

Public Distribution System and Food Security in India: A Review

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Abstract:

Ensuring Food Security is a challenge in India, given its huge population. At present India finds itself in the midst of a paradoxical situation; endemic mass-hunger coexisting with the mounting food grains stocks. The paradox lies in the inherent flaws in the existing policy and implementation bottlenecks.

This paper provides a review of the public distribution system that seeks to tackle food security and also the nutrition security in India. This paper finds that the government effort alone is inadequate to meet the challenges of universal food security. There is a need to shift from the existing expensive, inefficient and corruption ridden institutional arrangements to those that will ensure cheap delivery of requisite quality grains in a transparent manner and are self-targeting.

Key words: Food Security, Public Distribution System.

1. Introduction

India is acclaimed internationally for its fast growing economy among the developing countries. At the same time it is struggling with problems of poverty, hunger, unemployment and food insecurity. Though the poverty level has declined remarkably in terms of percentage from 1951 to 2013, hunger and helplessness is not so rare incident in India till date, which creates the idea of food security so relevant for the country at this moment.

1.1 What is food security?

Ensuring food security continues to be a challenging issue as well as of vital importance for the developing countries including India. The Millennium Development goals provide us with the starting point to assess the level of food security and prioritize our efforts to achieve it. According to World Development Report (1986), food security is “*access by all people at all times to enough food for an active, healthy life.*” Apart from it, Food and Agriculture Organisation (FAO, 1983) has defined food security in terms of “*ensuring that all have both physical and economic access to basic food they need.*”

Food security is a complex issue that has been raised over time. The concept of food security indicates access of food to all people of the country at all times. Food security is described as the state when people have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

1.2 Food security in India

However, even after the bill is passed in 2013, food security in India has to be understood as a distressed phenomenon, as with marginal enhancement in their incomes over time – they are forced to cut down on their food consumption to meet up their imperative demands of health and education that were not so important in the earlier period. In order to feed the burgeoning population of India and to attain food security, the efforts for increasing food security and its sustainability through advanced agro and biotechnological ways are to be undertaken. However, problems of climate change, biodiversity, desertification, water depletion, etc. are becoming unfriendly to nature and human health. There is a crucial need for developing the systems to alleviate the environmental disorders in order to boost crop productivity.

1.3 Historical Background

Food security concerns in India can be traced back to the famous Bengal Famine in 1943 at the time of British colonial rule, during which about 2 million to 3 million people perished owing to starvation. Since independence (1947), for more emphasis industrialization agriculture was ignored, hence India had to depend on United States food aid. This exposed India's vulnerabilities to several shocks on the food security front. (ShikhaJha and P.V.Srinivasan 2008).

The partition of the country in 1947 left the country with 82 % of the total population, but 75 % of the cereals production of undivided India. During the first five year plan, quite justifiable emphasis was given on agricultural sector to ensure sustained supply of food for the people. There was import of food from foreign country also. During the second five year plan, emphasis was given on industrialization and reliance was put on heavy industries. As a result agricultural was relatively neglected and the nation had to face acute food crisis during the mid-1960s.

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Food production has increased more steadfastly than the population, which has been evidenced through scientific research. Against this reality, hunger still persists in many parts of the world. Today more than one billion are very poor and suffering from hunger and 800 million are chronically malnourished. Millions more become blind, retarded or suffer other disabilities that impair functioning because of lack of minerals and vitamins. (Sushil Kumar, 2010)

India has one of the highest levels of malnutrition in the world and there are reports of hunger and starvation deaths from different parts of the country. The average requirement of cereals per persons in the country is 427 grams per day (FAO,2010), whereas allocation for economically deprived groups covers merely half of this requirement. With this background, the objective of this paper is to review the public distribution system.

Towering economic growth rates have failed to improve food security in India leaving the country facing a crisis in its rural economy. India has one of the highest levels of malnutrition in the world and there are reports of hunger and starvation deaths from different parts of the country. The average requirement of cereals per persons in the country is 427 grams per day (FAO, 2010), whereas allocation for economically deprived groups covers merely half of this requirement.

1.4 Objective of the study

Food security implies access by all people at all times to sufficient quantities of food to lead an active and healthy life. This requires not just adequate supply of food at the aggregate level but also enough purchasing capacity with the individual or households to demand adequate level of food. The adequate supply involves the dimension of quantitative and qualitative aspects. The quantitative dimension related to the overall food availability in the economy should be sufficient to meet the demand and the qualitative dimension relates the nutritional requirements of the population are properly looked after. As far as the question of enough purchasing capacity is concerned, it involves the introduction of employment generation programme so that the income and purchasing power of the people increases.

However, to tackle the qualitative and quantitative aspects of the food security problem, Government of India has relied on the three food-based safety nets:

- Public Distribution System (PDS)
- Integrated Child Development Services (ICDS)
- Mid-day Meals Programme (MDM)

This paper is an endeavor to review the public distribution system of India in the light of idea of Food Security Bill. The paper has been organized as follows - Section 2 of this paper consists of data source, Section 3 includes the review and section 4 consists of the conclusion and policy suggestions.

2. Data Source and Methodology

Keeping in mind the focused objective we did our study only on the basis of secondary data that collected from different journals, books, articles, reports, papers etc. which are mentioned in references. Simple descriptive statistical tools have been used for analysis.

3. Public Distribution System (PDS) in India

The most important medium through which the government ensures food security at the micro level in India is the Public Distribution System. By PDS we actually mean a network of retail outlets, popularly known as the ration shops or the fair price shops, through which the government sells grains and other necessities. India has a large network of fair price shops, both in rural and urban areas and thus its reach in rural areas is sometimes better than the market.

3.1 Purpose

The main purpose of the PDS in India was to act as a price support program for the consumer during the periods of food shortage of the 1960s. The basic objectives of the PDS in India has been to provide essential consumer goods at cheap and subsidized price to the consumers so as to insulate them from the impact of rising prices of these commodities and maintain the minimum nutritional status of our population.

3.2 Coverage

In addition to food grains, PDS has also been used in India for the distribution of edible oils, sugar, coal, kerosene and cloth. The most important item covered under PDS in India have been rice, wheat, sugar and kerosene. Together these four items have accounted for 86 percent of the PDS sale. Pulses, which constitute an important source of protein for the poor, have a share of less than 0.2 percent in total PDS sale. PDS in India covers the whole population as no means of direct targeting are employed. PDS distributes commodities worth more than Rs 30,000 cores annually to about 160 million families and is perhaps the largest network of its kind in the world.

Figure 1 shows the process of public distribution system in India and Table 1 shows the policies taken by GOI for public distribution system from pre-reform to post-reform period. The Central Issue Price (CIP) fixed by the government remained unaltered till 1997, then a dual pricing structure was introduced under the Targeted Public Distribution System (TPDS), in which the issue price for families below the poverty line (APL) were fixed equal to the economic cost, and

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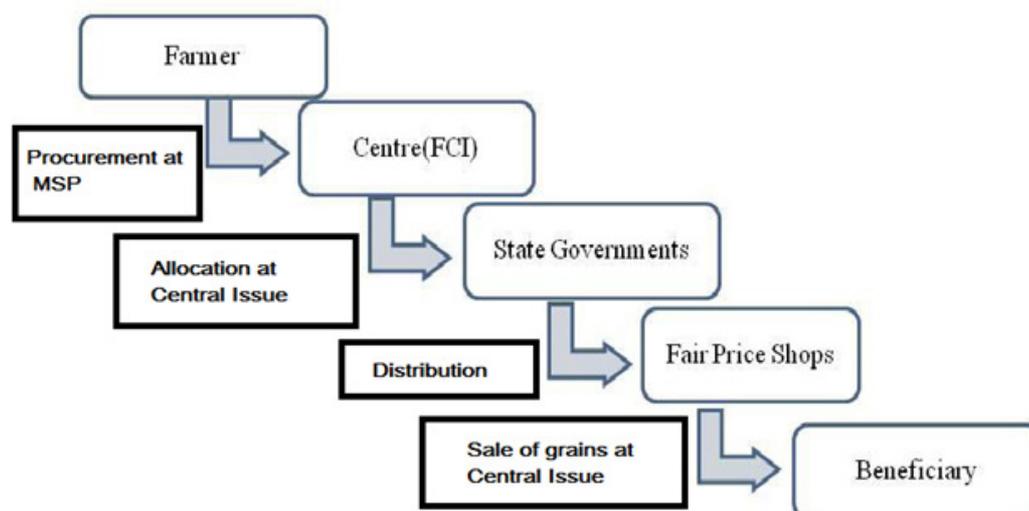
for BPL were fixed at 50 percent of economic cost. For making the PDS system more efficient, the government reduced the issue price of APL families by 70 percent during 2010-11.

Table1: India Govt.'s safety net programs interventions, financing arrangements and coverage.

Program/Scheme (yr. of intro.)	Volume of food based transfer	Coverage target gripe	Program interventions
A. Public Distribution System. (1) PDS (up to 1992)	BPL/APL: Wheat (at the rate of) @ 2.34/kg. and rice @ 2.89/kg & etc.	Universal	Price subsidies on rice, wheat, sugar edible oils.
(2) RPDS (1992)	BPL: 20 kg. of rice and wheat/family/month	Backward blocks.	Food subsidies on rice and wheat.
(3) TPDS (January (1997)	BPL/APL: 35kg. rice and wheat/family/month	Both poor and non-poor.	Both price and food subsidies on rice, wheat, sugar, edible oils.
(4) AAY (December, 2000)	Below BPL: 35 kg. Of rice & wheat/family.	Poorest of the poor.	A higher price subsidy on rice & wheat than the BPL rates.

Source: Economic Survey

Figure 1: The Public Distribution Process in India



Source : Authors analysis

3.3 Relative Share of different items in PDS sales

Rice, wheat, sugar, edible oil, soft coke and kerosene are sold through PDS outlets. Of these 4 items, viz., rice, wheat, sugar and kerosene account for 86 percent of total PDS sales. Sugar alone accounts for 35 percent, followed by rice-27 percent, wheat-10 percent and kerosene-15 percent Coarse cereals(bajra, jowar and other coarse grains), which a largely consumed by the poor account for less than one percent of total PDS sales. The share of pulses, the main source of protein for the poor, is less than 0.2 percent. Data about commodity wise composition of market dependent population

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reveal that the bulk of PDS purchases of these of these commodities go to benefit the non-poor in urban and rural areas (Basu&Maertens, 2010). This is shown in the Table 2.

Table 2: Percentage shares of different items in PDS Sales.

Commodity	Percentage share in total (rural+urban) PDS Purchases
Rice	26.7
Wheat	10.1
Minor Cereals	0.8
Edible oils	8.6
Sugar	35.0
Kerosene	14.6
Pulses	0.2
Others	4.0
Total	100.0

Source: Datt & Sundaram, 63rd Revised Edition

Subsidies in Indian agriculture have increased significantly in the post-reforms period. Food subsidies increased from Rs. 2,850 crores in 1991-92 to about Rs. 72,823 crore in 2011-12 (Revised Estimates), an increase of over 25 times in 21 years (Table 3). As a result, its share in total central government subsidies under non-plan expenditure increased from 23.3 per cent to 33.7 per cent between 1991-92 and 2011-12. As a percentage of agricultural GDP, the food subsidy increased from 1.8 per cent to 5.8 per cent during 1991-92 and 2010-11. Food subsidy, which increased at an annual compound growth rate of about 17.8 per cent during the 1990s, remained stable between 2002-03 and 2006-07 mainly due to low offtake of food grains and marginal increases in procurement prices. However, there has been a significant increase in food subsidy during the last few 5-6 years. For example, food subsidy more than tripled from Rs. 24,014 crore in 2006-07 to Rs. 72,823 crore in 2011-12 and is estimated to cross Rs. 75,000 crore in 2012-12, at an annual compound growth rate of 21.6 per cent.

Table 3: Major Subsidies (in crores of Rupees) of Government of India on Food: 1990-91 to 2012-13

Year	Subsidy on Food	Percentage Change over Previous Year	Percentage of GDP from Agriculture	Percentage of Total Subsidies
1991-92	2850	-	1.8	23.3
1992-93	2800	-1.8	1.5	23.3
1993-94	5537	97.8	2.6	47.7
1994-95	5100	-7.9	2.1	43
1995-96	5377	5.4	2	42.5
1996-97	6066	12.8	1.9	39.1
1997-98	7900	30.2	2.4	42.6
1998-99	9100	15.2	2.4	38.6
1999-00	9434	3.7	2.3	38.5
2000-01	12060	27.8	2.9	44.9
2001-02	17499	45.1	4	56.1
2002-03	24176	38.2	5.7	55.5
2003-04	25181	4.2	5.2	56.8
2004-05	25798	2.5	5.3	56.1
2005-06	23077	-10.5	4.3	48.6
2006-07	24014	4.1	4	42
2007-08	31328	30.5	4.4	44.2
2008-09	43751	39.7	5.4	33.7
2009-10	58443	33.6	6.3	41.3
2010-11	63844	9.2	5.8	36.8
2011-12	72823	14.1	-	33.7
2012-13	75000	3	-	39.5

Sources: Government of India (2013a)

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The Government of India fixes the Minimum Support Price (MSP) of foodgrains at which procurement is made from the farmers. The Central Issue Price (CIP) of foodgrains at which foodgrains are sold under different government schemes and allocations of quantity of foodgrains under Targeted Public Distribution Scheme (TPDS) and other welfare schemes are also fixed by the Government of India. The difference between the Economic Cost and the Central Issue Price is reimbursed by the Government of India as consumer subsidy to the Food Corporation of India (FCI). The economic cost includes MSP, procurement costs, incidentals and distribution costs. The Government of India also reimburses the cost of carrying of buffer stock of foodgrains maintained by FCI as a part of subsidy. The trends in average consumer subsidy on rice and wheat and share of buffer subsidy during the period 2002-03 and 2011-12 are given in Table 4.

Table 4: Trends in Consumer Subsidy on Rice and Wheat (Rs./quintal) and Share of Consumer and Buffer Subsidy in Total Subsidy in India: 2002-03 to 2011-12

Year	Wheat (Rs./quintal)			Rice (Rs./ quintal)			Share (%) in total FCI Subsidy	
	AAV	BPL	APL	AAV	BPL	APL	Consumer	Buffer
2002-03	684.1	469	301	866.1	600.4	370.5	73.7	26.3
2003-04	718.7	503.7	308.7	936.1	671.1	408.7	85.3	14.7
2004-05	818.9	604	409	1003.6	738.6	475.1	93.2	6.8
2005-06	831.5	616.5	421.3	1050.7	785.7	520.7	98.2	1.8
2006-07	1014.4	799.4	604.4	1111.6	846.6	581.6	98	2
2007-08	1148.7	933.7	738.7	1271.4	1006.4	741.4	87	13
2008-09	1180.6	965.6	770.6	1440.7	1175.7	909.9	88.1	11.9
2009-10	1224.6	1009.6	811.5	1519.5	1254.1	939	86	14
2010-11	1326.4	1111.4	916.4	1702.4	1437.4	1172.4	85.7	14.3
2011-12	1451.9	1236.9	1041.9	1884.2	1619.2	1354.2	90.3	9.7

Sources: GoI (2012a)

The main reasons for increase in food subsidy include steep rise in minimum support/procurement prices, accumulation of large stocks of grains, rising economic costs of foodgrains, high offtake of foodgrains under targeted public distribution system and other welfare schemes and constant central issue prices (CIP) of foodgrains (GoI, 2012e). It is generally believed that high food subsidies are mainly because of inefficient functioning of Food Corporation of India.

3.4 The Sources of Rising Food Subsidy

Food subsidies are one of the most prominent features of the Indian economy. Because of its socio-political importance to the economy, the food subsidies have been the subject of discussions. Recent spike in subsidies in general and food subsidy in particular is a growing policy challenge for the government. Between 2006-07 and 2011-12 the food subsidy in India more than tripled and several factors have contributed to this increase.

Table 5: Trends in Minimum Support Price, Procurement Incidentals, Distribution Costs and Economic Cost of Rice and Wheat: 2001-02 to 2012-13 (Rs. /quintal).

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Year	MSP		Procurement Incidentals		Distribution Costs		Economic Costs	
	Wheat	Paddy	Wheat	Paddy	Wheat	Paddy	Wheat	Paddy
2001-02	610	530	134.7	66.8	126.7	119.6	852.9	1098
2002-03	620	550	137.6	61.7	145.5	157.7	884	1165
2003-04	630	550	138.2	30.7	169.7	214.5	918.7	1236.1
2004-05	630	560	182.7	58.5	222.8	256.5	1019	1303.6
2005-06	640	570	171.2	39.1	234.5	272.4	1041.8	1339.7
2006-07	700	620	180.2	193.7	269.4	289.6	1177.8	1391.2
2007-08	850	745	164	214.9	244.4	297.8	1311.7	1549.9
2008-09	1000	900	179.6	226.9	245.4	280.8	1380.6	1740.7
2009-10	1080	1000	206.9	288.6	200.4	184.9	1424.6	1820.1
2010-11	1100	1000	212.4	313.1	217.7	223.5	1494.3	1983.1
2011-12	1170	1080	271.8	366.9	252.5	291.3	1651.9	2184.2
2012-13	1285	1250	305.2	383.3	296.3	397.1	1822.2	2418.7

Sources: Food Corporation of India; PRS.

The economic cost of food grains to Food Corporation of India (FCI) is of strategic importance as it has direct impact on food subsidy. Minimum support price is one of the major components of economic costs and accounts for about 70 per cent of FCI's economic cost of foodgrains and share of procurement incidentals and distribution costs is about 30 per cent (Table 5). However, FCI has no control on MSP as well as large number of cost items of procurement incidentals and distribution costs.

Table 6: CIPs and MSPs of rice and wheat (Rs/kg)

Year	Rice				Wheat			
	MSP#	CIP			MSP	CIP		
		AAY	BPL	APL		AAY	BPL	APL
2002	5.40	3.00	5.65	8.30	5.50	2.00	4.15	6.10
2012	12.80	3.00	5.65	8.30	13.50	2.00	4.15	6.10

Sources: Food Corporation of India; PRS.

The MSP is for paddy. The equivalent price of rice is about 60% higher.

Table 6 indicates that while the CIP for food grains have remained constant through the years, the MSP has been increasing. The difference between the MSP (higher than market price) and the lower CIP is the food subsidy per kg of food grain.

3.5 Leakage of food grains

TPDS suffers from large leakages of food grains during transportation to and from ration shops into the open market. In an evaluation of TPDS, the Planning Commission found 36% leakage of PDS rice and wheat at the all-India level. The Table 7 & Table 8 provide data on states with varying leakage of food grains.

Table 7: Overall leakage of food grains across states

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Extent of Leakage	States
Low Leakage (less than 25%)	Andhra Pradesh, Kerala, Orissa, Tamil Nadu, West Bengal
High Leakage (25% - 50%)	Assam, Gujarat, Himachal Pradesh, Karnataka, Maharashtra Rajasthan
Very High Leakage (50% - 75%)	Haryana, Madhya Pradesh, Uttar Pradesh
Abnormal Leakage (more than 75%)	Bihar, Punjab

Source: Planning Commission, 2005.

Table 8: Leakage of food grains at the fair price shop

Very Low Leakage (less than 10%)	Assam, Himachal Pradesh, Madhya Pradesh, Odisha, Tamil Nadu, West Bengal
Moderate Leakage (10% - 25%)	Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra
High Leakage (25% - 50%)	Rajasthan, Uttar Pradesh
Very High Leakage (more than 50%)	Bihar, Haryana, Punjab

Source: Planning Commission, 2005.

Table 9 compares the off take of rice and wheat to consumption of the same.

Table 9: Offtake compared to consumption of food grains (all India) in million tonnes

Cereal	Year	Allocation	Offtake	Consumption as per NSS	Leakage	Leakage (in %)
Rice	2004-05	34.5	16.5	9.9	6.5	39.8
	2009-10	24.8	23.4	17.5	5.9	25.1
Wheat	2004-05	37.3	12.9	3.6	9.3	72.4
	2009-10	22.8	18.9	7.8	11.2	59.1
Total (Rice + Wheat)	2004-05	71.7	29.4	13.5	15.9	54.1
	2009-10	47.6	42.4	25.3	17.1	40.4

Source: Commission for Agricultural Costs and Prices, 2010

3.6 Shortcomings identified by the existing literature

The PDS in India has been criticized on various counts by leading economists like Misra & Puri (1983), Utsa Patnaik (2008), Sushil Kumar (2013), M S Swaminathan (2008) etc. Many empirical studies have also shown that the rural poor have not benefited much from the PDS as their dependence on the open market has been much higher than the PDS for most of the commodities. In the similar way urban poor have also depended on a substantial extent on the open market to meet their consumption requirements. Ration cards are issued only to those households who have proper registered residential addresses. This means that a large number of poor who are homeless and others without proper residential

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addresses (for example, migrant laborers) are automatically left out of the food security system. The per capita income gain to the poor from all consumer subsidies was no more than Rs. 2.01 per month. The overall transfer gains were very meager, with the exception of Kerala and Andhra Pradesh. Even the TPDS introduced in 1997, has not made a significant impact on the access of food since delivery systems in the poorer states are weak.

Secondly, there are considerable regional disparities in the distribution of PDS benefits. For example, in 1995, four southern states of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu accounted for almost one half of total PDS off take of food grains in the country while their share in the all India population below the poverty line in 1993-94 was just 18.4 percent. As against this, the four northern states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh having as much as 47.6 percent of all India population below the poverty line in 1993-94 accounted for only 10.4 percent of all-India off take of food grains. A number of economists have also pointed out that the PDS remained limited only to the urban areas for a considerable period of planning while the coverage of rural areas was very insufficient. In fact in an article published in 1984, P.S.George estimated that the off take in urban areas was 85 % of the total off take from the PDS. However, with expansion of PDS in rural areas, this bias has been corrected. But the ineffective operation of the FPS in rural areas raises questions as to the meaningfulness of their existence.

PDS is highly subsidized in India and this has put a severe fiscal burden on the government. Subsidy on PDS arises from the difference in the issue price and the economic cost of FCI. From Rs. 662 crore in 1980-81, food subsidy rose to Rs. 2850 crore in 1991-92 and further to Rs. 60600 crore in 2010-11. The drastic reduction in the issue price for the BPL families raised the subsidy burden considerably. Moreover, The Bureau of Industrial Costs and Prices (BICP) and the Government of India have pointed out a number of inefficiencies in the operation of FCI. The economic cost of FCI food grains operation has been rising on the account of increase in procurement prices and other costs (which include procurement incidentals, distribution cost and carrying costs).the inefficiencies in the operation of FCI are due to its “ highly centralized and bureaucratic mode of operation”.

However, the reason behind price increases is due to reduction in the net quantities of food grains available in the open market because of large procurement of food grains every by the government. Taking advantage of the low supplies in the market, traders have indulged in speculation raising prices to unusually high level. The dual market system- the PDS and the open market operates to the disadvantage of the poor. PDS meets only a fraction of the requirements of the poor, this they are compelled to purchase from the open market.

Another criticism of PDS relates to the problem of leakages from the system in the form of transport and storage and diversion in the open market. The major part of the leakage is due to diversion of food grain in the open market because of the widespread prevalence of the corrupt practices. Instead of selling ration at subsidized prices, shopkeepers sell them in the open market in higher prices, pocketing the difference. According to a study conducted by Tata Consultancy Services, the all-India diversion of PDS food grains is 31 % for rice and 26 % for wheat.

Interestingly, the Govt. of India is running a number of schemes which are targeting the same section of the society for the purpose of subsidized food grain. It would be possible that some family would be the beneficiary under PDS and at the same time SGRY and its special component. Moreover, many families from the poorest the poor category, who should have been included in Antyodaya Anna Yojana scheme, have been deprived of the facility. As on June 2006, only 14 states/UTs have completed identification and issue of disincentive ration cards to the beneficiaries. Other states have completed the targets partially.

On account of shortage of resources, there is considerable delay in lifting of food grains on the part of state agents and FPS shop dealers. The consumers are not generally given the arrears of the previous month/fortnight. Finally, the quality differential of the dealer outlet is due to inefficiencies in the marketing chain, lack of care in storage and inefficiency in operation of the public sector.

4. Conclusion and Policy Suggestions

In this paper we tried to review the performance of the public distribution system and find governmental loss or leakages as a whole through this system. Government procure food grains from farmers at a high price, and then it to all Fair Price Shops (ration shops) to sell those procured food grains at a cheaper rate to people, i.e. Govt. gives subsidy to the farmers and also to the people. But in many cases the ration shop owners sell these subsidized items to the local market at a higher price. The higher income group people do not avail the allocated items from the fair price shops due to perceived poor quality and the shop owners sell it to the open market at the market price. Hence, though the subsidy given to the farmers goes to them, but the subsidy given to the consumers goes to the fair price shop owners in case if the consumer belongs to higher income group. In the context of the above discussion we can easily come to the conclusion that the PDS in India failed to fulfill the major objectives which have been mentioned in the beginning of this paper. Even after the bill is passed, food security for the poor is far from a reality. Hence, since higher income group people do not need the advantage of PDS, the Government should focus on a modified PDS specifically focused towards the people who actually need it.

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