Food Security and Public Distribution

System in India

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Abstract

This paper appraises the performance and outreach of public distribution system (PDS) in comparison with the Country both in the rural and urban areas using the recent rounds of NSSO data. The results suggested that the reach of PDS in India is significant, especially in the lower income group. The quantity of cereal, wheat and rice consumption from PDS is notable in India. In India the reach of public distribution system in rural is better than that of urban areas. Public Distribution System (PDS) introduces the Fair Price Shop (FPS) for distributing the grains to the poor peoples. So this paper suggested that the distribution of food grains to the poor and non – poor ration card holders in some major states in India, Monthly and Annual consumption of Rice, Wheat and Cereals among the card holders in some major states and Wheat in some major states in India.

The important objectives of this paper to study the demand and availability of food grains for the ration card holders. This provides high reliability and there brings a sense of straightforwardness to the consumers. Here instead of a Ration card, a smart card will be introduced in some major states.

Introduction

In the 1970s, food security was understood as the "availability at all times of adequate supply of basic foodstuffs" (UN, 1975). Amartya Sen. added a new dimension to food security and emphasized the "access" to food through what he called 'entitlements' — a combination of what one can produce, exchange in the market along with state or other socially provided supplies. Accordingly, there has been a substantial shift in the understanding of food security. The 1995 World Food Summit declared, "Food security at the individual, household, regional, national and global levels exists 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" (FAO, 1996, p.3). The declaration further recognizes that "poverty eradication is essential to improve access to food".

PDS scheme is mainly used to distribute the materials to all consumers with free of cost or low cost. In now a days this PDS contains lot of corruptions. Due to this reasons today the modern governments introduced smart card system in PDS. This Smart Card is highly secured one and easily identifies the user's data. This proposed system consists of personal computer for easily identifying the user's details and maintain the stock details. With the help of controller to get the material details easily from PC and distribute the materials to the consumer properly.

First the user gets the smart ration card instead of a traditional ration card for secured ration materials collection. Before going into ration shop, users easily know the available current stock details from home itself with the help of Internet of Things. And also here Smart card used to easily identifies the user's details. In a smart card corner the designer will print the serial number based on family details. The shop worker provides the schedule to the user based on serial number. On that day only the user buys the materials.

India's Public Distribution System (PDS) is the largest distribution network of its kind in the world. PDS was introduced around World War II as a war-time rationing measure. Before the 1960s, distribution through PDS was generally dependent on imports of food grains. It was expanded in the 1960s as a response to the food shortages of the time; subsequently, the government set up the Agriculture Prices Commission and the Food Corporation of India to improve domestic procurement and storage of food grains for PDS. By the 1970s, PDS had evolved into a universal scheme for the distribution of subsidized food. In the 1990s, the scheme was revamped to improve access of food grains to people in hilly and inaccessible areas, and to target the poor.

Objectives of the study

The following are the important objectives of this study:

1. To trace the availability of ration cards among poor and BPL people in India;
2. To study the Annual Consumption of Rice, Wheat and Cereals among the card holders in some major state;
3. To analyze the Demand, Availability and Consumption of Rice and Wheat in PDS system in some major state;
4. To give remedial suggestions to improve Public Distribution System in India.

Methodology

This study is based on secondary data. Secondary source of data were collected from various sources, i.e., journals, newspapers, books, electronic sources, Govt of India reports, publications from ministry of Statistics and information and ministry of Food and Agriculture department, Govt of India. Time series data which is relevant to the study have been collected and tabulated for the period of 10 years. Percentage tables and diagrammatic representation is being made for the analysis of the data.

Review of Literature

M.S. Manivannan (2016) studied about Fully Automated Ration Shop Monitoring and Controlling System Based on Embedded Processors and Controllers in their study they revealed that Public Distribution

System (PDS) introduces the Fair Price Shop (FPS) for distributing the grains to the poor peoples. In now a day's this PDS involves corruption and proscribed smuggling of goods. So this thesis suggest an approach to mechanize all the manual jobs in ration shop and the whole thing from data entry to weighing to thrashing is prepared by machines and the people have no hand in that. This provides high reliability and there brings a sense of straightforwardness to the consumers. Further, as all the data maintenance and data allocation is prepared by the computer and it can keep track of all the data and the entire process of data maintenance is taken care of by the PC and hence no possibility of mistakes and practically no manual work. This scheme used to reduce the workers burden and easily maintain the stock details.

Sakshi balani (2013) studied about Functioning of the Public Distribution System in their study revealed that The National Food Security Act gives statutory backing to the TPDS. This legislation marks a shift in the right to food as a legal right rather than a general entitlement. The Act classifies the population into three categories: excluded (i.e., no entitlement), priority (entitlement), and Antyodaya Anna Yojana (AAY; higher entitlement). It establishes responsibilities for the centre and states and creates a grievance redressal mechanism to address non-delivery of entitlements. It is yet to be implemented.

Shekhar Shah (2015) studied about Evaluation Study of Targeted Public Distribution System in Selected States in their study revealed that Rising population along with changing consumption patterns in India have increased the demand for food since independence. At the same time a considerable proportion of the Indian population lives in poverty and hunger. To mitigate hunger and to save poor people from volatile market prices of food, a food security programme, the Public Distribution System (PDS), has been operative in the country for a long period. Though the form and coverage of the programme evolved over the time, its objective has remained the same, namely, to provide food security to the poor. In 1997, the Targeted Public Distribution System (TPDS) was introduced, replacing the almost universal PDS. In general, under the TPDS, major food grains including rice and wheat are sold from Fair Price Shops at significantly lower prices than the market rate. Different states have adopted various reform measures to strengthen the functioning of the TPDS.

Ashok Gulati and Shweta Saini (2015) studied about Leakages from Public Distribution System (PDS) and the Way Forward in their study they revealed that The Public Distribution System (PDS) for grains is one of the main vehicles through which Government of India (GoI) delivers 'food security' to people of this country, especially the economically vulnerable ones. This PDS not only aims to make sure that grains are available in sufficient quantities at all times even in the remotest regions but also that these are delivered to targeted

beneficiary households at highly subsidized prices, thus making sure that they have 'economic access' to basic staples for a reasonably healthy life.

T. Jayan (2015) studied about Performance of Targeted Public Distribution System in Kerala in their study they revealed that In 1997, the Union Government implemented targeted public distribution system (TPDS) as the universal public distribution system had failed to serve below poverty line (BPL) consumers, particularly in poverty-ridden states. Under the targeted PDS, food grains are being distributed to BPL households at heavily subsidized prices and to APL households at marginally subsidized prices. The task of identification of the poor was entrusted to the states, based on the methodology of the Expert Group on the Estimation of Poverty and number of poor chaired by the late Lakdawala.

Analysis of the Data

In this chapter deals with secondary data analysis and interpretation were focuses reality of the study. In this chapter to achieve the objectives of the study we made an analysis on the basis of collected data. The main purpose of this chapter is to represent the secondary data and analysis with the help of basic statistical tools such as percentage table, diagrams and regression analysis were made.

Table No.1.1 Title: Distribution of Cardholders Poor and Non – Poor in some Major States

State	% of poor with no ration card	% poor with BPL/AAY cards/ration card	% non-poor with BPL/AAY cards
Andhra Pradesh	33.2	66.8	50.3
Assam	76.7	23.3	7.6
Bihar	78.8	21.2	12.6
Chandigarh	52.1	47.9	29.4
Gujarat	51.9	48.1	24.2
Haryana	67.4	32.6	15.2
Himachal Pradesh	54.9	45.1	13.7
Jammu & Kashmir	44.9	55.1	17.2
Jharkhand	68.1	31.9	17.0
Karnataka	40.4	59.6	36.5
Kerala	51.6	48.4	25.0
Madhya Pradesh	58.1	41.9	22.2
Maharashtra	60.1	39.9	18.4
Orissa	45.2	54.8	29.4
Punjab	80.5	19.5	8.5
Rajasthan	76.4	23.6	12.1
Tamil Nadu	**70.3**	**29.7**	**15.0**
Uttar Pradesh	77.1	22.9	10.6

Uttarakhand	64.8	35.2	12.0
West Bengal	59.5	40.5	20.6
All India	**64.0**	**36.0**	**20.7**

Source: Secondary Data.

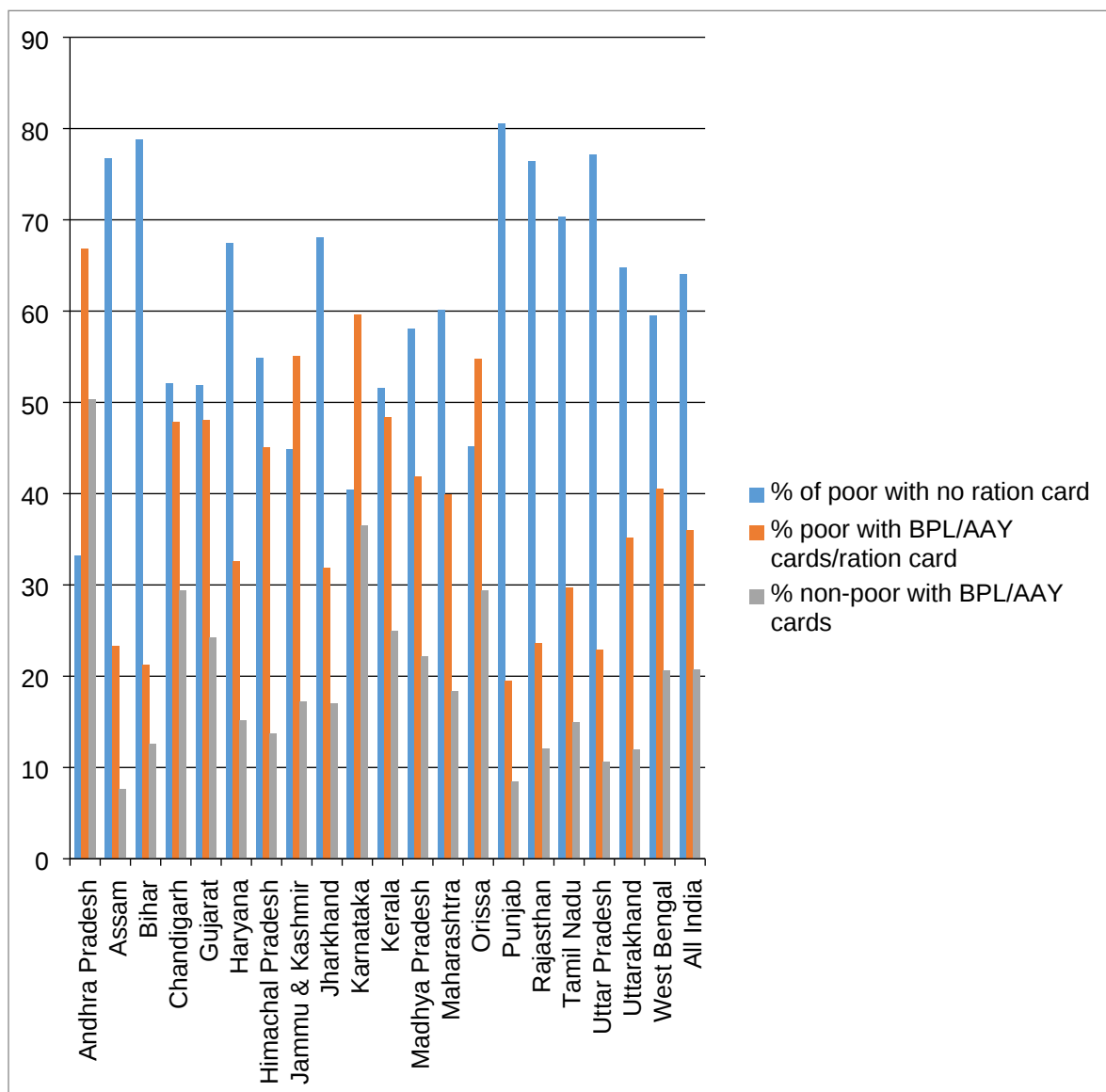**Diagram No.1.1. Title: Distribution of Cardholders Poor and Non-Poor in some Major States**

Table No.1.2.Title: Converting Monthly and Annual Consumption of Rice, Wheat and Cereals

States/ Uts	Monthly Per capita Consumption (kgs)				Annual per capita Consumption (kgs)			
	Rice PDS	Wheat PDS	Total R+W PDS	Total cereals consumed	Rice PDS	Wheat PDS	Total R+W PDS	Total cereals consumed
A&N Islands	3.0	0.0	3.05	11.3	54.2	8.6	62.9	120.3
Andhra	2.7	0.0	2.7	12.4	36.1	0.5	36.6	135.3
Arunachal	4.0	0.1	4.1	12.5	48.0	0.7	48.7	150.5
Assam	1.2	0.9	2.2	12.0	32.0	0.5	32.4	149.4
Bihar	0.1	0.8	0.9	7.9	14.8	11.0	25.9	144.5
Chandigarh	3.9	0.4	4.3	12.1	1.0	9.3	10.3	94.5
Chhattisgarh	1.3	0.0	1.4	8.2	46.9	4.9	51.8	145.0
D&N Haveli	0.1	0.0	0.1	7.1	16.0	0.5	16.5	98.1
Daman & Diu	0.1	0.5	0.6	8.0	1.3	0.2	1.5	85.2
Delhi	1.8	0.3	2.0	8.6	1.4	5.6	7.0	95.6
Goa	0.2	0.5	0.7	8.4	21.1	3.0	24.1	103.8
Gujarat	0.0	1.0	1.0	9.1	2.7	5.5	8.2	100.4
Haryana	2.0	3.1	5.0	11.7	0.1	12.5	12.6	109.3
Hp	4.4	1.6	6.0	12.4	23.6	36.7	60.3	140.6
J&K	1.7	0.0	1.7	11.6	52.6	19.4	72.1	149.4
Jharkhand	2.1	0.4	2.4	9.4	19.8	0.3	20.1	139.4
Karnataka	2.3	0.4	2.7	8.4	24.8	4.2	29.0	112.5
Kerala	6.5	0.1	6.5	9.1	27.7	4.6	32.3	100.5
Lakshadweep	0.4	1.4	1.8	11.1	77.5	0.8	78.3	109.3
MP	0.7	0.9	1.6	9.2	4.8	16.8	21.6	133.7
Maharashtra	0.2	0.0	0.2	13.9	8.5	10.4	18.9	110.4
Manipur	2.8	0.0	2.8	10.2	2.2	0.0	2.2	166.4
Meghalaya	5.7	0.1	5.8	12.5	33.1	0.1	33.2	122.7

Mizoram	0.7	0.0	0.7	13.2	68.3	0.8	69.1	150.4
Nagaland	3.3	0.2	3.5	13.1	8.6	0.1	8.7	158.5
Orissa	2.6	0.7	3.2	9.1	39.2	2.3	41.5	156.9
Pondicherry	0.0	0.9	0.9	9.0	30.8	8.0	38.7	109.7
Punjab	0.0	1.2	1.2	11.4	0.0	10.4	10.4	107.7
Rajasthan	3.4	0.0	3.4	10.2	0.1	14.1	14.2	136.8
Sikkim	3.9	0.4	4.3	9.0	40.4	0.1	40.5	122.4
TN	**5.2**	**0.1**	**5.3**	**13.4**	**46.5**	**5.3**	**51.7**	**108.1**
Tripura	0.7	0.6	1.4	11.1	61.9	1.2	63.2	160.4
UP	1.5	1.4	2.9	11.8	8.8	7.4	16.2	132.9
Uttarakhand	0.8	0.5	1.3	11.2	17.5	17.2	34.7	141.4
WB	1.4	0.6	2.1	10.6	9.2	6.4	15.6	133.9
India	**4.5**	**0.7**	**5.2**	**10.0**	**17.1**	**7.7**	**24.8**	**127.4**

Source: Author's Calculations from NSSO Data

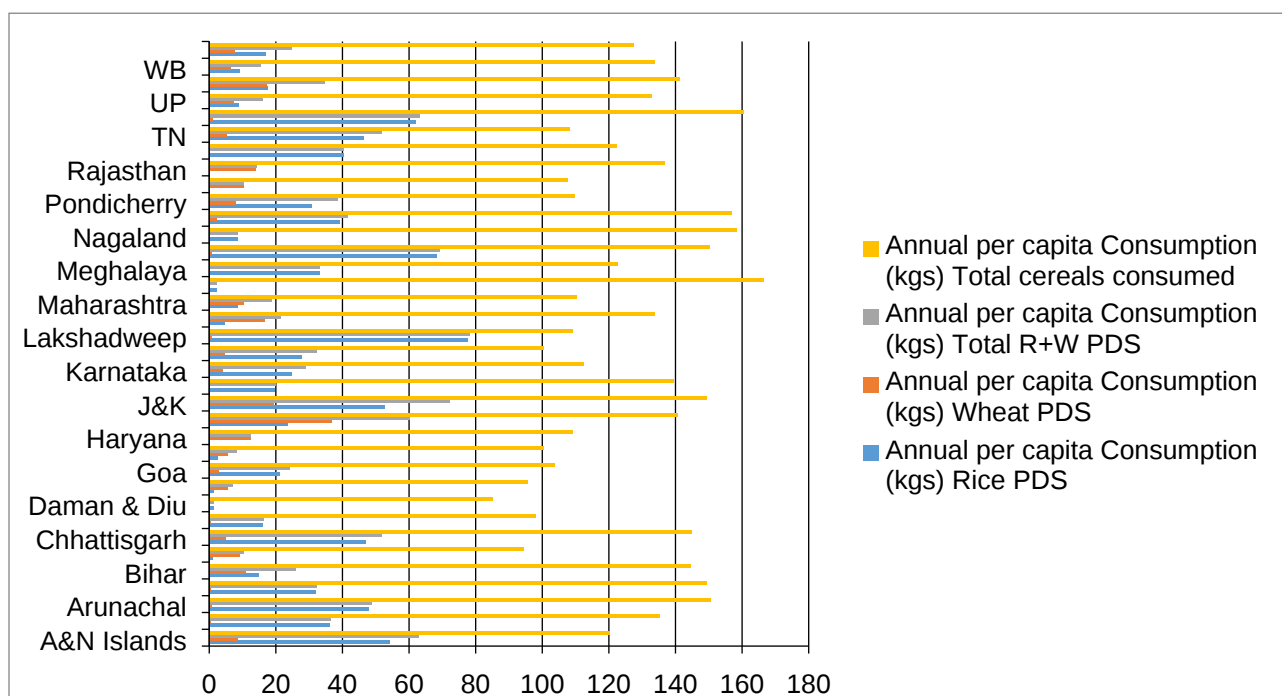**Diagram No.1.2. Title: Converting Annual Consumption of Rice, Wheat and Cereals**

Table No.1.3 Title: Converting Monthly and Annual Consumption of Rice, Wheat and Cereals

States	Monthly Per capita Consumption (kgs)				Annual per capita Consumption (kgs)			
	Rice PDS	Wheat PDS	Total R+W PDS	Total cereals consumed	Rice PDS	Wheat PDS	Total R+W PDS	Total cereals consumed
TN	5.2	0.1	5.3	13.4	46.5	5.3	51.7	108.1
India	4.5	0.7	5.2	10.0	17.1	7.7	24.8	127.4

Source: Author's Calculations from NSSO Data

Diagram No.1.3 Title: Converting Monthly and Annual Consumption of Rice, Wheat and Cereals
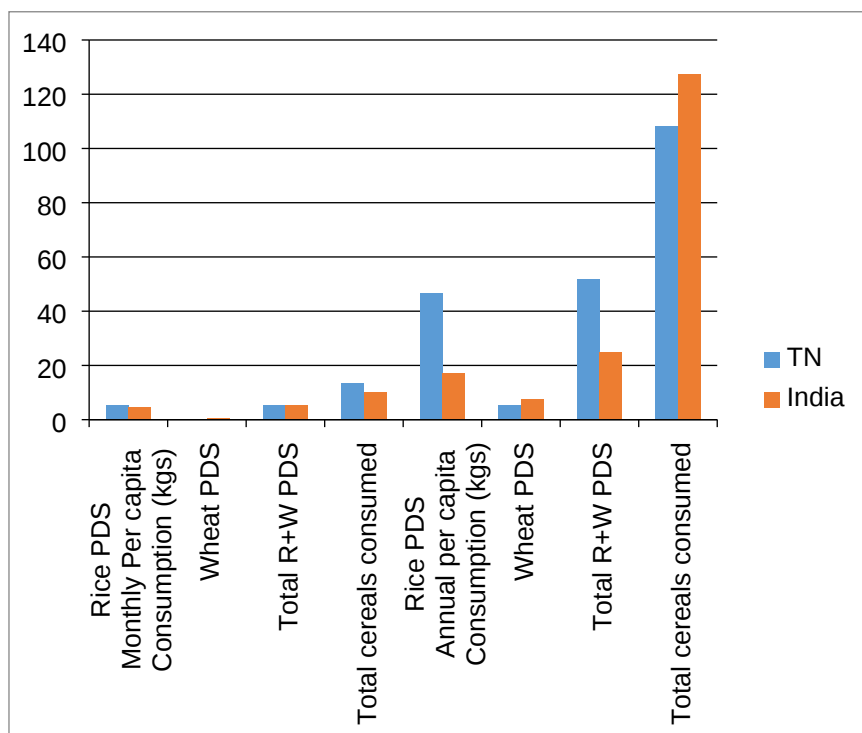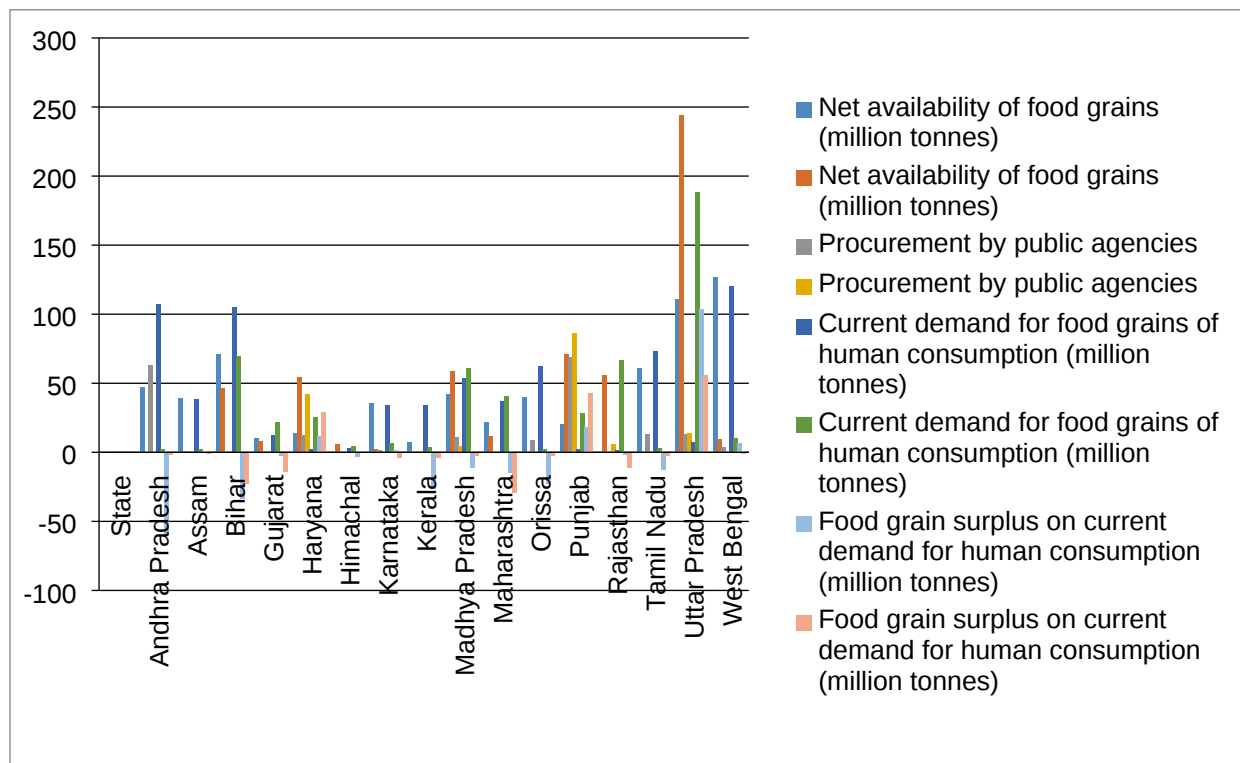
Table.No.1.4. Title: Demand, Availability and Consumption of Rice and Wheat

State	Net availability of food grains (million tonnes)		Procurement by public agencies		Current demand for food grains of human consumption (million tonnes)		Food grain surplus on current demand for human consumption (million tonnes)	
	Rice	Wheat	Rice	Wheat	Rice	Wheat	Rice	Wheat
Andhra Pradesh	47.09	0.00	63.36	0.00	107.09	2.01	-60.00	-2.01
Assam	39.30	0.95	0.00	0.00	38.19	2.21	1.11	-1.26
Bihar	71.36	46.45	0.20	0.00	105.28	69.53	-33.93	-23.08
Gujarat	9.95	8.35	0.00	0.00	12.77	22.13	-2.82	-13.78
Haryana	13.96	54.67	12.34	41.83	2.54	25.50	11.42	29.17
Himachal	0.00	5.85	0.00	0.00	3.05	4.76	-3.05	1.09
Karnataka	35.55	2.30	1.71	0.00	34.12	6.53	1.42	-4.23
Kerala	7.60	0.00	0.00	0.00	34.12	3.63	-26.52	-3.63
Madhya Pradesh	42.22	58.44	10.69	4.47	53.58	60.89	-11.37	-2.45
Maharashtra	22.13	11.95	0.43	0.00	36.97	40.92	-14.84	-28.97
Orissa	39.97	0.00	9.04	0.00	62.54	2.61	-22.57	-2.61
Punjab	20.46	71.03	68.90	86.28	2.05	28.24	18.41	42.79
Rajasthan	-0.29	55.52	0.29	5.88	1.56	66.59	-1.55	-11.07
Tamil Nadu	60.68	0.00	13.07	0.00	73.54	2.70	-12.86	-2.70
Uttar Pradesh	110.67	244.12	13.19	14.04	7.13	188.24	103.54	55.87
West Bengal	127.03	9.55	3.93	0.00	120.36	10.29	6.66	-0.74

Source: Secondary Data

Diagram.No.1.4. Title: Demand, Availability and Consumption of Rice and Wheat

Findings of the study

The important findings of the study are follows:

☐ Almost of the poor people in India, they do not have Ration card as well as AAY card,

☐ Some states they have low proportionate distribution of ration cards among the poor people,

☐ The monthly consumption of rice, wheat and cereals are highly disproportionate in some state,

☐ The total annual consumption of rice, wheat and cereals are inadequate for the card holders in some states,

☐ Converting Monthly and Annual Consumption of Rice, Wheat and Cereals compare than all India level the share of Tamil Nadu is more proportionate.

Suggestions:

The important suggestions of this study are as follows;

- Government should buy rice for its PDS system though on open tender system,
- De-reserve food processing units, especially rapeseed and groundnut processing units from SSI list,
- Impose tariff on import of wheat and encourage roller flour mills to buy from the farmers,
- Export needs to be encouraged; broken rice could be imported for the PDS,
- FCI should be allowed to intervene in the food grains market within a pre determined price band to moderate prices and facilitate management of surplus food stocks.
- Limiting public distribution of essential items to targeted groups; abolishing PDS for APL while retaining PDS.

Conclusion

In ration shop several drawbacks have occurred like material robbery, corruption, malpractices, long waiting time to collect materials and low processing speed. To overcome the above problems the mechanized rationing scheme is needed. Here the automatic ration shop has proposed to use smart card and to control the distributing the materials. In the proposed method smart cards is used in place of ration card and send the stock details to head office using GSM module. This method automates all the process associated with the ration shop without any human's intervention. Hence this is corruption free, prevents the theft, forgery and reduces the consumer's time. Also the proposed method helps to maintain the stock details easily and the same is conveyed to the consumer. It improves the overall function of the ration shop and reduces the burden of shopkeeper as well as the consumer.

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