	2.7	22.63	1.7	14.87	3.1	32.50	3.6	31.78	5.9	48.75	6.4	55.04	6.9	81.41	6.7	102.6	4.6	78.32	6.7	108.16
	8		8		7		0		8		4		1		4	9	9	9	8	
Spices	0.2	14.97	0.2	16.55	0.2	15.44	0.3	18.83	0.4	21.16	0.4	31.58	0.6	43.15	0.6	63.38	0.6	61.52	0.7	78.65
	4		8		7		6		0		8		1		7		8		5	
Meat & preparations	ne	11.93	ne	13.77	ne	17.14	ne	19.05	ne	27.50	ne	33.14	ne	37.49	ne	53.71	ne	62.86	ne	87.52
	g		g		g		g		g		g		g		g		g		g	
Other cereals	0.1	1.16	0.1	0.91	ne	3.98	1.1	7.94	0.5	4.54	0.7	5.99	3.2	30.02	4.0	39.21	2.9	30.05	3.1	35.96
	4		1		g		8		7		3		3		0		0		9	
Fresh vegetables	ne	5.75	ne	6.43	ne	9.54	ne	8.63	ne	9.20	ne	15.47	ne	14.78	ne	24.54	ne	29.04	ne	62.40
	g		g		g		g		g		g		g		g		g		g	
Fresh Fruits	ne	4.17	ne	4.47	ne	7.84	ne	8.62	ne	11.21	ne	14.14	ne	14.47	ne	19.45	ne	22.69	---	---
	g		g		g		g		g		g		g		g		g		---	---
Miscellaneous	ne	7.24	ne	9.10	ne	10.59	ne	9.08	ne	9.90	ne	11.25	ne	13.62	ne	20.77	ne	32.55	ne	35.80
	g		g		g		g		g		g		g		g		g		g	
Groundnuts	0.1	2.51	0.0	1.78	0.1	1.79	0.1	5.47	0.1	5.14	0.2	7.98	0.2	10.54	0.3	12.39	0.3	14.25	---	---
	1		7		8		8		9		5		7		0		4		---	---
Fruit Juices	ne	5.13	ne	5.74	ne	3.44	ne	3.69	ne	6.00	ne	7.11	ne	7.73	ne	10.99	ne	11.56	---	---
	g		g		g		g		g		g		g		g		g		---	---
Processed vegetables	ne	1.99	ne	2.57	ne	2.91	ne	3.62	ne	4.94	ne	6.50	ne	6.02	ne	7.11	ne	7.52	---	---
	g		g		g		g		g		g		g		g		g		---	---
Pulses	0.1	3.69	0.1	3.45	0.1	3.29	0.2	6.03	0.4	11.15	0.2	7.73	0.1	5.26	0.1	5.40	0.1	4.07	---	---
	6		5		5		7		5		5		6		4		0		---	---
Sugar	1.4	17.28	1.6	17.69	1.2	12.17	0.1	1.50	0.3	5.69	1.6	31.27	4.6	54.12	3.3	44.49	0.0	1.30	3.2	103.39
	6		6		0		1		2		4		8		3		8		4	
Poultry & dairy	ne	2.08	ne	1.76	ne	1.62	ne	4.59	ne	7.95	ne	4.97	ne	9.60	ne	11.30	ne	5.49	---	---
	g		g		g		g		g		g		g		g		g		---	---
All Food items		132.2		157.4		163.9		196.5		235.3		302.5		445.7		527.0		462.6		617.70
		7		3		1		2		3		5		7		9		4		
Share (%)		44.49		45.43		43.98		47.24		47.82		48.48		56.40		61.32		51.68		51.39

Agricultural sector	297.2	346.5	372.6	416.0	492.1	624.1	790.4	859.5	852.1	1201.8
	9	4	7	3	7	1	0	2	1	6
Share (%)	14.22	13.58	12.70	11.08	10.78	10.92	12.05	10.22	10.08	10.47
Total Exports	2090.	2551.	2933.	3753.	4564.	5717.	6558.	8407.	8455.	11481.
	18	37	67	40	18	79	64	55	34	70

and semolina were allowed from private account with quantitative limits of 0.65 million tone from May, 2009 (this capacity was increased to two million tone during 2009-10). Humanitarian assistance/aid had been given from time to time at the prevailing export price to the needy countries (GOI, 2009-10).

Imports

Average import tariffs have been reduced gradually with the liberalisation of economy. Value of total imports consistently increased (table 11) from Rs2452 billion during 2001-02 to Rs16053.15 billion during 2010-11 showing an increase of 6.55 times. Value of agricultural imports during this period increased from Rs162.57 billion to Rs561.96 billion but its share in total imports has declined from 6.63% to 3.50%. Share of food in agricultural imports has kept fluctuating that increased from 70.88% to 84.55%. Among the major imports during 2010-11, value of the vegetable oils and pulses during 2008-09 constituted a combined share of 76.66% while of fruits & nuts (other than cashew nuts, sugar and cashew nuts it stood at 7.75%, 5.90% and 5.22% respectively. In the recent years, among the major staples, rice imports were allowed from March 2008 to April 2009 at zero duty. Thereafter government had withdrawn the exemption on customs duty while imposed a basic custom duty on semi/wholly-milled rice at 70% ad valorem, import duty on wheat was reduced from 50% to 5% from July, 2006 and zero from September, 2006 and on wheat flour it was fixed at 30% ad valorem from April, 2009 (Economic Survey 2009-10).

Recent Food Crisis

In the country, wholesale price index (WPI) of all the commodities has increased since 2001-02 (table12). It stood above 5% for six years i.e., 2010-11 (9.6%), 2011-12 (9.1%) 2008-09 (8%), 2001-02 (7.2%), 2004-05 and 2006-07 (6.5% each). This price increase was fuelled by the energy sub sector during 2000-01 and 2004-05 whereas food sub sector during 2006-07. In contrast, recent pressure on prices (as at the global level) has emanated from both these sub sectors. However, contribution of primary articles has declined from about 46% during 2010-11 to 28% during 2011-12 (Economic Survey, 2011-12). Since the domestic markets cannot be fully insulated so some spillovers of the global prices on these are inevitable but the demand and supply side influences of these upon the local markets are not identical.

Table 11: India's Imports of Agricultural Products

Quantity: Million tones

Value: Rs billion

Item	2001- 02		2002-03		2003 - 04		2004 - 2005		2005 - 2006		2006 - 2007		2007 - 2008		2008 - 2009		2009 – 2010		2010-11	
	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V
Vegetable oils	4.3 2	64.65	4.3 7	87.80	5.2 9	116.8 3	4.7 5	110.7 7	4.2 9	89.61	4.2 7	95.40	4.9 0	103.01	6.7 2	158.37	8.0 3	264.8 4	6.7 2	294.42
Pulses	2.2 2	31.60	1.9 9	27.37	1.7 2	22.85	1.3 4	17.78	1.7 0	24.76	2.2 7	38.92	2.8 4	53.75	2.4 7	62.46	3.5 1	96.73	2.5 9	69.80
Sugar	0.0 3	0.33	0.0 4	0.33	0.0 7	0.63	0.9 3	9.76	0.5 6	6.52	ne g	0.03	ne g	0.06	0.3 9	5.83	2.5 5	59.61	1.2 0	27.87
Cashew nuts	0.1 6	4.31	0.4 0	12.36	0.4 4	13.72	0.4 8	18.05	0.5 4	20.89	0.5 9	18.21	0.5 9	17.15	0.6 1	26.72	0.7 6	30.50	0.5 0	24.80
Fruits & nuts	ne g	7.57	ne g	6.42	ne g	8.02	ne g	11.01	ne g	13.90	ne g	19.13	ne g	18.58	ne g	23.73	ne g	28.73	ne g	36.84
Spices	0.0 9	5.04	0.1 2	5.86	0.1 2	5.64	0.1 1	5.94	0.1 1	6.88	0.1 2	7.39	0.1 4	9.74	0.1 2	10.76	0.1 5	14.32	0.1 1	13.59
Tea	0.0 1	0.67	0.0 2	1.25	0.0 1	0.65	0.0 3	1.47	0.0 2	1.08	0.0 2	1.27	0.0 2	1.31	0.0 3	1.97	0.0 3	2.75	---	---
Wheat	0.0 0	0.01	---	---	---	---	---	---	---	---	6.0 8	58.50	1.7 9	26.58	---	---	0.1 6	2.31	0.1 8	2.36
Cereal prep	0.0 4	0.82	0.0 5	1.17	0.0 3	0.87	0.0 5	1.12	0.0 4	1.29	0.0 4	1.33	4.4 0	1.62	0.0 3	1.70	0.0 2	4.97	0.2 5	5.45
Oil Seeds	ne g	0.01	ne g	0.11	ne g	0.14	ne g	0.28	ne g	0.47	ne g	1.04	ne g	1.49	ne g	1.30	ne g	1.83	---	---
All food		115.2 3		142.9 0		170.3 9		176.5 0		166.0 0		241.7 5		233.89		293.81		506.5 9		475.13
Share (%)		70.88		81.16		77.55		77.37		77.21		81.57		78.21		79.02		85.10		84.55
Agri sector		162.5 7		176.0 9		219.7 3		228.1 2		214.9 9		296.3 8		299.06		371.83		595.2 8		561.96
Share (%)		6.63		5.92		6.12	-	4.55	-	3.26	-	3.53	-	2.95	-	2.71	-	4.37		3.50
Total		2452. 00		2972. 06		3591. 08		5010. 65		6604. 09		8405. 06		10123. 12		13744. 36		1367. 36		16053. 15

Table 12: Annual Average Inflation based upon Wholesale Price Indices

	(Per cent)			
Year	Primary Articles	Fuel & Power	Manufactured Products	All Commodities
Weight (%)	20.12	14.91	64.97	100.00
2000-01	2.8	28.5	3.3	7.2
2001-02	3.6	8.9	1.8	3.6
2002-03	3.3	5.5	2.6	3.4
2003-04	4.3	6.4	5.7	5.5
2004-05	3.7	10.1	6.3	6.5
2005-06	4.3	13.5	2.3	4.3
2006-07	9.6	6.5	5.6	6.5
2007-08	8.3	---	4.9	4.8
2008-09	11.0	11.6	6.2	8.0
2009-10	12.7	-2.1	2.2	3.8
2010-11(Apr-Jan)	18.4	12.2	5.5	9.6
2011-12(Apr-Jan)	16.8	13.7	7.6	9.1

Source: Economic Surveys, various issues

Food price index has (table 13) two components i.e., primary food articles and processed food products. Weight of the composite food index in the WPI is 24.31%, of which it is 14.34% and 9.97% for the primary articles and manufactured products respectively. An examination of the monthly WPI of food articles indicates that its increase stood above 10% since July, 2009 that continued till October, 2010. It stood the highest i.e., 20.21% during December, 2009 that declined to 19.80% during January, 2010 but jumped back to 20.22% during February, 2010 and came down gradually to 8.59%. during December, 2010. Of its two components, increase in the prices of primary articles had also touched as high as 20.76% during December, 2009 that declined marginally to 20.19% during January, 2010 but touched again 21.85% during February, 2010. Thereafter its increase ranged from about 15% to 20% till October, 2010 that declined to 9.41% during November, 2010 but jumped again to 13.55% during December, 2010. In contrast, increase in the price index of processed food items declined from 19.16% during January, 2010 to 0.35% during December, 2010. This indicates that the major driver of the price movements in food articles is the prices of primary food articles.

Table 13: Monthly Break-up of Changes in Wholesale Food Price Indices

Period	(Per cent)							
	All Commodities		Primary Food Articles		Food Products		Food Combined	
	100		14.34		9.97		24.31	
Weight %	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
April	.089	11.00	8.69	20.49	8.86	9.09	8.76	16.09
May	1.21	10.60	8.91	21.37	10.12	7.09	9.37	15.85
June	-0.71	10.28	11.28	20.97	9.05	6.13	10.42	15.30
July	-0.62	10.02	12.74	18.48	8.46	7.34	11.10	14.31
August.	0.31	8.82	14.36	14.96	10.73	4.58	12.97	11.06
September	1.09	8.93	13.92	16.29	12.08	3.62	13.21	11.49
October	1.48	9.12	12.47	14.64	12.97	3.75	12.66	10.56
November	4.50	7.48P	16.73	9.41P	17.94	0.57P	17.17	6.11P
December	6.92	8.43P	20.76	13.55P	19.30	0.35P	20.21	8.59P
January	8.53	---	20.19	---	19.16	---	19.80	---
February	9.68	---	21.85	---	17.68	---	20.22	---
March	10.23	---	20.65	---	15.11	---	18.50	---

Major items of the driver of food inflation during the recent financial year were milk, eggs/meat/fish and edible oils. This is because the country meets about 50% of its requirements of edible oils such as crude palm oil, sunflower oil, soybean oil and Refined Bleached and Deodorized (RBD) palmolein through imports. So a spurt in the global prices of these has contributed to its higher domestic prices. Food price rise being a sensitive issue the government had to resort to a combination of monetary, fiscal and administrative measures to curb these.

Conclusions

Study indicated that in the Indian economy food markets' sizes both rural and urban have expanded over time. But this expansion has been relatively larger for the urban markets because of growing urbanization. With growth in population size of the operational holdings has declined further and the share of cultivators in rural population has declined. Wide spread as well as high incidence of poverty continues to persist in the rural and urban areas. Public intervention in the food grain markets has existed since the inception of planning. Its policy instruments included the removal of supply side constraints, regulations of food grain markets, procurement, storage and shipment of food grains, fixation of MSPs, supplies of food grains at subsidized rates, etc. Due to the

availability of public support and technology for the major staples, namely, wheat and rice, it led to a dramatic shift in the cultivated area under these crops particularly in the major producing states. As a result, the country has come to rely upon imports to meet its requirements of the other food items such as edible oils and pulses. With the liberalization of economy government has decentralized its procurement system to extend its coverage and provide benefits to farmers in other regions. Government has also streamlined the PDS with its focus shifted primarily in favor of BPL families. Food subsidy bill of the government has mounted over time due to continuous upward revision in the MSPs without a corresponding change in the CIPs. Role of external sector in the agricultural sub sector has remained miniscule and is also not consistent except for few crops. Thus public intervention in the food grain markets with its focus tilted primarily in favor of major staples has distorted the functioning of open markets that failed to emanate proper price signals for farm level crop adjustments. Food prices particularly of the primary articles play a decisive role in setting up inflationary trends in the economy. This is because of large market size and high incidence of poverty wherein people spend a larger share of income upon food items. However, recent price rise is due to increase in the prices of several high value items because of changing dietary patterns accruing from growing incomes. Thus government has to resort to a variety of sector specific policy instruments to arrest price rise

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