

TRANSPARENCY IN PUBLIC DISTRIBUTION SYSTEM THROUGH DIGITIZATION: A STUDY ON CONSUMER SATISFACTION

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Abstract

The Public Distribution System (PDS) of India is one of the largest welfare schemes in the world. PDS was introduced after 2nd World War due to severe food shortages in the country. Initially, the subsidy was common to all. In 1990's, PDS was restructured to include hilly and inaccessible areas. Finally, the scheme was moved with a targeted approach and is known as Targeted PDS (TPDS). Under Essential Commodities act 2001, Public distribution system order was passed. It governs rules regarding identification of beneficiaries and commodities to be included for PDS. Department of rural Development through BPL survey decides criteria for inclusion or exclusion of beneficiaries. Finally, individual states identify the beneficiary households. Central govt. allocates food grains as per list prepared by NITI Aayog (erstwhile Planning Commission) based on families of BPL category to each state. Enactment of Food security Act, 2013 has done away with the need for BPL based identification. Computerization and other technology- based reforms to TPDS have succeeded in plugging leakages of food grains. It is important to mention the e-PDS project of Chhattisgarh government which has real time GPS monitoring from depots to the FPSs. has shown an encouraging result. Most states have now digitized their PDS to pass on subsidy benefits to targeted group of beneficiaries. The objective is that the Cash transfers can directly improve the economic lives of poor, and raise economic efficiency by reducing leakages and market distortions. Central government Data Center to host the beneficiary database and all other crucial MIS needs by the Department. The Central Data Center could be linked with the State Data Center (SDC) being setup under the National E-Governance Action Plan (NEGAP) and the State Wide Area Network (SWAN).

Key words: e-PDS, Public Distribution System, Kurukshetra magazine, Food security act 2013.

Public Distribution System (PDS) in India

PDS was introduced after 2nd World War due to severe food shortages in the country. Initially, the subsidy was common to all. In 1990's, PDS was restructured to include hilly and inaccessible areas. Finally, the scheme was moved with a targeted approach and is known as Targeted PDS (TPDS). Under Essential Commodities act 2001, Public distribution system order was passed. It governs rules regarding identification of beneficiaries and commodities to be included for PDS. Department of rural Development

through BPL survey decides criteria for inclusion or exclusion of beneficiaries. Finally, individual states identify the beneficiary households. Central govt. allocates food grains as per list prepared by NITI Aayog (erstwhile Planning Commission) based on families of BPL category to each state. Enactment of Food security Act, 2013 has done away with the need for BPL based identification.

What is Food Security?

Food security ensures when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Food security has three important and closely related components, which are availability of food, access to food, and absorption of food. Food security is thus, a multi-dimensional concept and extends beyond the production, availability and demand for food. Ensuring food security is the basic goal of social justice, apart from development of adequate human resources.

All these functions are performed through the PDS (Public Distribution System). PDS is operated under the joint responsibility of the Central and the State governments. The Central government, through Food Corporation of India (FCI), has assumed the responsibility for procurement, storage, transportation and bulk allocation of food grains to the State governments. The operational responsibility including allocation within State, identification of eligible families, issue of ration Cards and supervision of the functioning of Fair Price Shops (FPSs) etc., rest with the State governments.

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State resources are continuously utilized in the name of poverty alleviation and disparity reduction. Even after 69 years of independence, the country is still suffering from poverty and disparities. A series of welfare schemes over the last 60 years failed to end the miseries of the bottom segments of population in the economic ladder. In the past few years, technology has become the tool to bring transparency and effectiveness in welfare measures. Most states have now digitized their PDS to pass on subsidy benefits to targeted group of beneficiaries. The objective is that the Cash transfers can directly improve the economic lives of poor, and raise economic efficiency by reducing leakages and market distortions.

Statement of the Problems

The main work of Public Distribution System is to deliver goods to ultimate beneficiaries at the right time, right place, right quality, quantity and at right price. This is possible only with the effective support of both Government and staff members of PDS. As in Ration shops Dealers concerns, staff members at PDS have to initiate necessary steps for ascertaining the customers grievances and to take suitable steps for redressing their customers grievances, so that the customers satisfaction may be increased. Thus, in this study an effort has been made on ascertaining the customer's level.

Objectives of the study

- To study the functioning of the Digitalized and the role played by the Central and State Governments in India.
- To study explores Consumer Satisfaction in the effective implementation of PDS-Digital solution to the problem.

- To offer a few suggestions based on the findings of the study

Research methodology

The empirical base of the study rests on the data collected from both primary and secondary sources. The primary data was collected from the beneficiaries of PDS, purposefully selected for the study. Well structured schedule were prepared to study the consumer beneficiaries satisfaction, and they were administered to extract their problems, reaction and attitude to the system of distribution. Personal visit were made to the selected villages to make on the spot study of various socio-economic conditions of the consumer beneficiaries.

The Secondary data was collected from published sources like Annual Reports, action plans, Govt. Magazine's and other Publications.

Sample Universe

The sample universe for the study consists, households who are eligible to buy rations from public distribution and to whom photo identity household supply cards have been issued and fair price shops. As such in Anantapur district there were ration cards and Digital fair price shops, which constitute the universe. As against them 110 households were selected representing a sample of percent of universe.

Sample design

For the present study, a three-stage stratified random sampling method was employed in selecting the (i) mandals (2) villages and (3) beneficiary households. There are 63 mandals in

Anantapur district, of which only 18 mandals were selected for the purpose of the study. Those sampled mandals account for 33.33 per cent of total mandals. In the first state, there are 3 revenue divisions, 18 mandals wer selected from the district. In the second stage, from each mandal 2 villages and urban areas 2 wards were systematically selected. In the third stage, households were selected. In order to meet the requirements of the study. The 110 beneficiary/households were selected both from villages and urban. For random sampling purpose, two villages from each mandal and 2 wards from urban areas were selected on population proportion. Thus, in all 36 villages were selected from 18 mandals. A lot of care was taken to identify the villages, wards areas, and respondents to be representative in character as per the convenience sampling method.

Tool used

Based on the objectives of the study to be achieved, appropriate statistical tools were used to classify and tabulate the collected data and information to bring out a systematic analysis.

Review of literatures

Krishnaji. N, Krishna T.N (2000) stated in their study that even you poor people were purchasing food grains from the open market. So, vigorous effects are to be made in future it's stabilize the consumption level of poor people, which is one of the aims of public distribution system. **Svedberg (2012)** analyzed the case for and against replacing a reformed version of the current PDS with a targeted and differentiated cash transfer scheme and expressed a concern that providing unconditional cash to poor households will reduce the labour supply but increase significantly the amount of nutritional intake of the poor. **Khera (2011b)** pointed out that PDS mainly focused on antyodaya Anna Yojana and BPL household and there was rampant corruption in APL quotas and focused on the facts there is a huge lack of infrastructure for cash transfer in rural India. **Ramesh Kumar (2013)** in his study shows that the satisfaction level on PDS services does not differ

among customers based on their income. Government should take necessary steps to improve the quality of services and to ensure the goods are distributed in time. **Rajiv K. Phull (2013)** states that there is a common dissatisfaction across the state that they do not get ration regularly despite visiting the depots many times and the situation in rural areas is even worse. **Chandanshiv and Narwade (2014)** ascertain that half of the beneficiaries (54 percent) are not satisfied with regard to quality of the food grains supplied through PDS. **Suprit Panigrahi (2014)** in his study reveals that the issue of corruption within the system remains a major reason behind the dissatisfaction of the service users. **Arumugam Mahendran and Sulibhavi Indrakant (2014)** in their study reveal that the poor people are satisfied with the PDS, as they meet their private needs. Further, they also pointed out that rural coastal people's lifestyle has been improved better due to the distribution of free rice, color TVs, fans, mixer grinders, etc., **Ashok Kumar and Naveena (2014)** in their study revealed that the consumers are not satisfied with regard to distribution of poor quality of goods at fair price shops.

Table 1.1
Distribution of select households according to their age

S.No	Age group	No. of Respondents	Percentage to total
1	< 40 years	348	39.00
2	40-50 years	312	35.00
3	50-60 years	117	13.00
4	60 and above	123	13.00
	Total	900	100

In the present study, as is shown in table 1.1. 74.00 per cent of the select respondents in the study area are in the age group of less than 50 years. It is further found that 117 respondents representing 13 per cent are in the age group of 50-60 years and the remaining 13 per cent fall in the 60 years and above age-strata and the average age of the respondents is 42.5 years. In brief, majority of the households in the study area fall more than 40 years who has same exposure and experience either in understanding the world knowledge, and sharing, and capable of experience & knowledge to the young generation.

Table-1.2
Classification of select households according to gender

S.No	Gender	No. of Respondents	Percentage to total
1	Male	690	77.00
2	Female	210	23.00
	Total	900	100

Head of the family is the main source of identification, and importance being given in the rural society. He or she decides and assigns the households activities to the members family, manages the resources of the family. As per his/her directions normally the family members follow even affairs outside the family. In the current study, it is observed in table 1.2 that 77 per cent of households are male and the remaining are female dominated households. The data clearly support the general notion that by passage of time, sharing households activities which were hither to in the hands of the male is shifting to women also.

Table – 1.3
Satisfaction on quality of commodities distributed

Opinion	Frequency	Percentage
Highly satisfied	225	25.00
Satisfied	242	38.00
Partly satisfied	198	22.00
Not satisfied	135	15.00
Total	900	100

The table -----presents the satisfaction of households regarding quantum and quality of commodities distributed under PDS. 25 per cent of respondents were highly satisfied.

38 per cent of the consumers are just satisfied and partly satisfied by the 22 per cent of the customers on distributed quality commodities by the respective dealers and it represents 198 consumers, and only 15 per cent are not satisfied on issuing the quality commodities by the ration shops. It can be concluded that majority of the respondents are expressed highly satisfaction to just satisfaction because of all the consumers are utilized properly hence, they are satisfied PDS products.

Table – 1.4

Satisfaction of households on monthly sufficiency of FPS supplies

Opinion	Frequency	Percentage
Highly sufficient	27	3.00
Sufficient	108	12.00
Partly sufficient	486	54.00
Not sufficient	252	28.00
Can't say	27	3.00
Total	900	100

Table 1.4 indicates opinion of the households on supplies of all commodities through FPSs in Anantapuramu district. With regard to their sufficiency for whole of month, only 3 per cent of the consumers were stated that the supply of FPS commodities

are sufficient as whole month, 12 per cent of the households are said that they have sufficient, partly sufficient of the selected consumer and it represented 54 per cent, 28 per cent of the consumer have said that, the food grains are not sufficient which is providing central government through the PDS in the study area. And only megre percentage of the sample respondents are unable to decide on this matters.

It is clearly thus found that majority of the sample respondents have felt insufficiency of the stocks supplied and thus there was a mismatch between the requirements of the targeted public and the PDS supplies.

Table – 1.5
Opinion on quality of services rendered by the fair price shop dealers

Opinion	Frequency	Percentage
Highly satisfied	99	11.00
Just satisfied	279	31.00
Partly satisfied	351	39.00
Not at all	126	14.00
Can't say	45	5.00
Total	900	100

The satisfaction response about quality of services rendered by the fair price shop dealers is shown in table 1.5. Out of the total respondents, 39 per cent of the sample respondents were satisfied partially on the service rendered by the fair price of shops dealers, followed by 31 per cent who were just satisfied; whereas 141 per cent were not at all satisfied and only 11 per cent households were highly satisfied about their services in Anantapuram district of the Andhra Pradesh.

National food Security Act: Some Provisions

Coverage: 75 per cent of the rural and 50 per cent of the urban population will be covered under targeted PDS, with uniform entitlement of 5 kg food grain per person per month. However, beneficiaries of Antyodaya Anna Yojana (AAY) households will be protected at 35 kg per household per month as they constitute poorest of the poor in the society.

Subsidized prices: Food grains under TPDS are made available at subsidized prices and in future, it will be linked to Minimum Support Price (MSP).

Support to Women and Children: Pregnant women and lactating mothers and children in the age group of 6 months to 14 years will be entitled to meals as per prescribed nutritional norms under Integrated Child Development Services (ICDS) and Mid-Day Meal (MDM) schemes.

Women Empowerment: Eldest woman of the household of age 18 years or above to be the head of the household for the purpose of issuing of ration cards.

Transportation Cost: Central government will provide assistance to States in meeting the expenditure incurred by them on transportation of food grains within the State.

Food Security Allowance: Provision for food security allowance to entitled beneficiaries in case of non-supply of entitled food grains or meals.

Other Welfare Schemes:

Apart from TPDS and Food Security Act, there are number of other schemes. Important among them are:-

Mid-Day Meal Scheme: The Scheme presently covers students of Class I-VIII. It was launched with an objective to improve enrollment, retention, attendance and simultaneously improving nutritional levels among students.

Wheat bases nutrition program(WBNP): The food grains allotted under this Scheme are to be utilized under the Integrated Child Development Scheme (ICDS) for providing nutritious food to children below 6 years of age, expected and lactating mother.

Annapurna Scheme: Needy senior citizens of 65 years of age or above who are not getting 'Old Age Pension' are provided 10 kgs of food grains per person per month without any cost.

Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG): The Scheme aims at empowering adolescent girls of 11- 18 years by improvement of their nutritional and health status and upgrading various skills. This scheme has provision of 100 grams of grains per beneficiary per day for 300 days in a year

DBT Solution of Food Subsidy:

DBT aims to transfer subsidies directly to the people through their bank accounts, using the Aadhaar Payment Bridge of NPCI. It is hoped that crediting subsidies into bank accounts will reduce leakages, delays, etc. During 2017-18, the Centre's food subsidy bill is expected to go down by `25,000 crore annually, due to the Direct Benefit Transfer arrangement. The Centre's overall subsidy bill is also expected to dip further with the

planned extension of the DBT. State governments are expected to automate all the 5.4 lakh fair price shops and install Point of Sale machines for distribution of subsidized food grains. This will be a massive step for systematic identification of beneficiaries and cutting down on leakages

Digital solution to the problem:

Major challenges in the PDS system emanates from bogus ration cards belonging to fictitious families and shadow ration cards, that is genuine ration cards are being used by someone else. Attempts of preventing physical theft by human monitoring, Global Positioning System (GPS) of truck movement and electronic weigh bridge are inadequate and easily by-passable. leakages of various forms cannot be avoided through this way. Quality and transparency in beneficiary database, followed by tracking of Individual Beneficiary off take, coupled with a computerized MIS system can effectively improve the PDS system. By leveraging e-governance, initiatives can minimize leakage and pilferage

Solution: Some Factors

- Creation of a Beneficiary Database

The government should create a quality beneficiary database by conducting house-to-house survey and by enrolling each family member into Unique ID program. Information of each family member must be digitized. The digitized database will contain ten finger biometrics and photographic information of all family members. This enrolled data would be sent to Unique Identity Authority of India for printing on the ration card for each member to avoid card duplication. The inclusion of all families in the beneficiary database is important for an effective elimination of Shadow and Bogus cards.

Clean Consumer Fora and Clean Market Scheme to launch from 2017-18

The Department of Consumer Affairs has decided to launch two schemes, namely, Clean Consumer Fora and Clean Market from 2017-18, as a lot of emphasis is being given for setting up of permanent mechanism through new programmes or schemes for sustainability of Swachhta under Swachh Bharat Mission. The salient features of the schemes are as under:

Clean Consumer Fora : A number of consumers visit the Consumer Fora every day in connection with their complaints. There should be adequate facilities for the consumers in each Consumer Forum, including adequate toilets, especially for the differently-abled. Under the scheme, financial assistance will be provided for construction/upgradation of toilets, at least three toilets- one for men, one for women and one for differently-abled, for the use of the consumers visiting the Consumer Fora in connection with their complaints.

Clean Market: Unhygienic conditions at market places pose health hazards to the consumers. Under the scheme, the Voluntary Consumer Organizations (VCO) will be associated and asked to adopt a market place where they can carry out awareness activities on Swachhta and also cleanliness of the market place including provision of sanitation facilities for consumers and street vendors, in association with the market association and local authorities. Financial assistance will be provided to a VCO in each State/UT

Individual Beneficiary Tracking:

Eligible beneficiaries sometimes do not avail of their entire allotment due to immediate unavailability of funds, usage of own farm grains and temporary absence in the locality. But Fair Price Shop owners report a complete off take of allotments. The most ideal option is the deployment of a Point of Sale (POS) system, equipped with a fingerprint reader to identify a beneficiary before an issue is made. The POS system can automate the book keeping and generate receipt. This data can be updated each month in the data base server. As the server data are available and accessible everywhere, it also creates considerable flexibility in the choice of FPS for the consumer and introduces competitiveness between different FPS.

Information, Communication Technology Infrastructure (ICT) base Solution

Information Communication Technology (ICT) infrastructure needs to be deployed to connect all the key offices of the Food Department including the Secretariat, Commissioner Cell, District Offices, Block offices and Sale Points both horizontally and vertically for transparent communication. Central government Data Center to host the beneficiary database and all other crucial MIS needs by the Department. The Central Data Center could be linked with the State Data Center (SDC) being setup under the National E-Governance Action Plan (NEGAP) and the State Wide Area Network (SWAN). Software should include a ration card management system, an individual beneficiary offtake analysis system and an automated allotment system etc. A full-featured MIS system is the need of the Departments. Appropriate mechanism and set up for data management and administration to extend the benefits of computerization to the field force are the essential parts of the ICT. This also includes the use of mobile hand set, handheld devices or the POS for managing inspections and other data collection activities. Common Service Centers (CSCs) under the National E-governances Action Plan can be used for grievance submission and redressal as also for services such as issue of duplicate ration cards and changes to ration cards. There must be horizontal and vertical movement of information by use of beneficiary mobile at last mile to Block, District, State and Centre for better transparency and effective PDS mechanism

ICT Solution: Major Benefits

- Better Identification of individuals and families leading to better targeting and increased transparency.
- The PDS system can use the database for authentication of beneficiaries during the off take process. A mechanism of verifying the ID of the person at the time of delivery of grains will help in improving the targeting of the grains and beneficiaries.
- Technology specifications and infrastructure to handle enrollment, storage and identity confirmation of all Indian residents. The PDS system can leverage this and rapidly move ahead with the enrollment process.
- Duplicate and ghost detection becomes easier.
- This data base can be utilized for Direct Benefit Transfer through bank account

Other Steps to Strengthen PDS:

- Decentralized of procurement and distribution of locally produce food grain would ensure diversity of food grains requirement.

- Proper identification and classification of beneficiaries, APL, BPL, or AAY household in a foolproof manner.
- Incentivizing the Fair Price Shops (FPSs) for extended opening hours and selling commodities not covered under PDS with permission.
- Computerization and other technology- based reforms to TPDS have succeeded in plugging leakages of food grains. It is important to mention the e-PDS project of Chhattisgarh government which has real time GPS monitoring from depots to the FPSs. has shown an encouraging result.
- Under coupon system, grains will not be given at a subsidized rate to the PDS stores. Instead, beneficiaries will use the food coupons to purchase food grains from retailers/PDS stores. retailers take these coupons to the local bank and are reimbursed with money. This coupon comes back to state agency that is then compensated by government as per value of coupon. Food coupons also decrease the scope for corruption since the store owner gets the same price from all buyers.

Conclusion

According to the Economic Survey 2014-15, about 4.2 per cent of the GDP, which works out to roughly rs 3.78 lakh crore was spent on key subsidies in the Financial Year March 2015. Out of the total subsidies, rs 1.23 lakh crore was food subsidy (1.14 per cent of GDP). Food subsidy during 2015 -16 was around Rs 1.24 lakh crore . As per an estimate of FAO, during 2010-12 and 2014-16, undernourished population of the country was rs18.99 crore (15.6 per cent) and 19.46 crore (15.2 per cent) respectively. It is widely accepted that India's welfare system is suffering with leakages. rampant corruption diverted the benefits intended for the poor to the pockets of middlemen and corrupt officials. Neither the system covers the genuine beneficiaries, nor does it support the recipients with total of benefits. Consequently, nearly 22 per cent of the population is still living below poverty line. Aadhaar based cash transfer, cashless environment, efficiency in communication and administration are different initiatives of government to pass on direct benefits to the poor. Identification of unique individuals and families is the vital element to bring transparency in PDS. The role of data cleaning and management through biometric updation is the most important. Use of this can lead to a high-quality beneficiary database without duplication and perpetration of ghost cards. The UID database can also be used by the PDS system for confirmation of off take by the resident. The efficiency and transparency improvements in the PDS system will make it one of the best-run pro-poor schemes in the country.

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