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Public Distribution System

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## 1 Abstract

”Public distribution system” (PDS) is an Indian food security system. Established by the Government of India under Ministry of Consumer Affairs, Food, and Public Distribution and managed jointly with state governments in India, it distributes subsidized food and non-food items to India’s poor. Major commodities distributed mainly include staple food grains, such as wheat, rice, sugar, and kerosene, through a network of public distribution shops (also known as ration shops) established in several states across the country. Food Corporation of India (FCI), a Government-owned corporation, procures and maintains the PDS. The FCI distributes the items through the shops it establishes, called the Fair Price Shops (FPS). There are different distribution mechanisms used under the scheme. Presently, these are based on the categorization of people below and above poverty line. For example, people Below the Poverty Line are entitled to 35 kg of rice every month while those Above the Poverty line are entitled to 15 kg of the same. The PDS as a system is a progressive step in addressing the poverty and malnutrition problems in India. It is also a good example of cooperative federalism where center and the states work in sync to make the grains available.

## 2 Brief history of Public Distribution System

Till 1992, PDS was a general entitlement scheme for all consumers without any specific target.

But in 1992, PDS became RPDS (Revamped PDS) focusing the poor families, especially in the far-flung, hilly, remote and inaccessible areas.

In 1997 RPDS became TPDS (Targeted PDS) which established Fair Price Shops for the distribution of food grains at subsidized rates.

In People’s Union for Civil Liberties v. Union of India case, Supreme Court contended that the “right to food” is essential to the right to life as provided in Article 21 of the Constitution. In line with this Parliament passed the National Food Security Act (NFSA) in 2013. The NFSA seeks to make the right to food a legal entitlement by providing subsidized food grains to almost two-thirds of the population. It relies on the existing Targeted Public Distribution System (TPDS) mechanism to deliver these entitlements

## 3 Overview of Procedure

### 3.1 Procurement

1. The center is responsible for procuring the food grains from farmers at a Minimum Support Price(MSP). MSP is generally higher than the market price. The MSP is set by the Commission for Agricultural Costs and Prices (CACP). It is intended to provide price support to farmers and incentivize the production.
2. Types of procurement : Centralized Procurement, and decentralized procurement.
3. Centralized procurement is carried out by the FCI(Food corporation of India) where FCI buys crops directly from farmers.
4. Decentralized procurement is a central scheme under which 10 states/Union Territories procure food grains for the central pool at MSP on behalf of FCI. The main purpose of decentralized procurement is to encourage local procurement of food grains and minimize expenditure incurred when transporting grains from surplus to deficit states over long distances.

However, certain loopholes in the PDS and the procurement prior to the distribution, need to be addressed. What also needs to be kept in mind are the 'limits' set by the WTO for procurement. A regulatory body for procurement and distribution is the need of the hour. Other steps like Food Stamps are on trial and will help in increasing the efficiency of the PDS system.

### 3.2 Storage

The commodities (food grains) are stored by the central government in stores across the country. Food grains, in particular are stored in cold stores and silos of Food Corporation of India (FCI).

### 3.3 Allocation for families

The central government identifies which families are eligible for procuring grains through PDS. The government conducts surveys every decade to classify families as 'Below Poverty Line' (BPL) and 'Above Poverty Line' (APL). An example of such a survey is the 'Socio-Economic Caste Census' (SECC). Based on this data, the states distribute the food grains and other commodities.

### 3.4 Transportation

The government finally transport the centrally procured grains to different 'Fair Price Shops' (FPS) spread across the country. It is from here that the grains and other goods are distributed to families after confirming their eligibility to the procurement.

## 4 Features of an Ideal Public Distribution System

Let us look at the key features of an ideal public distribution system.

- **Price Restrictions** - The grains should be provided at prices fixed by the government. Every individual should be able to verify the updated prices.
- **Quantity Restrictions** - The quantity of grains to be given to each individual should be determined by the government. The FPS shopkeeper should not be able to manipulate that quantity. Also, every individual should be able to verify whether the shopkeeper has given him his rightful share of grain or not.
- **Quality Restrictions** - The quality of grains to be given to each individual should be determined by the government in each season. The FPS shopkeeper should not be able to substitute high quality grains supplied by the govt with low quality grains so that he can profit from selling high quality grains in the open market. Every individual should be able to verify whether the shopkeeper has provided him with grains of the quality intended by the government or not.
- **Flexibility** - The customer should have the option of sending someone on his behalf to procure the grains in case he is physically disabled or even for the sake of convenience. Hence the entire ration for a family can be procured by a single family member; all members need not go to the FPS shop.
- **Portability** - The customer should have the option of changing the ration shop from where he is supposed to procure the grains as per his convenience.

## 5 Current Public Distribution System

In the current system, primarily there are three levels to distribution of commodities. Food grains are transferred from stores of Food Corporation of India (FCI) to states and then to regional levels. It is from these fair price shops at regional level that individuals are rationed their share of commodities. Most states rely on registers to keep track of grain given out. This leads to the problems of bogus cards and dummy people without any authentication.

There are different ways in which different states of India are implementing the PDS, especially the last mile authentication of sale. All of them involve authentication of the user before giving out the grain. 'Aadhar Based Biometric Authentication' (ABBA) is one way to tackle this which would nullify bogus and duplicate cards. Here, entitled persons are required to authenticate their

fingerprint at the time of purchase. The ABBA seems to be the solution of using a sword to do the work of a knife. Such a digitally heavy infrastructure is difficult to maintain in the rural parts of the country. Also, it is difficult to create and maintain such a large database.

Some interesting options adopted by Indian states include Chattisgarh's core PDS experiment. This had a smart card which would log all transactions and were made available online. This also takes care of certain problems, such as the problem of collection of grain by elderly people, people who would be unable to collect it on their own. An ABBA scheme would prevent him from obtaining grains through indirect means.

On the other hand, the PDS in Tamil Nadu is working nicely. They are using QR coded smart cards for last mile authentication, which is quite easy to operate and works fine on a large scale.

## 6 Problems in the current design

Let us have a look at various problems that current design suffers from:

- Low payment motivates shop keepers to go for corrupt methods  
The shopkeepers working at FPSs earn their income from the commission they get from each purchase. When the system of PDS was introduced, it was meant for all the people. But now due to limited resources, we mainly focus on people below BPL, because of which the number of transactions taking place at the free shops have reduced. This has led to lower commission for the shopkeepers motivating them to go for inappropriate methods.
- Most of the food supply diverges in its transportation between FCI and FPSs. The truck drivers, who get the grains to the free shops keep major chunks of the grains for themselves.
- If we do not use biometric authentication, a lot of people would try to take double the amount which is allotted to them.
- Most of the citizens living in rural areas do not even know about how much wheat and rice they are entitled to. Due to this many shopkeepers fool them and keep the rest of the material for themselves.
- There is some bribery at the level of consumers itself. It may happen that a consumer pays some bribe to the shopkeeper and asks him/her to give some extra amount(which would come for someone else's quota).
- Middlemen sometimes replace the food grains(which the FCI supplies), with inferior quality grains.
- Shopkeepers also make bogus cards for ghost people and under their name, they sell food grains in open (here black) market.

- Identifying households who have been granted PDS services is irregular in various states. There is no set criteria as to which family is BPL and which is APL. This non ambiguity gives massive scope for corruption and fallouts in PDS systems because those who are actually meant to be benefited are not able to taste the fruits of PDS.
- As mentioned above, if a state uses Aadhaar based biometric authentication, old people who are not able to get their ration themselves since they cannot travel to the FPS shops. They usually ask their relatives to get ration on their behalf but since that is not allowed, they would suffer.

## 7 Proposed Design

- Identify the denomination that is most common for distribution of a good. This denomination may be different for different good. For eg. this denomination may be 5kg for grains while it may be 1 L for kerosene.
- Next, we will pack grains(or any such commodity) in the denominations estimated in the above step. The packing should be sealed such that no external agency is able to seal the packing apart from the government authority. Hence, if someone tries to tamper with the goods before they reach the end consumer, then he wont be able to do so as he will not be able to reseal the packing once opened. Without opening the packing, the middlemen will not be able to change the quantity of grains in a single pack nor will they be able to substitute the grains with those of inferior quality. Hence, both these problems are tackled jointly with this solution.
- A unique barcode will be applied to each packing. This mode of identification is used since it is one of the cheapest ways of unique identification. This barcode will be used to track every pack from its source to destination.
- The distribution network consists of different levels as mentioned above. At each level, there is a supplier and a receiver. The system involves having every level check that the level from which it is receiving the goods is working correctly. This means that every receiver scans the barcode of all the packs that he receives from the supplier. This is feasible as barcode scanners are very cheap machines. Also, the government has a track of all the packs that the supplier received and dispatched further. If there is a mismatch between the two then this indicated a malpractice on the part of this supplier. This way of tracking is very efficient since there is no central authority checking every individual. Every person in the system is checking someone else.
- To avoid the problem of bogus cards, we will use Aadhar card as the identification of an individual. This will largely save costs as the entire setup of Aadhar is already established. Initially, people will have to go

to the FPS shops to register themselves at a particular shop. But this is a one-time process. The person will also enlist the Aadhar details of atmost 5 persons whom he entitles to procure his share of goods. This will introduce flexibility in the system as now the elderly can send any of these 5 people to procure grains on their behalf.

- An individual is free to change the FPS where he is registered so as to introduce portability in the system.
- Whenever a person comes to a FPS to procure goods, his Aadhar card is verified against the records. Next we scan the barcode from the sealed bags hence marking that a particular bag was distributed to a particular person.

## 8 Conclusion

Finally I came out with a reformed design of a Public distribution system, catering all the drawbacks of the current design. Although people tend to fraud and cheat in their jobs but the current model definitely stands confronting them. So, given the assumption that the consumer has a basic level of rationality, he/she won't be fooled easily.

## 9 Citations

- Core-pds-smart-system-in-raipur-chhattisgarh-food-security-portability-government
- The UID Project Reetika Khera.pdf
- [http://web.iitd.ac.in/~suban/COP290/stuff/pds/Understanding\\_Leakages\\_in\\_the\\_Public\\_Distribution\\_System.pdf](http://web.iitd.ac.in/~suban/COP290/stuff/pds/Understanding_Leakages_in_the_Public_Distribution_System.pdf)
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