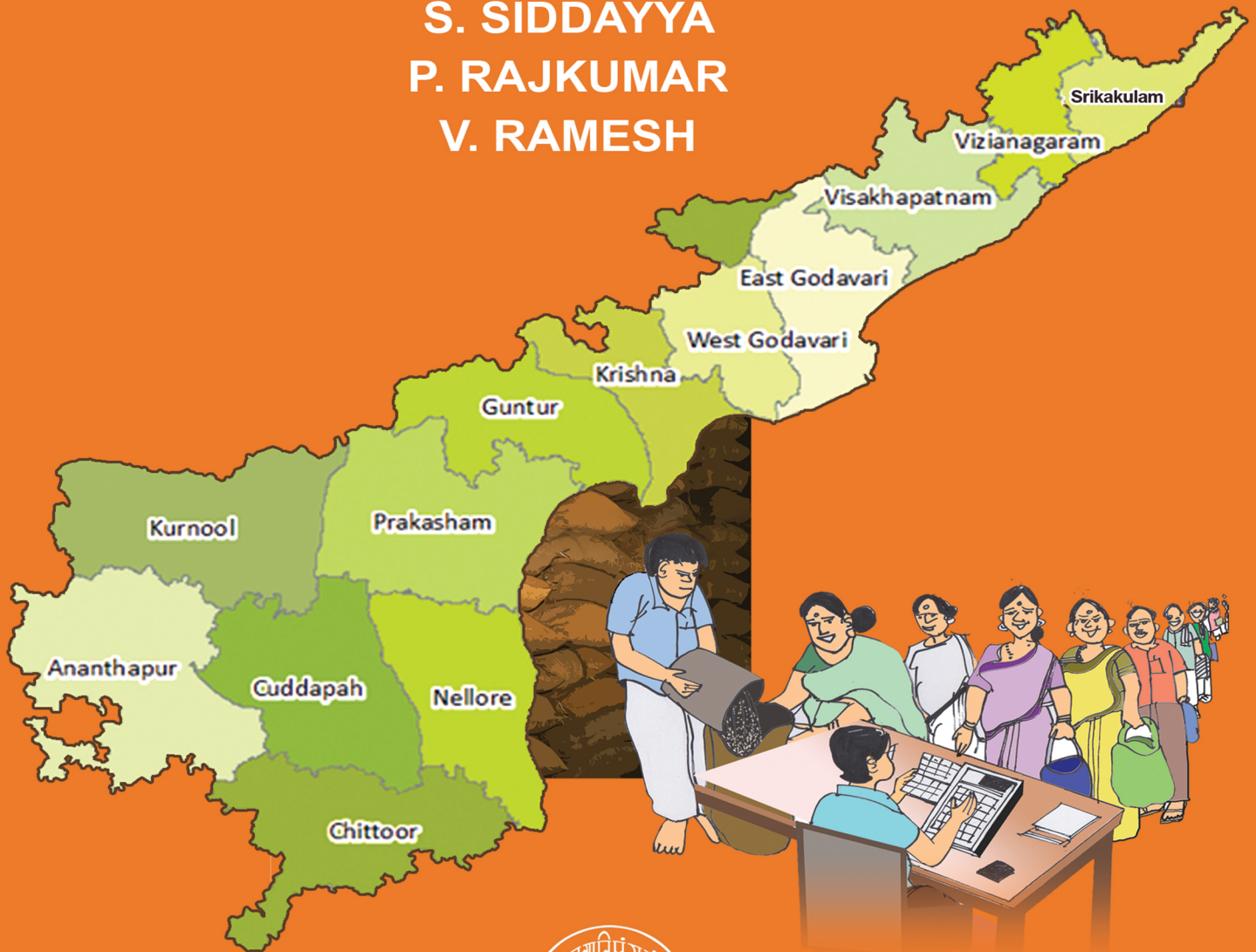


An Assessment of Effectiveness of Electronic and Cashless transaction in Public Distribution System (Study of Andhra Pradesh State)

K. PRABHAKAR
S. SIDDAYYA
P. RAJKUMAR
V. RAMESH



Centre for Good Governance & Policy Analysis -CGGPA
National Institute of Rural Development and Panchayati Raj
Ministry of Rural Development, Government of India
Rajendranagar, Hyderabad - 500 030, India

An Assessment of Effectiveness of Electronic and Cashless transaction in Public Distribution System

K.PRABHAKAR

S.SIDDAYYA

P.RAJKUMAR

V.RAMESH



Centre for Good Governance & Policy Analysis (CGGPA)

School of Public policy and Good Governance

NATIONAL INSTITUTE OF RURAL DEVELOPEMTN PANCHAYATI RAJ

Ministry of Rural Development

Rajendranagar, Hyderabad- 500030

An Assessment of Effectiveness of Electronic and Cashless transaction in Public Distribution System (Study of Andhra Pradesh State)

Authors: **Dr.K. PRABHAKAR, Dr.S. SIDDAYYA, Dr.P. RAJKUMAR, Dr.V. RAMESH**

@ National Institute of Rural Development and Panchayati Raj

ISBN: 978-81-951169-1-1

March, 2021

Published by:

**NATIONAL INSTITUTE OF RURAL DEVELOPMENT AND
PANCHAYATI RAJ**

(Ministry of Rural Development, Government of India)

Rajendranagar, Hyderabad-500030, India

nirdpr.org.in

Table of Contents

1	Chapter 1: Introduction.....	1
1.1	Background	2
1.2	Review of Literature	4
1.3	Study Objectives	7
1.4	Study Methodology	7
1.5	Sampling.....	10
1.6	Quality control	12
1.7	Analytical Framework	12
1.8	Utilization of findings	12
2	Chapter 2: User Feedback.....	14
2.1	Profile of users	14
2.2	Quality of PDS services	16
2.3	Pre AePDS vs AePDS comparison	17
2.4	Cashless transactions.....	21
2.5	Portability (Anywhere Ration) programme	22
2.6	Grievance Redressal System	23
2.7	Overall satisfaction with PDS	24
2.8	Suggestions for improvement	25
2.9	Factors contributing satisfaction (Ordered Probit and Logit Model).....	25
2.10	Village/Fair Price Shops Service Delivery Index (SDI)	28
3	Chapter 3: Feedback from Fair Price Shop Dealers.....	36
3.1	Profile of FPS dealers.....	37
3.2	Quality of PDS services	37
3.3	Supply and distribution of commodities	39
3.4	Pre AePDS vs AePDS comparison	39
3.5	Cashless transactions.....	40
3.6	Portability (Anywhere Ration) programme	41

3.7	Complaints regarding FPSs.....	41
3.8	Grievance Redressal System	41
3.9	Overall satisfaction with PDS	43
3.10	Suggestions for improvement	43
3.11	Observations at the FPS	43
4	Chapter 4:Feedback from PDS officials	44
4.1	Profile of FPS dealers.....	46
4.2	Quality of PDS services	47
4.3	Supply and distribution of commodities	48
4.4	Pre AePDS vs AePDS comparison	48
4.5	Cashless transactions.....	49
4.6	Portability (Anywhere Ration) programme	50
4.7	Complaints regarding FPSs.....	51
4.8	Grievance Redressal System	51
4.9	Overall satisfaction with PDS	52
4.10	Suggestions for improvement	52
5	Chapter 5: Conclusions and Recommendations.....	53
	References	58
	Appendix I: about Citizen Report Cards (CRCs)	61
	Annexure –I: Systemic Randomly selected FOUR districts.....	65
	Annexure –II: District/Mandal wise selected List of Fair Price Shops/Dealers List	66

List of Figures

Picture 1.1: Maps of the study covered four districts of Andhra Pradesh State.....	25
Figure 2.1: Satisfaction levels of users' across various aspects of PDS.....	24
Figure 2.2: Satisfaction levels of users with PDS across districts PDS.....	25
Figure 2.3: Overall satisfaction with PDS - Caste wise.....	25
Figure 3.1: Problem incidence with AePDS as reported by dealers of FPS.....	38
Figure 3.2: Nature of problems reported by FPS dealers.....	40
Figure 3.3: Satisfaction levels of dealers across various aspects of PDS.....	40
Figure 3.4: Observations of the survey team about the FPS in the four districts.....	44
Figure 4.1: Ration shops issuing commodities through AePDS in their jurisdiction.....	47
Figure 4.2: PDS shops covered under cashless transactions in their jurisdictions.....	50
Figure 4.3: Overall satisfaction with PDS as reported by Staff members.....	52

List of Tables

Table 1.1: Andhra Pradesh PDS Service delivery in brief	3
Table 1.2: List of Interviewed Officials	11
Table 1.3: Total sample Size covered	11
Table 2.1: Facilities available at the HHs.....	15
Table 2.2: Communication medium available to HHs.....	15
Table 2.3: Nature of problems reported by HHs with AePDS.....	17
Table 2.4: Pre AePDS vs AePDS status on proper measuring of commodities as reported by HHs (%).....	18
Table 2.5: Commodities distribution during Pre-AePDS Vs AePDS.....	19
Table 2.6: Pre- AePDS conditions Vs AePDS Benefits	20
Table 2.7: Pre- AePDS conditions Vs AePDS Benefits by Social Groups	21
Table 2.8: Reasons for not practicing cashless transactions.....	22
Table 2.9: Individual and Service Factors influence on level of satisfaction -Order Probit analysis.....	29
Table 2.10: Village wise Satisfaction Service Delivery Index	32
Table 2.11: Mandal wise Service Delivery Index.....	33
Table 2.12: District wise Service Delivery Index	34
Table 3.1: Nature of problems reported by HHs with AePDS	38
Table 3.2: Pre AePDS vs AePDS service delivery as reported by FPS dealers	40
Table 3.3: Benefits of cashless transactions experienced by dealers of FPSs	40
Table 4.1: Distribution of commodities at the FPS as reported by staff	48
Table 4.2: Pre AePDS vs AePDS service delivery as reported by staff members.....	49
Table 4.3: Benefits of cashless transactions as reported by staff members	50

Aknowledgments

We would like to thank Dr. W. R. Reddy, IAS, Director General, NIRDPR and Smt. Radhika Rastogi, IAS, Deputy Director General, NIRDPR for their valuable guidance and support for this study.

We would like to express our sincere thanks to Shri B. Rajashekar, IAS, Commissioner & Ex-Officio Secretary to Government, Shri G. Ravi Babu, IAS, Director of Civil Supplies & Ex-Officio Addl. Secretary to Government and Smt. A. Surya Kumari, IAS, Director of Civil Supplies (FAC) & Ex-Officio Joint Secretary to Government, Consumers Affairs, Food and Civil Supplies Department, Government of Andhra Pradesh.

It's our gratitude to give special thanks to the Shri G. Venkateswara Rao, Deputy Director (Administration & PP) and Shri Sheshagiri Rao, Assistant Director from head office Consumer Affairs, Food & Civil Supplies department who supported throughout the study period. We deliver our special thanks and regards to the Joint Collectors and Districts Supply Officers (DSOs) of the Srikakulam, East Godavari, Krishna and Anantapur districts for extending field support and arranging for data collection throughout study period.

We would like to thank Dr. Gyanmudra, Professor and Head CRTCN-Research, for her continuous support and encouragement to complete the study in time. Our sincere thanks to Dr. S. V. Rangacharyulu, Consultant, NIRDPR, for his support in the preparation of Service Delivery Index (SDI).

We would like to thank all the interviewed PDS beneficiaries as well as department personnel in respective districts who gave their time and shared experiences with us and provided with information that helped us with the study.

Our sincere thanks to the data enumerators, present at the field for excellent support in data collection across all the districts for timely and smooth data collection process.

While we are indebted to the individuals mentioned above for their contribution, we authors are solely responsible for the opinion expressed and any errors therein.

Dr. K. Prabhakar

Executive Summary

This report summarises the findings of the study “An assessment of effectiveness of electronic and cashless transaction in Public Distribution System” using the Citizen Report Card approach.

The study aims to understand the implementation of e-PoS (AePDS) and cashless service delivery of PDS through the experiences of the stakeholders. The following are two main objectives of this study:

- To systematically assess the quality, responsiveness and outcomes (effectiveness) of the e-PoS (AePDS) and cashless service delivery of PDS services provided by Fair Prices Shops/unit office to the public and
- To generate a better understanding of the problems and constraints being faced by the Fair Prices Shops and the staff of Department of Consumer Affairs, Food & Civil Supplies in their role as service provider to the community.

The Citizen Report Card (CRC) methodology is employed in this study. It is a simple but powerful and credible tool to provide systematic feedback to public agencies about various qualitative and quantitative aspects of their performance.

The study covered a total of four districts (one-fourth from the total districts) from Andhra Pradesh State (this is the first State in the country that has initiated AePDS and Cashless transactions covering all districts of the State). A total of 1,200 PDS users and 100 officials were interviewed by covering 80 Fair Price Shops (FPS) from all four districts. From every selected district, 300 PDS users and 25 officials were interviewed.

PDS User Feedback

Type of Ration Card and Ration Supply: More than 90 per cent Households' (HHs) in all four districts of study reported having BPL cards. Almost all the HHs reported regular supply of ration on a monthly basis.

Fair Price Shops (Ration Shops): All HHs in all four districts has reported that the FPSs are kept open on all working days.

AePDS: Almost all of the HHs were aware of the AePDS. Around 90 per cent of the HHs reported that the AADHAAR seeding into AePDS system for all its family members was completed. Those who haven't successfully completed the process reported that their finger prints were not recognisable (75 per cent, mostly children aged below 14 years) or their iris was not recognised

(12.5 per cent) or in some cases the seeding machine had a problem (12.5 per cent).

Pre AePDS vs AePDS comparison: An attempt was made to understand the quality of service delivery pre and during AePDS by comparing the difference observed by the users in terms of weighing/measuring the commodities at the FPS. There has been a definite raise in the number of HHs reporting that the commodities are weighed/measured properly before they are given to consumers.

Cashless Transactions: More than half the HHs (59 per cent) were aware of the cashless transactions in PDS system. Three- quarter of the HHs (75 per cent) have reported that their FPS is covered under this initiative, however this varies from district to district. Many (61 per cent) of the users who have availed cashless transactions have said that they are benefited by this as there is ease in payment, 38 per cent have said that it is beneficial because they do not have to carry hard cash and another 12 per cent have reported that the process has helped resolve the issue of tendering change in transactions.

Portability (Anywhere Ration) Programme: On an average 58 per cent users were aware of the portability programme under the PDS distribution system. Similar to the cashless transactions, awareness about the portability programme among the communities of SC (39 per cent) and ST (33 per cent) was found to be lower than the average awareness (58 per cent).

Grievance Redressal System: On an average, one-third users reported that the information regarding grievance redressal (complaints) was displayed at the FPSs. A majority of the users (92 per cent) did not have complaints regarding the PDS. All those who complained were satisfied with the problem resolution.

Overall satisfaction with PDS: On an average, a majority of the users of PDS were satisfied with the system. More than half of them were completely satisfied on various aspects of the system such as AePDS, behaviour of staff, problem resolution and portability system, etc. Highest satisfaction is with the behaviour of staff while the lowest is with the cashless transactions. Overall satisfaction with the PDS system across all the four districts was high.

Feedback from FPS dealers

AePDS: A vast majority of the respondents were aware of the AePDS across the four districts (99

per cent). The main issue reported with Aadhaar seeding was the difficulty in finger print recognition.

Supply and Distribution of Commodities: All dealers of four districts have reported that ration is distributed regularly at their shops on a monthly basis. They all are getting commodities such as rice, sugar and kerosene, etc., as per the entitlement of the beneficiaries at their shops.

Pre AePDS vs AePDS comparison: Every district has seen an improvement in service delivery after the introduction of AePDS. The initiative has definitely resulted in making the PDS more accountable, commodities are received at the FPS in accurate measurements and has resulted in overall improvement of the system.

Cashless Transactions: All dealers (100 per cent) were aware of the cashless transactions in PDS. However, none of their shops are covered under the scheme (0 per cent).

Portability (Anywhere Ration) Programme: On an average 98 per cent FPS dealers were aware of the portability programme under the PDS distribution system. Most of them (98 per cent) have opined that the programme is very useful especially for the migrant labourers.

Grievance Redressal System: On an average, 41 per cent dealers reported that the information regarding grievance redressal (complaints) was displayed at the FPSs. Two-third dealers (75 per cent) were aware of the process of lodging complaints.

Overall satisfaction with PDS : On an average, a majority of the dealers of PDS shops were satisfied with the system. More than half of them are completely satisfied on various aspects of the system such as AePDS, e-weighing system and portability system, etc.

Feedback from Officials

AePDS: All the staff members were aware of the AePDS across the four districts (100 per cent). 80 per cent shops in their jurisdictions were completely covered under the AePDS initiative. The main issue reported with Aadhaar seeding was the difficulty in finger print recognition.

Pre-AePDS vs AePDS comparison: The initiative has definitely resulted in timely distribution of commodities, ensuring that the benefits reach the actual beneficiaries, improved the overall transparency of PDS, to name a few.

Cashless Transactions: All staff members (100 per cent) were aware of the cashless transactions in PDS. On an average, 55 per cent shops in their jurisdiction were covered under the initiative. The staff members report that the cashless transactions were useful because of the ease in payment, not having to carry hard cash and also the process has helped resolve the issue of tendering change in transactions for a lot of them.

Portability (Anywhere Ration) Programme: All staff members (100 per cent) were aware of the portability programme under the PDS distribution system. All staff members (100 per cent) have reported that, beneficiaries have obtained commodities as per their entitlement from shops in their jurisdiction under this programme.

Grievance Redressal System: On an average, 95 per cent staff members reported that the information regarding grievance redressal (complaints) was displayed at the FPSs in their jurisdiction. A quarter of the staff members have reported that they have faced problems while discharging their duties. All those staff members who have faced problems have lodged complaints regarding their problems.

Overall satisfaction with PDS: On an average, a majority of the PDS staff members were satisfied with the Public Distribution system. Apart from cashless transactions, a majority of the aspects of the PDS have completely satisfied more than 90 per cent of the staff members. Overall satisfaction with the PDS system across all the four districts was 100 per cent.

Summary of Conclusions and Recommendations

S. No.	Areas for improvement	Suggested steps for improvement
1	Quality of the commodities	Shop level vigilance committee should take a keen interest in checking the quality of the commodities
AePDS		
2	Aadhaar seeding issues	Dedicated Aadhaar seeding campaigns to be incited at village level
	Infrastructure issues such as power failure and internet connectivity problems	Alternate power sources such as generators and solar power, etc., can be explored where uninterrupted power supply from main grid seems difficult Public Private Partnership models with digital companies can be a possible solution to

Summary of Conclusions and Recommendations

Cashless Transactions

3	<p>Low awareness about cashless transactions</p> <p>Less coverage of shops under cashless transactions</p>	<p>Dedicated awareness initiatives and media campaign should be planned and implemented</p> <p>Deeper investigation of reasons for less coverage and appropriate steps to increase the coverage to be taken by the State and district level PDS departments</p>
----------	--	---

Portability Programme

4	<p>Low awareness about Portability programme</p> <p>Less number of cardholders have availed the benefits of the programme</p>	<p>Dedicated awareness initiatives and media campaign should be planned and implemented</p> <p>This will also ensure more cardholders avail the benefits of the programme</p>
----------	---	---

Grievance Redressal

5	<p>Low awareness of complaint lodging method among card holders</p> <p>Low awareness about Vigilance committee, Citizen Charters and Helpline</p>	<p>General and dedicated awareness programmes have to be conducted at the district level to build awareness among card holders</p> <p>Obtaining feedback from the cardholders on a regular basis at the shop level can be introduced whereby they can also be educated on their entitlements and the available channels of grievance redressal</p>
----------	---	--

Overall satisfaction

6	<p>Though a larger number of users, dealers and staff have expressed that they are satisfied with the PDS, many of them are partially satisfied which shows that clearly there is a scope for improvement</p>	<p>By addressing the issues related to various aspects of the PDS such as internet connectivity and power issues, etc., the department can ensure that partial satisfaction can be transformed into complete satisfaction</p>
----------	---	---

1. Introduction

Chapter 1: Introduction

1.1 Background

Public Distribution System (PDS) had its roots during the period of World War-II. Due to the non-availability of food grains (rice and wheat) during the war time, the colonial government launched public distribution of food grains through ration in selected cities/towns to people with ration cards. A Department of Food was created in 1942 by the colonial regime. However, the system ended in 1943 with the war almost coming to an end. The independent India had to reintroduce the rationing through PDS in 1950 owing to the fluctuations in price rises, inflation and scarcity of food grains. The system was extended to rural areas also. However, the scheme lost its relevance due to high production of food grains by the end of the first Five-Year Plan in 1956. Owing to cyclic productions of food grains, the government of India re-introduced the scheme in 1958.

PDS apart from supplying food grains under subsidised rate from the government also had ensured food security to the people in general and vulnerable sections of the society in particular. One of the biggest successes of the PDS in India is that, the system was able to tackle drought and famine in an effective manner thereby reducing adverse impact. For instance, the 1987 famine was tackled largely through the PDS.

1.1.1 Union- State Coordination

Under PDS, the Central government has assumed the responsibility for procurement and supply of essential commodities such as wheat, rice, levy sugar, imported edible oils and kerosene to the State governments and the Union Territories for distribution at almost uniform and affordable prices to the public. These commodities are made available at fixed Central Issue Prices (CIP) which was determined by the Central government. They lift these commodities from the Central Godowns/mills and distribute them to the consumers through a network of Fair Price Shops (FPS). Some States/UTs also distribute additional items of daily use through the PDS outlets (GOI Dept. of Public Distribution 2012).

1.1.2 Context of Andhra Pradesh PDS service delivery mechanism

Department of consumer Affairs, Food & Civil Supplies, Government of Andhra Pradesh

is a state agency appointed by the State Government for lifting of Rice and Wheat from Food Corporation of India (FCI) and Levy Sugar from Factories under PDS. It is the responsibility of the Corporation to undertake transportation, storage and delivery of the stocks under PDS at the door step of the Fair Price Shop dealers.

Public Distribution System is a major instrument for ensuring availability of food grains to the public at affordable prices as well as for enhancing food security for the poor. While the agricultural production in the State is mainly cereals, rice, jowar and maize, etc., the staple food is primarily rice though wheat is also consumed. (Source: <http://epos.ap.gov.in/ePos/>.)

1.1.3 The objectives of PDS

- To protect the low income groups by assuring them, supply of certain minimum quantities of food grains at affordable price
- Ensuring equitable distribution
- Controlling the price rise of essential commodities in the open market
- To ensure regular supply of essential commodities of main consumption like, rice, sugar, kerosene and wheat etc., at reasonable prices through FP Shops
- To ensure social justice by providing food security for the poorest of the poor in rural and urban areas by making food grains available at cheapest rates
- To provide food security to more senior citizens, who, though eligible have remained uncovered under National Old Age Pension Scheme (NOAP Scheme)
- To assess the efficiency in procurement and handling of food grains towards storage, transportation and delivery.

**Table 1.1: Andhra Pradesh PDS Service delivery in brief
(Data as per proposal submission date 9-10-17)**

Total Cards	1,38,91,463
Availed Cards	98,20,240
Total Shops	28,691
Active Shops	16,770
Month Transaction percentage	70.7
Month Transactions	98,85,512
Today's Transactions (9-10-17)	1,38,877
Cashless Transactions	5,05,135

1.1.4 Expansion of AePDS Implementation in all '13' districts

With the launch of e-PDS system, Government of Andhra Pradesh has digitised the entire Ration Card Database of all districts and the seeding of Aadhaar numbers against ration unit members into the ration card database across the State. Through an electronic point of sale or e-POS model, Andhra Pradesh has imparted a great amount of incremental efficiency to the State's Public Distribution System (PDS), as it is being implemented in all 13 districts of the State.

While essential food grains like (rice and wheat), sugar and kerosene are being distributed across the State via e-POS-equipped PDS, since April 2015. In order to increase transparency, accountability and efficiency, Aadhaar enabled PDS (AePDS) with PoS devices for automation of FPS has been taken up in nearly 28,600 shops in two phases in the 13 districts of Andhra Pradesh (AePDS /ePoS Project). Under the system, the beneficiaries are identified by Aadhaar and verified through iris and fingerprinting at the time of release of the goods.

The objective of the AePDS through e-PoS, is to ensure that only genuine cardholder or his/her family members whose name is mentioned in the ration card can buy the subsidised commodities. It would help record all FPSs transactions electronically which enables real time accounting of opening stock, daily sales and closing stock. In turn, this would facilitate monthly allotment of stocks to the FPSs based on the stock position and also facilitate monitoring and detection of fraudulent transactions.

Expressing confidence in the new system, both e-POS and Aadhaar enabled public distribution system (AePDS) have reduced leakages in the welfare schemes and only the eligible card-holders are availing the services. Cashless transactions have helped keep the fake white ration card-holders aside.

1.2 Review of Literature

The Public Distribution System (PDS) plays a significant role in the Indian government's poverty alleviation programmes and discharging its social development obligations by providing food grains and essential items to the rural and urban poor at subsidised rates. The history of PDS dates back to the time before the first Five-Year Plan but it did not focus on universal coverage as it was mainly for price stability and availability of food grains in urban areas and some deficit areas. The focus of the PDS hence remained somewhat unchanged till the sixth Five-Year Plan. It was during the eighth Five-Year Plan that the focus shifted on

targeting poor people and excluding those from better off economic backgrounds. From June 1997, the government launched the Targeted Public Distribution System (TPDS). According to the TPDS, the government started making more efforts to cater to the needs of the marginalised sections of society like the rural poor, tribal population, etc. The government thus initiated the increase in the number of PDS Shops or Fair Price Shops and increased the number of ration cards. It is the responsibility of the State government to identify the poor and ensure that they are getting the benefits of the PDS. State wise Below Poverty Line (BPL) quota is fixed on the basis of the adjusted poverty share determined by the Planning Commission based on official poverty lines in 1993-94, adjusted for growth in population in the interim.

Shri Amartya Sen argues that democracy can tackle natural disasters like famines and drought in an effective manner unlike in totalitarian regimes. He cites that independent India had not seen a severe famine wherein people perished, he argues, that because of democracy India was able to survive famines like that of 1987. Further he cites examples of famines where people perished in the case of colonial India and China. Along with democracy, however, PDS also appears to be an important factor in controlling the adverse impacts of famine, drought and floods. By PDS we mean it is the system when the whole or a part is controlled by public authorities on behalf of the general public for their well-being. It has a social objective of making the commercial activity, a productive development and welfare activity. In areas where local production was sufficient for local consumption, dependence on public distribution was resorted to in the periods of shortage. The PDS aims in providing fair distribution and self-sufficiency in good grains to the public. This system works as an instrument for efficient management of consumer goods for "maintaining stable price" conditions (Chakraborty, M. (2000)).

According to the Planning Commission and the Ministry of Consumer Affairs, Food and Public Distribution evaluation of TPDS performance by the Programme Evaluation Organisation (PEO) found that about 58 percent of the subsidised food grains issued from the central pool do not reach the BPL families because of identification errors, non-transparent operation and unethical practices in the implementation of TPDS. The cost of handling of food grains by public agencies is also very high. According to the study, for one rupee worth of income transfer to the poor, the Gol spends Rs.3.65, indicating that one rupee of budgetary consumer subsidy is worth only 27 paise to the poor. The results obtained deserve careful consideration and suggested some measures for improvement, which would help in finding

better ways of ensuring food security for the poor Commission, P. (2005).

It finds that Tamil Nadu and Himachal Pradesh continue to be the leading performers, but early movers such as Odisha saw improvements in the functioning of the PDS between 2004-05 and 2009-10. In late movers such as Bihar and Jharkhand, improvement was evident between 2009-10 and 2011-12. The share of the PDS as a source of rice and wheat has increased over time, suggesting an improvement in its outreach (Rahman, A. (2014)).

While the social objective is of protecting poor citizens from the vagaries of market forces, the PDS current system has several well documented problems such as lack of transparency, accountability, poor governance and poor service delivery mechanisms. Several suggestions have been made for improvement through technology intervention. The Smart PDS solution that has been developed uses low-cost mobile technologies and a work flow based request tracking system to enable the delivery of critical governance services such as food entitlements, at the doorstep of the citizen. The system leverages the expanding cellular network to enable a consumer to place an order on a mobile phone and the entire process of PDS service delivery can be monitored and tracked in near real-time. An electronic voucher scheme has been developed to implement a cashless benefits transfer system to reduce leakages in the system and improve tracking of a PDS transaction from the generation of a consumer request to the delivery of food items to the consumer (Garg, S., & Sundar, K. (2013)).

This PDS system works as an instrument for efficient management of consumer goods for "maintaining stable price conditions." In areas where local production was sufficient for local consumption, dependence on public distribution was resorted to in the periods of shortage. The 'puzzle of under-purchase' in PDS quotas is analysed by extending the dual-pricing model to account for supply-side (for example, diversion) and demand-side (for example, transaction costs) constraints. Primary and secondary data as well as field observations suggest that under-purchase is mainly due to supply constraints and at all-India level, the PDS is estimated to reduce the poverty-gap index of rural poverty by 18% to 22%. The corresponding figures are much larger for states with a well-functioning PDS, e. g., 61% to 83% in Tamil Nadu and 39% to 57% in Chhattisgarh (Dreze, J., & Khera, R. 2013 & 2015).

In order to increase transparency, accountability and efficiency in public distribution system(PDS), government of Andhra Pradesh initiated Aadhaar enabled PDS (AePDS) with PoS devices for automation of FPS was taken up in nearly 28,600 shops in two phases in the '13' districts (AePDS /ePoS Project) of the State. The objective of the AePDS through e-PoS, is

to ensure that only genuine cardholder or his/her family members whose name is mentioned in the ration card can buy the subsidised commodities. It would help record all FPSs transactions electronically which enables real-time accounts of opening stock, daily sales and closing stock. In turn, this would facilitate monthly allotment of stocks to the FPSs based on the stock position and also facilitate monitoring and detection of fraudulent transactions. Expressing confidence on the new system, both e-POS and Aadhaar enabled public distribution system (AePDS) have reduced leakages in the welfare schemes and only the eligible card-holders are availing of the services and with the help of cashless transactions and bogus white ration card-holder can be kept aside. Besides this, “Government of Andhra Pradesh also wants to make the system of cashless transaction for more transparency in Public Distribution System”. Cash transactions in Public Distribution System (PDS) took place through bank transfers from 1st April, 2016 onwards. The ration card holders could purchase groceries by swiping their debit cards.

The proposed study aims to analyse the success of AePDS and Cashless Transactions in achieving its objectives and results. The study will assess two new initiatives (AePDS and Cashless Transactions) with reference to extent of transparency, accountability and efficiency in service delivery of PDS. The study will investigate the Pre (Prior to 2015) -Post impact of AePDS service delivery and also look into why it has not worked in some of the PDS centres.

1.3 Objectives of Study

The study aims to understand the implementation of e-PoS (AePDS) and cashless service delivery of PDS through the experiences of the stakeholders. The following are two main objectives of this study:

- To systematically assess the quality, responsiveness and outcomes (effectiveness) of the e-PoS (AePDS) and cashless service delivery of PDS services provided by Fair Prices Shops/unit office to the public and
- To generate a better understanding of the problems and constraints being faced by the Fair Prices Shops and the staff of Department of Consumer Affairs, Food & Civil Supplies in their role as service provider to the community.

1.4 Study Methodology

The Citizen Report Card (CRC) methodology is employed in this study. It is a simple but powerful and credible tool to provide systematic feedback to public agencies about various

qualitative and quantitative aspects of their performance. Citizen Report Card identifies the key constraints faced by the citizens in accessing public services, their appraisals of the quality, adequacy of public services and the quality of interactions they have with the service providers. Citizen Report Cards entail a random sample survey of the users of different public services (utilities), and the aggregation of the users' experiences as a basis for rating the services.

Citizen Report Cards (CRCs) are participatory surveys that solicit user feedback on the performance of public services. CRCs can significantly enhance public accountability through the extensive media coverage and civil society advocacy that accompanies the process.

Citizen Report Cards are used in situations where demand side data, such as user perceptions on quality and satisfaction with public services is absent. Specific CRC methodologies may vary depending on the local context.

There are some basic steps that apply to all CRC methodologies:

1. Deciding on agencies/services to be evaluated
2. Identification of scope and key actors that will be involved
3. Design of questionnaires in a manner that is simple enough for ordinary citizens to understand
4. Careful demographic assessment to select the appropriate sample and size for survey
5. Raising awareness of the survey respondents to the process
6. Providing training to the individuals involved in conducting the survey and
7. Dissemination of findings with due consideration of the power relationships and political economy of the situation

1.4.1 Methods of Data Collection

The exercise involved three stages: (a) Pre-survey stage of finalising the questionnaire, selection of interviewers and training of interviewers. (b) The field survey by a set of independent investigators equally adept in carrying out surveys. (c) Post survey actions like designing analytical frameworks and drafting the report.

1. <https://openknowledge.worldbank.org/bitstream/handle/10986/11277/286010CRCoSDonote09101public1.pdf?sequence=1>

2. The brief details about Citizen Report Card (CRC) has given under Bibliography

As a part of the scoping exercise the study team met the officials at the Department of Consumer Affairs, Food & Civil Supplies (PDS) at various levels to understand norms followed for dealing with – AePDS and cashless PDS distribution system, attending to consumer complaints and other technical matters and action taken on complaints.

The entire data collection has been completed through electronic data collection process i.e., all three questionnaires are entered in ODK collect data collection software and complete data is collected through smartphones. Data collection through ODK collect will bring more

ODK Collect is an open source Android app that replaces paper forms used in survey-based data gathering. It supports a wide range of question and answer types, and is designed to work well without network connectivity.

ODK Collect renders forms into a sequence of input prompts that apply form logic, entry constraints and repeating sub-structures. Users work through the prompts and can save the submission at any point. Finalised submissions can be sent to (and new forms can be downloaded from) a server.

Collect supports location, audio, images, video, barcodes, signatures, multiple-choice, free text, and numeric answers. It can even accept answers from other apps on your device.

transparency and it captures the complete data collection details like who is actual respondents with 100 percent accuracy i.e., respondents photo, place and location of the interview was taken, etc.

1.4.2 Questionnaire Design

Questionnaires, designed for the staff assessment formed the base and were modified to suit contextual requirements. Three sets of data collection instruments were designed are:

- Questionnaire for PDS users
- Questionnaire for PDS dealers
- Questionnaire for PDS staff

The scope of data collection instruments covered the following:

- Awareness of the service
- Usage of the service
- Service quality and reliability
- Problems and resolution
- Corruption
- Satisfaction
- Suggestions for improvement

Along with these, the Questionnaire for PDS staff also included their job aspects, support from department and community, responsiveness and reasons for success/failure in implementation of the scheme.

1.5 Sampling

The study covered a total of four districts (one-fourth from the total districts) from the State of Andhra Pradesh (this is the first State in the country that has initiated AePDS and cashless transactions covering all district of the State)

The Four districts were selected based on systematic random sampling (Annexure-1). A total of 1,200 PDS users and 100 officials were interviewed from all four districts. From every selected district, 300 PDS users and 25 officials were interviewed.

The study covered 80 Fair Price Shops (FPS) from four districts. From each selected district 20 FPS were selected following systemic random sampling. From every selected FPS shop, 15 beneficiaries were selected randomly for the interview to collect user feedback. The beneficiaries were selected from the database or register kept/maintained at each of the selected FPS who were interviewed in their homes.

Other than 1200 beneficiaries, 100 department personnel (80 rations shop dealers and 20 PDS officials) were also interviewed, i.e., from each selected district 20 PDS dealers and five officials were interviewed, i.e., in every district the following 25 officials were interviewed:

Table 1.2: List of Interviewed Officials

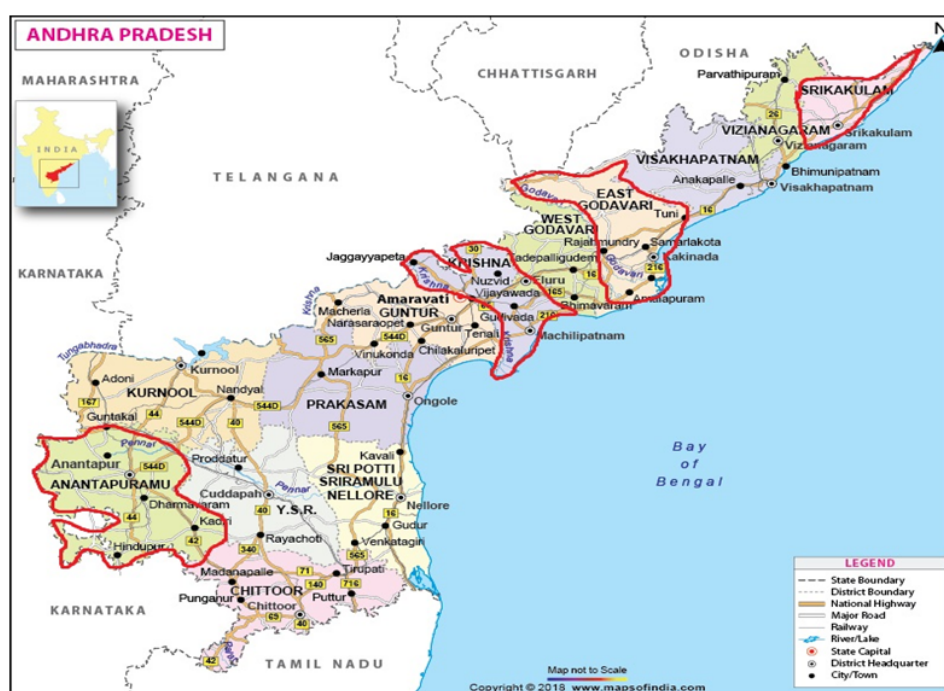
S. No.	Official	No. of Interviewed officials
1	District Supply Officer / Deputy Directors	1
2	Assistant Supply Officer / Asst. Grain Purchasing officer / Asst. Director	1
3	Deputy Tahsildars / Superintendents /Mandal Supply Officer/CSDT	2
4	Senior Assistants / Senior Accountants / Senior checking Inspectors / UD Revenue Inspectors	1
5	Owner of the Fair Price shops	20

Thus the total sample size was

Table 1.3:Total sample Size Covered

S.No.	Interview details	Numbers
1	Interviews with PDS Consumers	1200
2	Interviews with PDS dealers	80
3	Interviews with PDS officials	20
	TOTAL	1300

Picture 1.1: Maps of the study covered four districts of Andhra Pradesh State



In the study, the reliability of sample size estimated and tested at 95 percent confidence. The reliability of estimate of users (N=1200) is significant at 95 percent confidence level is ± 2.8 and in case of dealers (N=80), the reliability of estimate is significant at 95 percent confidence level ± 2.1 .

1.6 Quality Control

The surveys at the selected offices and their jurisdictions (Dist. block and shop level and Consumer) were carried out by a trained enumerator/survey team appointed and supervised by NIRDPR study team. A comprehensive training programme involving briefing on the data collection instruments, mock call exercises, and pilot field visits were carried out before the actual implementation of the survey. The actual field survey that commenced soon after the training programme was closely monitored by the NIRDPR study team through spot checks, back checks and on-site scrutiny of the filled in questionnaires in ODK collect plus.

1.7 Analytical Framework

Statistical and Qualitative techniques (percentages, Order Probit analysis, Service Delivery Index) were used to analyse the data to understand the quality of service delivery under PDS through AePDS and Cashless transactions, constraints faced and the outcomes achieved.

1.8 Utilisation of Findings

The information and knowledge generated through the study will be useful to the Department of Consumer Affairs, Food and Civil Supplies, Government of Andhra Pradesh to understand the strengths and weaknesses, formulate actionable policies and remedies to strengthen the existing system and to bring necessary changes wherein necessary guidelines for better implementation of AePDS and cashless transactions.

The report will also be used to conduct workshops at National and regional level for cross learning of good practices on e-Governance. The study will also bring about a policy brief and publish articles based on the findings for larger dissemination.

2. Key Findings from PDF Beneficiaries Interview

Chapter 2: User Feedback

In order to increase transparency, accountability and efficiency in public distribution system (PDS), Government of Andhra Pradesh initiated Aadhaar enabled PDS (AePDS) with electronic point of Sale (ePoS) devices for automation of Fair Price Shop (FPS) in all the 13 districts of the State. The objective of the AePDS through e-PoS is to ensure that only genuine cardholder or his/her family members whose name is mentioned in the ration card can buy the subsidised commodities. A feedback from users based on their recent experience with the new initiatives implemented in their FPSs was obtained. The following chapter gives the findings from this user feedback survey. The findings from the survey are compiled district wise to enable intra-district comparison of implementation. Where possible, the data is also analysed based on caste divisions to understand the implications of the schemes across different social strata.

2.1 PROFILE OF USERS

Age and Gender: A little more than half (55 per cent) of the respondents were females while the remaining were men. The average age of the respondents was 42 years.

Occupation: Around 75 per cent of the respondents were labourers – 38 per cent were agricultural labourers and 37 per cent non-agricultural labourers. The remaining were cultivators, housewives, and petty businessmen, etc.

Education: Nearly one-third of (32 per cent) respondents were illiterates, 24 per cent had completed primary education, 17 per cent had completed middle/upper primary education, 15 per cent had completed secondary education, 11 per cent had completed higher secondary education or more. A few among them were graduates and post graduates.

Religion and Caste: A majority of the respondents (94 per cent) were Hindus. One-third (34 per cent) among them belonged to forward castes (GC), 40 per cent were from other backward communities (OBC) and 24 per cent were from Scheduled Caste (SC).

Annual income, monthly expenditure and household assets: Among the interviewed beneficiaries, almost more than three-fourth (77 per cent) were earning less than or equal to Rs. 60,000/- per annum and majority of the HHs (96 per cent) were from the BPL category. On an average HHs spend Rs. 7,078 every month towards their HH expenses. Around 87 per cent of the HHs reside in their own houses, 39 per cent of these houses were pucca houses under

the Indira Awas Yojana (IAY) and another 44 per cent HHs live in semi-pucca houses. More than half of the HHs (57 per cent) own/leased land.

Table 2.1: Facilities Available at the HHs

Availability of facilities in HHs					
	East Godavari	Srikakulam	Krishna	Anantapur	Total
Electricity	97%	100%	100%	100%	99%
Fan	95%	97%	99%	99%	98%
Television	96%	89%	90%	95%	93%
Mobile phone	91%	91%	93%	86%	90%
Motor bike	45%	36%	17%	22%	30%
Four wheeler	1%	2%	1%	1%	1%
Latrine	56%	37%	29%	37%	40%
Piped water supply	55%	25%	3%	3%	22%
Total	97%	100%	100%	100%	99%

Table 2.2: Communication Medium Available to HHs

Channels of communication available to the HHs					
	East Godavari	Srikakulam	Krishna	Anantapur	Total
Radio	98%	99%	98%	98%	98%
Television	79%	25%	68%	40%	53%
Village level mike announcements	80%	76%	99%	92%	87%
Computer with internet	34%	22%	7%	13%	19%
Mobile	69%	64%	65%	53%	63%
Newspapers in local language	43%	34%	38%	37%	38%
Newspapers in English	0%	4%	0%	1%	1%
Total	100%	100%	100%	100%	100%

Household savings and Debt: A vast majority of the HHs (97 per cent) have a bank account in the State of Andhra Pradesh. The main reasons for holding the bank account were to avail benefits from government schemes (77 per cent), to hold savings (74 per cent), for day-to-day transactions (57 per cent) and to obtain subsidies from schemes (33 per cent).

Less than 20 per cent HHs have post office accounts which makes it less popular among the HHs as compared to more bank accounts.

All most two-third (64 per cent) HHs in all the four districts reported having debt. A larger number of HHs from Anantapur reported HH debts (88 per cent). A majority of these HHs have borrowed money from formal institutions like Banks (83 per cent) as well as from

informal money lenders (97 per cent).

2.2 Quality of PDS Services

Type of Ration card and ration supply: More than 90 per cent HHs in all four districts of study reported having BPL cards. Almost all the HHs reported regular ration supply on a monthly basis in the State. Nearly every HH (98 per cent) reported getting commodities as per their entitlement and 89 per cent have reported taking these commodities as per their entitlement too in the State. Around 15 per cent users from the Scheduled Caste reported that they did not take all commodities as per their entitlement mainly due to the poor quality of the commodities. A main reason cited by those few who do not take commodities from the FPS is the poor quality of the commodities distributed. The most popular commodity that was purchased by all HHs in all four districts was the Red Gram Dal (RGD). In Anantapur and Srikakulam, Atta is also purchased by all the HHs.

Fair Price Shops (Ration Shop): All HHs in four districts reported that the FPSs are kept open on all working days. More than 60 per cent HHs in all four districts have reported that the shops are kept open from 1st to the 15th day of every month, another 36 per cent HHs have reported that the shops are open for the first 10 days of every month. More than 90 per cent HHs collect their ration within the first 10 days of the month on an average in the State.

AePDS: Almost all HHs were aware of the AePDS in the State. All HHs reported that their FPS issued commodities through AePDS. Around 90 per cent of the HHs in the State reported that the Aadhaar seeding into AePDS system for all its family members was completed. Those who haven't successfully completed the process reported that their finger prints were not recognisable (75 per cent) or their iris was not recognised (12.5 per cent) or in some cases the seeding machine had a problem (12.5 per cent).

There have been some efforts made throughout the State with respect to orientation of PDS users on AePDS. In Anantapur and Srikakulam, less than 40 per cent HHs, in East Godavari 81 per cent HHs reported that they were oriented on how the AePDS works.

Problem incidence: Problems with AePDS in PDS system has been reported by HHs in all four districts. Anantapur has the highest number of HHs reporting problem with the system with

43 per cent followed by Srikakulam at 31 per cent, East Godavari at 21 per cent and Krishna with 17 per cent. In most cases, the frequency of the problem incidence is once in a while as reported by 78 per cent HHs. The nature of problems vary between districts, some of the important problems narrated are listed below district wise:

Table 2.3: Nature of Problems Reported by HHs with AePDS

Nature of problem	East Godavari	Srikakulam	Krishna	Anantapur	Andhra Pradesh
Connectivity	81%	77%	46%	88%	77%
Power	42%	34%	52%	30%	37%
Training capacity	8%	11%	4%	18%	12%
Literacy levels of FPS Owner	17%	5%	2%	16%	11%
Application architecture & Development	8%	10%	6%	5%	7%
Software update	22%	3%	4%	0%	6%
Infrastructure	9%	4%	2%	0%	3%

Among the various social groups, 39 per cent users from SC and 24 per cent users from ST reported facing problems with the AePDS. Connectivity issues were reported by more than 75 per cent SC and ST users. Another issue reported by nearly one-third of them was power failures.

Only 11 per cent among those faced problems have lodged complaints regarding their problems. Among them, 58 per cent have reported that their problems have not been resolved after lodging complaints on an average. Problems not being resolved is found to be more than the average among ST (75 per cent) users. In spite, all HHs are getting their entitled quantity of commodities from the FPSs.

2.3 Pre AePDS Vs AePDS comparison

An attempt was made to understand the quality of service delivery pre and during AePDS by comparing the difference observed by the users in terms of weighing / measuring the commodities at the FPS. There has been a definite raise in the number of HHs reporting that the commodities are weighed/ measured properly before they are given to consumers, however, the raise is not huge across different commodities since the pre-AePDS experience as already reported before has been really good (>90 per cent). Among the four districts, the increase in response is more significant in East Godavari district as compared to the other three districts. There have been remarkable changes recorded in Anantapur district as well. For example, HHs reporting proper measurement of kerosene distributed in Anantapur has

increased from 14 per cent to 35 per cent and wheat measurement has increased from 49 per cent to 88 per cent after the implementation of AePDS. The following table gives a snapshot of the difference as reported by the users:

Table 2.4: Pre AePDS vs AePDS Status on Proper Measuring of Commodities as Reported by HHs (%)

S. No.	Com-modities	East Godavari		Srikakulam		Krishna		Anantapur		Total	
		Pre-AePDS (%)	During AePDS (%)	Pre-AePDS (%)	During AePDS (%)	Pre-AePDS (%)	During AePDS (%)	Pre-AePDS (%)	During AePDS (%)	Pre-AePDS (%)	During AePDS (%)
1	Rice	75	96	95	97	98	99	90	99	90	98
2	Wheat	59	76	90	98	94	94	49	88	66	83
3	Kerosene	56	72	86	83	61	67	14	35	57	71
4	Sugar	77	95	98	98	99	99	96	100	93	98
5	RGD	79	96	97	98	99	99	97	100	93	98
6	Atta	58	78	88	93	77	81	98	96	79	89
7	Others	46	62	71	73	82	69	0	20	54	62

An attempt was made to analyse the difference in service delivery before and after implementation of AePDS by interpreting the data across social groups. Generally, it was found that more users from other backward caste, SC and ST communities have reported that all commodities were not being measured/weighed properly before the AePDS implementation. However, after the implementation this has improved. For example, in case of rice weighing improved from 91 per cent (General Category), 90 per cent (OBC), 86 (SC), to 98 by all three categories. Similarly wheat weighing distribution also improved to 73 per cent to 88 per cent (General Category), 63 per cent to 81 per cent (OBC and SC).

Supply of Kerosene is less and most of the places it was already stopped. But, by the time of data collection distribution of Kerosene was not covered or adopted for e-weighing. Even though kerosene distribution is not covered through e-weighing, due to impact of AePDS in all the shops, the significant improvement was observed during Pre-AePDS and AePDS reported by the General category (56 per cent to 69 per cent) and OBC & SC (58 per cent to 73 per cent).

But if observed from ST category, variation cannot be reported between Pre-AePDS and AePDS period PDS distribution for all the commodities was due to high-illiteracy (30 per cent) and half of them are less than 4th standard qualified (49 per cent).

Table 2.5: Commodities Distribution during Pre-AePDS Vs AePDS

	Rice (N=1197)		Wheat (N=369)		Kerosene (N=376)	
	Pre - AePDS	AePDS	Pre - AePDS	AePDS	Pre - AePDS	AePDS
General Category	91%	98%	73%	88%	56%	69%
Other Backward caste	90%	98%	63%	81%	58%	73%
Scheduled Caste	86%	98%	61%	81%	57%	73%
Scheduled Tribe	100.0%	100.0%	87%	78%	75%	43%

A majority of the HHs have reported (97 per cent) that they have observed/heard the ‘Get weight’ voice alert announcement from e-PoS machine during their purchases at the FPSs. Only 5 per cent HHs have reported misappropriation in e-weighing. During such an incident, the users have weighed their commodities using another scale available at the FPS and/or brought it to the notice of the shop dealer. Most of them (98 per cent) have not lodged complaints about the misappropriation.

A majority of the HHs (95 per cent) were aware that they are supposed to get a printed slip giving the details of the purchased commodities. Almost all of these HHs (94 per cent) reported that the FPS owner gave them this slip every time they purchased at the shop.

On the whole, the positive impact of AePDS introduction in PDS service delivery was clearly distinguished by the all interviewed beneficiaries. According to them before AePDS introduction there were more bogus cards (74 per cent), benefits given to non-beneficiaries (65 per cent), commodities were sent to black markets (51 per cent) and Leakages during weighing the commodities (42 per cent).

On the whole, after introduction of AePDS service delivery (since 2015 onwards) in PDs distribution, the impacts of AePDS in terms of benefits reaching to the actual beneficiaries (88 per cent), more accountable (71 per cent), very transparent (53 per cent), receiving accurate commodities (54 per cent), timely distribution (50 per cent) and Improved Service Delivery (25 per cent) was reported.

Table 2.6: Pre- AePDS conditions Vs AePDS Benefits

Pre –AePDS-Conditions					
Responses	East Godavari	Srikakulam	Krishna	Anantapur	Andhra Pradesh
More bogus cards	62%	79%	71%	84%	74%
Benefits given to non-beneficiaries	74%	54%	66%	66%	65%
Commodities are send to black markets	56%	46%	49%	54%	51%
Leakages during weighing the commodities	23%	50%	45%	52%	42%

AePDS - Benefits					
Responses	East Godavari	Srikakulam	Krishna	Anantapur	Andhra Pradesh
Benefits reach to the actual beneficiaries	92%	75%	90%	93%	88%
More Accountable	58%	73%	81%	72%	71%
Very Transparent	52%	60%	21%	77%	53%
Receiving accurate commodities	74%	34%	80%	29%	54%
Timely Distribution	72%	36%	57%	35%	50%
Improved Service Delivery	20%	37%	1%	40%	25%

Also an attempt was made to analyse the difference in service delivery before and after implementation of AePDS by interpreting the data across social groups. Generally, it was found that more users from other General category, backward caste, SC and ST communities have reported that during pre-AePDS there were more bogus ration cards (76 per cent, 71 per cent, 77 per cent and 3 per cent) respectively. Leakages during weighing the commodities also reported by 51 per cent OBC and 42 per cent by ST category.

Similarly, the introduction of AePDS was positively reported by most of the social categories in terms of benefits reach to the actual beneficiaries 94 per cent-OBC, 89 per cent-SC and 84 per cent of General Category. The core aim of introduction of AePDS was to bring Accountability (68 per cent-General, 73 per cent - OBC & ST and 72 per cent-SC) and Transparency (ST-76 per cent, 65 per cent-SC, 50 per cent-General and 46 per cent-OBC) was also reported by all social categories.

Table 2.7: Pre- AePDS conditions Vs AePDS Benefits by Social Groups

Pre-AePDS-Conditions					
Responses	General Category	Other Back-ward caste	Scheduled Caste	Scheduled Caste	Andhra Pradesh
More bogus cards	76%	71%	77%	73%	74%
Benefits given to non-beneficiaries	71%	64%	61%	48%	65%
Commodities are sent to black markets	50%	51%	56%	24%	51%
Leakages during weighing the commodities	38%	51%	36%	42%	42%
AePDS – impacts					
Responses	General Category	Other Back-ward caste	Scheduled Caste	Scheduled Caste	Andhra Pradesh
Benefits reach to the actual beneficiaries	84%	94%	89%	39%	88%
More Accountable	68%	73%	72%	73%	71%
Very Transparent	50%	46%	65%	76%	53%
Receiving accurate commodities	53%	64%	46%	9%	54%
Timely Distribution	48%	49%	60%	18%	50%
Improved Service Delivery	18%	23%	36%	27%	25%

2.4 Cashless Transactions

More than half the HHs (59 per cent) were aware of the cashless transactions in PDS system in the State of Andhra Pradesh. Close to 71 per cent of HHs in Srikakulam district and 65 per cent HHs in Anantapur were aware of the cashless transactions. Three-quarters of HHs (75 per cent) have reported that their FPS is covered under this initiative. However this varies from district to district with 94 per cent HHs in Srikakulam and 40 per cent in East Godavari reporting that their FPSs are enabled with cashless transactions. Across all four districts, many HHs (75 per cent) have availed the cashless transaction facility at their FPS. Many (61 per cent) of the users who have availed cashless transactions have said that they were benefited by this as there is ease in payment, 38 per cent have said that it is beneficial because they do not have to carry hard cash and another 12 per cent have reported that the process has helped resolve the issue of tendering change in transactions. But, most of the interviewed reported that currently most of them are not practicing cashless transaction due to higher transaction charges by the banks (86 per cent), problems with e-PoS machine i.e., ATM card swiping machine (52 per cent), insufficient fund in the consumer bank account (24 per cent), Gateway

(digital payment system) and consumer bank account is not allowed to do this i.e., only few banks are authenticated for cashless transactions (13 per cent).

Table 2.8: Reasons for Not Practicing Cashless Transactions

Responses	East Godavari	Srikakulam	Krishna	Anantapur	Andhra Pradesh
Higher transaction charges by the banks	80%	83%	89%	90%	86%
Problems with e-PoS machine (money swiping machine)	56%	66%	6%	82%	52%
In sufficient fund in the bank account	60%	14%	2%	20%	24%
Gateway issues	36%	11%	4%	0%	13%
My bank account is not allowed to do this (only few banks are authenticated)	47%	3%	0%	2%	13%

Awareness about the cashless transactions among SC (43 per cent) and ST (33 per cent) communities was found to be lower than the average awareness (59 per cent). Also reported that cashless transactions were not practiced due to higher transaction charges by the banks (94 per cent-SC, 85 per cent-General category and OBC), problems with e-PoS machine (swiping machine)(71 per cent-General category, 56 per cent-SC and 50 per cent-ST), etc.

2.5 Portability (Anywhere Ration) Programme

On an average 58 per cent users were aware of the portability programme under the PDS distribution system in the State. In Krishna district, however, only 32 per cent were aware of the programme. Though on an average 38 per cent users had availed the facility in the last one-year, this varied across districts. A larger number of users in East Godavari (57 per cent) had availed commodities under the scheme whereas only 18 per cent users had availed the benefit of the programme in Krishna district. A vast majority of the users (99 per cent) in the State have opined that the programme is very useful to poor migrant labourers.

Similar to the cashless transactions, awareness about the portability programme among SC (39 per cent) and ST (33 per cent) communities were found to be lower than the average awareness (58 per cent). A majority of the users from ST (91 per cent) have not availed commodities through the programme in the last one-year.

2.6 Grievance Redressal System

On an average, one-third users reported that the information regarding grievance redressal (complaints) was displayed at the FPSs. This was lowest in Krishna district with only 10 per cent users reporting that the information was displayed while it was highest in East Godavari (51 per cent). Once again, on an average 32 per cent users reported that the complaint register was prominently displayed in the shops. Overall awareness about the process of lodging complaints was very low at 10 per cent on an average.

A majority of the users (92 per cent) do not have complaints regarding the PDS in the State. Very few (14 per cent) among those who had problems with PDS (8 per cent) have made the effort to lodge complaints. All of these were oral complaints. A little more than half (57 per cent) of these complaints were resolved. All those who complained were satisfied with the resolution of the problem, some were completely satisfied (38 per cent) while others were partially satisfied (62 per cent).

2.6.1 Vigilance Committee

Awareness about the existence of vigilance committees among users was low in the State. On an average only 18 per cent are aware of its existence. A large number of users (66 per cent) have not approached the committee at the shop level to lodge complaints about their problems with PDS. Majority (94 per cent) among those who approached the committee have reported that the committee ensured that their problems were resolved. On an average 67 per cent users opined that the committee was useful to PDS users in one way or another.

2.6.2 Consumer Helpline

On an average less than one-tenth (9 per cent) users were aware of the consumer helpline. This is similar across districts as well as across social groups. Even among those who are aware, only 12 per cent have used the number to lodge complaint about PDS system. The response to their phone call has been good with 86 per cent of those who called the helpline reporting that their calls were responded, 79 per cent reported that their complaints were lodged immediately and 82 per cent reported that their complaints were resolved. As many as 67 per cent among those who used the helpline have also received follow-up calls from the helpline.

2.6.3 Toll-free Complaint Number by the State Government

On an average only one-tenth (10 per cent) users are aware of the State Government's toll free number to lodge complaints about the PDS system. Less than one-third of those who were aware have tried to call the toll-free number to lodge their complaints.

2.6.4 Citizen Charter

On an average half of the users were aware of the PDS citizen charter. Around 60 per cent of them have gone through the charter, 96 per cent of them opined that the information given in the citizen charter is helpful – 96 per cent have found that the charter has helped them to understand their entitlements under PDS. Around 54 per cent of those who were aware of the contents of the charter felt that the information provided was complete.

2.7 Overall Satisfaction with PDS

On an average, a majority of the users of PDS are satisfied with the system in Andhra Pradesh. More than half of them are completely satisfied on various aspects of the system such as AePDS, behaviour of staff, problem resolution and portability system, etc. Highest satisfaction is with the behaviour of staff while the lowest is with the cashless transactions. Overall satisfaction with the PDS system across all the four districts was high.

Figure 2.1: Satisfaction Levels of Users' across Various Aspects of PDS

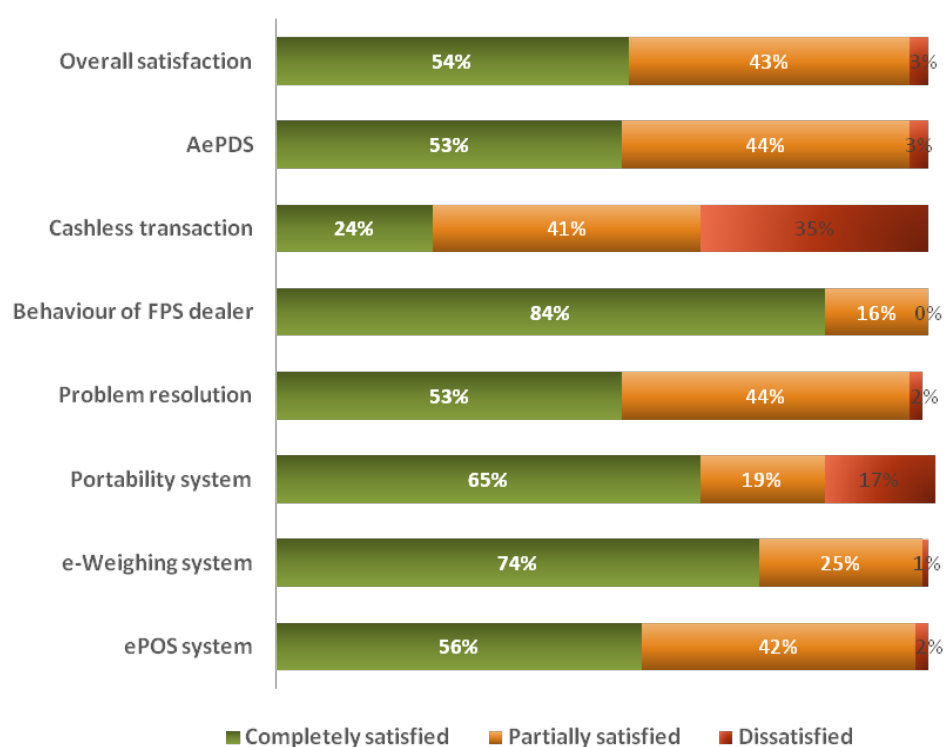


Figure 2.2: Satisfaction Levels of Users with PDS across Districts

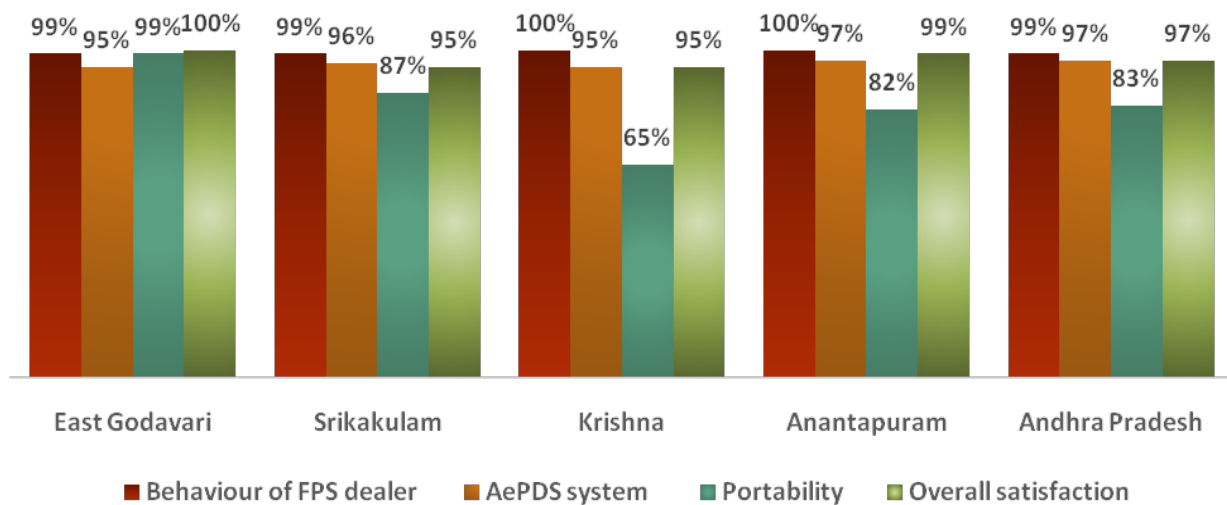
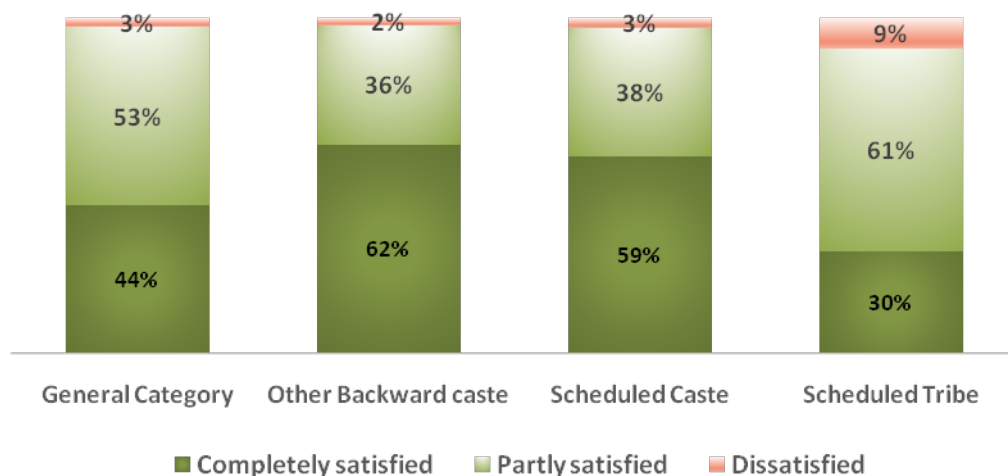


Figure 2.3: Overall Satisfaction with PDS - Caste-wise



2.8 Suggestions for Improvement

Users have suggested that the system could be made more useful by increasing the quantity of commodities distributed like sugar. Another important suggestion is to redistribute the kerosene and to add more products to the inventory at the FPS.

2.9 Factors Contributing Satisfaction (Ordered Probit and Logit Model)

Factors contributing to the consumer's satisfaction on PDS service delivery to its Consumers/ Users:

To know the factors which are more influential on consumer's satisfaction on service

delivery by Department of Consumer Affairs, Food & Civil Supplies, and Government of Andhra Pradesh to its consumers, here we tried an econometric model Order-Probit analysis by testing significance of service and individual characteristics on overall satisfaction.

In the study carried out for Department of Consumer Affairs, Food & Civil Supplies, and Government of Andhra Pradesh with a sample of 1,200 beneficiaries selected from 80 AePDS shops spread over four districts of Andhra Pradesh, the satisfaction levels for different indicators were collected from the PDS users/beneficiaries. The reported level of satisfaction with the AePDS service is influenced by several factors. The factors considered to influence the level of satisfaction are the service characteristics of the department and individual characteristics of the users. They are:

2.9.1 Individual characteristics

- Gender of the beneficiary/user
- Occupation of the beneficiary/user
- Caste of the beneficiary/user
- Education level of the beneficiary/user

2.9.2 Service Characteristics

- Taking/Collecting all items as per entitlements
- Weighed/measured properly of rice distribution (Pre-AePDS)
- Weighed/measured properly of wheat distribution (Pre-AePDS)
- Weighed/measured properly of kerosene distribution (Pre-AePDS)
- Weighed/measured properly of sugar distribution (Pre-AePDS)
- Weighed/measured properly of rice distribution (AePDS)
- Weighed/measured properly of wheat distribution (AePDS)
- Weighed/measured properly of kerosene distribution (AePDS)
- Weighed/measured properly of sugar distribution (AePDS)
- Aware of cashless transactions in PDS distribution system
- Had a problem with PDS service delivery?

Awareness about PDS Citizen Charter

An ordered probit analysis was carried out to explain the satisfaction levels for various indicators. The independent or explanatory variables are either dummy or continuous. Therefore, some of the categorical variables with more than two outcomes were converted into dummy variables. The dependent variable is the level of satisfaction viz., completely satisfied, partially satisfied and dissatisfied. The description of the independent variables and their significance is presented in the following table. The model formulated with the explanatory variables is highly significant.

Table 2.9: Individual and Service Factors Influence on Level of Satisfaction -Order Probit Analysis

S. No.	Independent variables	Coefficients	Type of variable	
			1	0
1	Gender of the beneficiary/user	-.197	Male	Female
2	Occupation of the beneficiary/user	-.605*	Other than agriculture	Cultivator cum agriculture labourer
3	Caste of the beneficiary/user	-.316	Others	SC/ST
4	Education level of the beneficiary/user	.508***	Literates	Illiterates
5	Taking/Collecting all items as per entitlements	1.545*	Yes	No
6	Weighed/measured properly of ricedistribution (Pre-AePDS)	.291	Yes	No
7	Weighed/measured properly of wheatdistribution (Pre-AePDS)	-1.578**	Yes	No
8	Weighed/measured properly of kerosenedistribution (Pre-AePDS)	.579	Yes	No
9	Weighed/measured properly of sugardistribution (Pre-AePDS)	-1.279*	Yes	No
10	Weighed/measured properly of ricedistribution (AePDS)	-.491	Yes	No
11	Weighed/measured properly of wheatdistribution (AePDS)	.080	Yes	No
12	Weighed/measured properly of kerosenedistribution (AePDS)	.881**	Yes	No
13	Weighed/measured properly of sugardistribution (AePDS)	1.478**	Yes	No
14	Aware of cashless transactions in PDS distribution system	.418**	Yes	No
15	Had a problem with PDS service delivery?	.585**	Yes	No
16	Awareness about PDS citizen charter	-.816*	Yes	No

Satisfaction: 1=Dissatisfied, 2=Partly Satisfied, and 3=Completely Satisfied;

*= 1% error level, **= 5% error level and ***=10% error level;

2.9.3 Results:

Individual Characteristics:

Except education level of the beneficiaries, other three individual characteristics were not significant. However, it is surprising to note that cultivator cum agriculture labourers turning out to be a significant variable to explain satisfaction levels.

The service characteristics that are significant are:

- Taking/Collecting all items as per entitlements
- Non-Weighed/measured wheat distribution during **Pre-AePDS**
- Non-Weighed/measured sugar distribution during **Pre-AePDS**
- Weighed/measured kerosene distribution during **AePDS**
- Weighed/measured sugar distribution during **AePDS**
- No problem faced in course of PDS service delivery
- Non-awareness about PDS citizen Charters.

2.10 VILLAGE/Fair Price Shops Service Delivery Index (SDI)

It has become critical to assess the current levels of satisfaction on any service delivery of public utilities, as experienced by the population, as the population has every right to demand quality service delivery. An understanding of the strengths and weaknesses of Public Distribution system (PDS) structures would entail many benefits. An assessment of the shortcomings and deficiencies in the delivery system would help plug them wherever required. The assessment would also provide a benchmark for assessing the performance of the system in future time points. When appropriate remedial measures are taken, the system would get strengthened further and the efficiency would be moving upward, which will be an indicator of Good Governance.

The service delivery framework, of late, has undergone a change where a need was felt that service delivery should be measured in a holistic and comprehensive way. Thus, in the present study, Service Delivery Index (SDI) is calculated for better appreciation of the functioning of the delivery mechanism (of village fair price shops) as experienced by the users. Using the index computed, all the fair shops in the study area can be arranged in the rank order.

There are a variety of indices that were developed to measure various concepts. After the introduction of Physical Quality of Life Index (PQLI), the UNDP has come out with multiple

indices for measuring various concepts and they are Human Poverty Index, Gender Development Index, Gender Empowerment Measure and Multi-dimensional Poverty Index besides Human Development Index. However, some of these measures have been criticised for poor data availability, the underlying concept of indicator being not uniform across various spatial units (like literacy for which there are varying definitions across different countries), and incorrect choice of indicators and so on.

An index is defined as a measure that combines a set of indicators to provide an assessment of various concepts like accessibility, cost, quality and frequency, etc. An indicator points to a broad direction of movement of the index and a good indicator should possess important properties that include relevance, uniqueness, sensitivity, feasibility and stability. The indicators that constitute Service Delivery Index include services to be provided mandatorily by the concerned agency.

Thus, an index is constructed based on a set of indicators which are assigned different weights depending upon their relative importance. The formula used for construction of index provides some limits for the index which will enable us to go in for comparison of various spatial units for a given point of time.

The objective of this exercise was to arrive at Service Delivery Index (SDI) for each of Village/Fair Price Shops in the study area covering East Godavari, Srikakulam, Krishna and Anantapur districts of Andhra Pradesh.

For computing such a composite index, besides the selection of indicators, the method adopted is also equally important. As regards the first aspect, level of satisfaction with seven selected PDS services are considered and they are i) Satisfaction with e-POS system, ii) Satisfaction with e-Weighing system in PDS, iii) Satisfaction with Portability (Anywhere ration) system, iv) Satisfaction with efficiency with which problem is dealt with, v) Satisfaction with overall behaviour of the PDS shop dealer, vi) Satisfaction with Cashless Transactions in PDS and lastly vii) Satisfaction with AePDS system as a whole and the selection of these indicators is mostly governed by their relevance to the exercise being carried out and also data availability. Each indicator is measured in terms of three cues viz., not satisfied, partially satisfied and fully satisfied and the scores assigned for these cues for quantification are 1, 2 and 3 respectively.

As regards the selection of method for working out the Service Delivery Index (SDI), the simplest of all methods is simple ranking method where Village/Fair Price Shop is given a rank on each indicator and later, an overall rank is arrived at by aggregating indicator-wise ranks.

This is said to be the simplest as it does not pose any restrictions on the values of the indicators (like normality of the values). Slightly complex methods are available which can be applied only when the assumptions that underlie the method are fulfilled and one such method is “Factor Analysis or Principal Components Approach (a)”. In the present exercise a simpler method (b) is used which is probably a better alternative to these conventional methods.

The steps followed in this method are demonstrated below:

To begin with, we use a matrix notation wherein we depict indicators (the seven referred to earlier) along the rows and the villages/shops where the sample fair price shops are covered in the study along the columns (in case a village has more than one fair price shop, their average score is considered).

	d= village (1 to n)							
i=indicator (1 to m)	1	2	3		d	.	.	n
1	X ₁₁	X ₁₂	X ₁₃		X _{1d}	.	.	X _{1n}
2	X ₂₁	X ₂₂	X ₂₃		X _{2d}	..	.	X _{2n}
3	X ₃₁	X ₃₂	X ₃₃		X _{3d}	.	.	X _{3n}
.						.	.	.
i	X _{i1}	X _{i2}	X _{i3}		X _{id}	.	.	X _{in}
.
.
.						.	.	.
m	X _{m1}	X _{m2}	X _{m3}		X _{md}	.	.	X _{mn}

Let x_{id} represent the size or value of the i-th indicator ($i=1,2,...m$) in the d-th Village/Fair Price Shop center ($d=1,2,3,...n$ say) of East Godavari, Srikakulam, Krishna and Anantapur districts.

Step 1: Compute $y_i = (X_i - \text{Min } X_i) / (\text{Max } X_i - \text{Min } X_i)$

If we have 8 indicators, then $i=8$. We will have $y_1, y_2, y_3, y_4, y_5, y_6, y_7$ and y_8 .

Indica- tor no.	Variance of y_i (var y_i)	$1/(\text{var } y_i)$	$W_i = k / (\text{var } y_i)$
(1)	(2)	(3)	(4)
y1	0.07169	13.94	0.1250
y2	0.05524	18.10	0.1622
y3	0.14533	6.88	0.06165
y4	0.07376	13.56	0.12148
y5	0.03762	26.58	0.23817
y6	0.14430	6.93	0.06209
y7	0.08002	12.50	0.11197
y8	0.07622	13.12	0.11755
		Sum= 111.61	Total= 1.00011

Inverse of 111.61= 0.008960 = k

Index can be computed by the following formula:

Actual score (in standardised form) of y_1 multiplied by weight of y_1 + actual score of y_2 multiplied by weight of y_2 + + actual score of y_8 multiplied by weight of y_8 will give us the composite index of each Village/Fair Price Shop.

The following statement shows the satisfaction indices village, mandal and district wise, these will facilitate comparison across various spatial units and thereby ranking:

Table 2.10: Village wise Satisfaction Service Delivery Index

S. No.	Name of the Village	No. of observa- tions/ respon- dents	Satisfaction Composite Index (%)	Village/ FPS level Ranks
1	Venkatampalli (Anantapur)	15	100	1
2	Edulabalapuram (Anantapur)	15	100	2
3	Tarakaturupalem (Krishna)	15	97.2	3
4	Julukunta (Anantapur)	15	97.1	4
5	Yeleswaram 1 (East Godavari)	15	96.9	5
6	Rangampeta (East Godavari)	15	96.3	6
7	Guruvindagunta (Krishna)	15	96.3	7
8	Muppalagutti (Anantapur)	15	95.6	8
9	Gudapadu (Krishna)	16	94.5	9
10	Entrikona (East Godavari)	15	94.3	10
11	Kintali (Srikakulam)	15	94.2	11
12	Chapiri (Anantapur)	15	93.8	12
13	Lakkasamudram (Anantapur)	15	93.8	13

S. No.	Name of the Village	No. of observations/ respondents	Satisfaction Composite Index (%)	Village/ FPS level Ranks
14	Pydayavalasa (Srikakulam)	15	93.4	14
15	Edulagudem (Krishna)	15	92.6	15
16	Godi (East Godavari)	15	91.9	16
17	Chopparametla (Krishna)	15	91.9	17
18	K.G.Patnam (East Godavari)	15	91.3	18
19	Marripudi (East Godavari)	15	90.0	19
20	Singampally (East Godavari)	15	89.5	20
21	Kethireddypalli (Anantapur)	15	88.9	21
22	Mallavolu (Krishna)	15	88.7	22
23	Polavaram (Krishna)	15	88.1	23
24	Baruva (Srikakulam)	15	87.9	24
25	Palankipadu (Krishna)	15	87.8	25
26	Pasalapudi 1 (East Godavari)	15	87.7	26
27	Narsingapalli (Krishna)	15	86.7	27
28	Somandapalli (Anantapur)	15	86.5	28
29	Jagathkesapuram (Srikakulam)	15	86.0	29
30	Gajulapalli (Anantapur)	15	85.6	30
31	Venturu (East Godavari)	15	83.6	31
32	Pasalapudi New colony2 (East Godavari)	15	83.2	32
33	Talupula (Anantapur)	15	83.1	33
34	Ventrapragada (Krishna)	15	82.7	34
35	Ravuludiki (Anantapur)	15	81.9	35
36	Someswaram (East Godavari)	15	81.6	36
37	Kalynadurgam (Anantapur)	15	81.2	37
38	Devaguptam (East Godavari)	15	80.8	38
39	Brahmanapalli (Anantapur)	15	80.6	39
40	Bodasakurru (East Godavari)	15	80.3	40
41	Kaza (Krishna)	15	79.6	41
42	Gandram (Krishna)	15	78.6	42
43	Pedasanagallu (Krishna)	15	78.5	43
44	Surnarayanapuram (Srikakulam)	15	77.5	44
45	Borampalli (Anantapur)	15	76.4	45
46	Dimmagudi (Anantapur)	15	76.3	46
47	Buridikancharam (Srikakulam)	15	74.8	47
48	Dosapadu (Krishna)	15	74.8	48
49	Elamaru (Krishna)	15	74.7	49
50	Bandlapalli (Anantapur)	15	74.1	50
51	Agiripalli (Krishna)	16	73.5	51
52	Kesavarayapuram (Srikakulam)	15	73.4	52
53	Gandreda (Srikakulam)	15	73.0	53
54	Chinaparapudi (Krishna)	15	72.5	54
55	Odulapalli (Anantapur)	15	72.3	55
56	K.Chervu (Anantapur)	15	71.7	56
57	Pinagudurulanka (Krishna)	15	71.1	57
58	Sompeta (Srikakulam)	15	70.6	58
59	Edara (Krishna)	15	69.5	59

An Assessment of Effectiveness of Electronic and Cashless transaction in Public Distribution System

S. No.	Name of the Village	No. of observations/ respondents	Satisfaction Composite Index (%)	Village/ FPS level Ranks
60	Pedamuttevi (Krishna)	15	69.4	60
61	Bayyannapeta (Srikakulam)	15	69.1	61
62	Lingamparthy 1 (East Godavari)	15	68.3	62
63	Ontimiddi (Anantapur)	15	68.3	63
64	Palasapuram (Srikakulam)	15	68.0	64
65	Salihundam (Srikakulam)	15	68.0	65
66	Yeleswaram 2 (East Godavari)	15	67.7	66
67	Ponduru (Srikakulam)	15	67.2	67
68	Gara (Srikakulam)	15	66.9	68
69	Erramukkam (Srikakulam)	15	66.8	69
70	Illayyagaripeta (Srikakulam)	15	65.6	70
71	Laxampalli (Anantapur)	15	65.3	71
72	Vedurupaka (East Godavari)	15	64.9	72
73	Lingamparthy 2 (East Godavari)	15	63.9	73
74	Ampolu (Srikakulam)	15	63.9	74
75	Blarampuram (Srikakulam)	15	63.3	75
76	Arangipeta (Srikakulam)	15	63.2	76
77	Budathavalasa (Srikakulam)	15	62.4	77
78	Elakolanu (East Godavari)	15	51.7	78
79	Subhadrapeta (East Godavari)	15	50.0	79
80	Yerravaram (East Godavari)	15	50.0	80

*Parentheses are name of the district

*Parentheses are name of the district

The composite Index varies from 50.00 to 100 points across (Rank one to 80) the study villages/fair price shops. Intra-district & Mandal variations in SDI are not that conspicuous.

S.No.	Name of the Mandal	No. of observations/ respondents	Satisfaction Composite Index (%)	Mandal level Ranks
1	Allavaram (East Godavari)	75	87.7	1
2	Somandepalle (Anantapur)	75	87.19	2
3	Guduru Mandal (Krishna)	75	84.74	3
4	Peddavadugur (Anantapur)	75	83.83	4
5	Agiripalli (Krishna)	76	82.72	5
6	Talupula (Anantapur)	75	82.43	6
7	Movva (Krishna)	76	82.12	7
8	Kalyandurg (Anantapur)	75	81.06	8
9	Rayavaram (East Godavari)	75	80.21	9
10	Pedaparupudi (Krishna)	75	80.18	10
11	Sompeta (Srikakulam)	75	75.85	11
12	Rangampeta (East Godavari)	75	75.49	12
13	Laveru (Srikakulam)	75	75.17	13

S.No.	Name of the Mandal	No. of observations/ respondents	Satisfaction Composite Index (%)	Mandal level Ranks
14	Ponduru (Srikakulam)	75	74.95	14
15	Yeleswaram (East Godavari)	75	69.36	15
16	Gara (Srikakulam)	75	65.03	16

Table 2.11: Mandal-wise Service Delivery Index

*Parentheses are name of the district

The SDI for the all 16 mandals from all four districts, Allavaram Mandal from East Godavari district stood with first rank by securing 87.7 satisfaction index and Gara mandal from Srikakulam district stood last among the studied mandals with 65.03 index value with 16th rank at the end.

S. No.	Name of the District	No. of observations/ respondents	Satisfaction Index (%)	District level Ranks
1	Anantapur District aggregate	300	83.63	1
2	Krishna District aggregate	302	82.44	2
3	East Godavari District Aggregate	300	78.19	3
4	Srikakulam District aggregate	300	72.75	4
Four Districts Aggregate		1202	79.26	

Table 2.12: District-wise Service Delivery Index

While all the aggregate SDI for the four study districts stands at 79.26, the individual district wise SDIs range between 72.75 (Srikakulam) and 83.63 percentage points (Anantapur).

Variations of smaller magnitudes are also noticed both across mandals within a district and also across villages within a mandal. Of all the villages, Edulabalapuram Village/Fair Price Shop, from Somandepalle mandal and Venkatampalli from Peddavadugur mandal in Anantapur district registered cent per cent SDI value while on the other side of the spectrum, Subhadrapeta of Rangampeta mandal and Yerravaram in Yeleswaram of East Godavari, emerged with the lowest SDI value of 50.00 percentage points. Considering 80 per cent SDI as the threshold level, the authorities concerned may bestow their attention on those Fair Price Shop centres/villages which registered SDI lesser than this cutoff point in order to improve the satisfaction level of the users on service delivery.

1. S V Rangacharyulu; Changes in Household incomes Matrix (CHIM) – A Tool for measuring overall Scheme Effectiveness; Indian Economic Panorama page 36-38;
2. N S Iyengar and P Sudarshan, A method of classifying regions from multivariate data, EPW ; December 18, 1982

3.

Findings from Fair Price Shop Dealers

Chapter 3: Feedback from Fair Price Shop Dealers

In order to make a holistic assessment of the implementation of government of Andhra Pradesh initiated Aadhaar enabled PDS (AePDS) with electronic Point of Sale (ePoS) devices for automation of Fair Price Shop (FPS). An attempt was made to obtain feedback from the dealers/owners of FPSs in the four districts covered in the study to understand their experiences of operating the shops and being a part of PDS.

The following chapter gives the findings from this shop dealers' feedback survey. Similar to the user feedback in the previous chapter, the findings are compiled district wise to enable intra-district comparison of experiences.

3.1 PROFILE OF FPS DEALERS

Age and Gender: A little more than half (58 per cent) of the respondents were male while the remaining were female. The average age of the respondents was 45 years.

Ownership of the shop: More than 90 per cent of the shops belonged to the dealers selected by the department on an average. Nearly two-third of the shops (62 per cent) were owned by the dealers and the remaining (38 per cent) were rented and on an average each rented shop paid Rs. 1,065 per month as rent.

Working days: Almost all shop dealers in all the districts have (99 per cent) have reported that the shops are kept open during the first fifteen days of every month.

Alternate livelihood: On an average, a little over half of the shop dealers (54 per cent) are engaged in other types of livelihood along with working at the FPSs. This is found to be more in Anantapur district at 75 per cent as compared to other three districts. Most of these dealers are engaged in agriculture as an alternate livelihood across the districts.

Annual income of the dealer/employee: On an average, the annual income of the employee/dealer was Rs. 69,400.

3.2 Quality of PDS Services

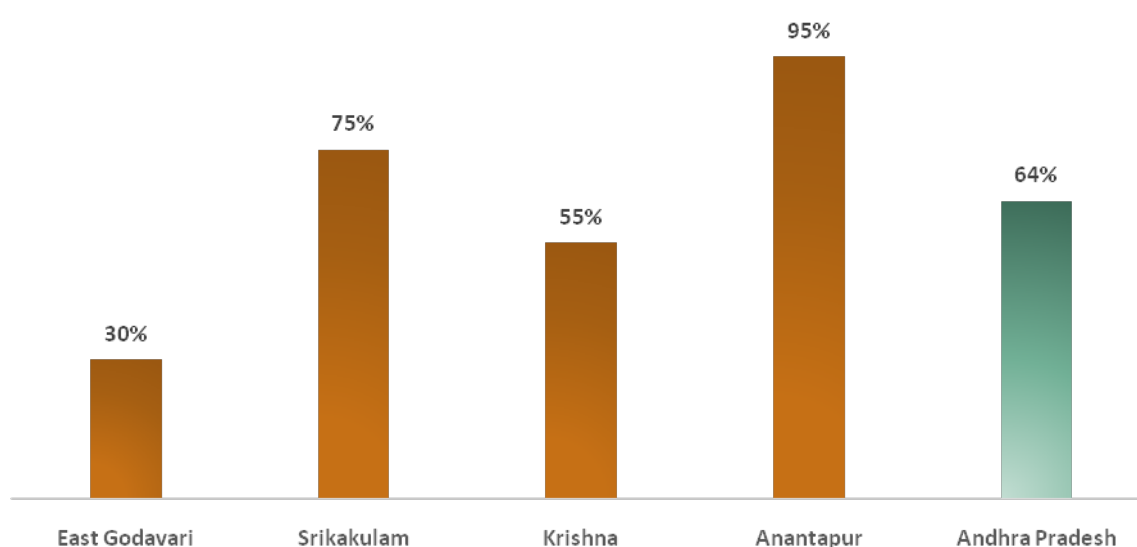
AePDS: A vast majority of the respondents were aware of the AePDS across the four districts (99 per cent). All the shops represented by the respondents were covered under the scheme in all the districts. The main issue reported with Aadhaar seeding is the difficulty in finger print recognition. Around 40 per cent dealers in East Godavari and 20 per cent in Anantapur districts reported that they faced difficulty in iris recognition. All shops are issuing the

commodities through AePDS.

On an average 99 per cent dealers in Andhra Pradesh are aware of how AePDS works. All the respondents in all four districts have undergone training/orientation on the working of AePDS.

Problem incidence: PDS system dealers in all four districts reported on AePDS. Anantapur has the highest number of dealers reporting problem with the system with 95 per cent followed by Srikakulam at 75 per cent, Krishna with 55 per cent and East Godavari with 30 per cent dealers reporting problems faced with AePDS.

Figure 3.1: Problem incidence with AePDS as reported by dealers of FPS



In most cases, the problem incidence is frequent as reported by 57 per cent dealers in the State. However, in Srikakulam district 73 per cent dealers have reported facing issues with AePDS once in a while. The nature of problems vary between districts, some of the important problems narrated are listed below district wise:

Table 3.1: Nature of problems reported by HHs with AePDS

Nature of problem	East Godavari	Srikakulam	Krishna	Anantapur	Andhra Pradesh
Connectivity	100	87	82	100	92
Power	33	0	27	0	10
Infrastructure	0	7	0	0	2
Software update	17	0	9	11	8

A majority (94 per cent) among those faced problems have lodged complaints regarding

their problems, mostly with the deputy Tahsildar (78 per cent, Civil Supply Deputy Tahsildar (CSDT) or Mandal Supply Officer (MSO)), Asst. Supply Officer (27 per cent) and MROs (21 per cent). Among them, 67 per cent have reported that their problems have been resolved after lodging complaints. However, the problem resolution reported in Anantapur was low at 32 per cent.

3.3 Supply and Distribution of Commodities

All dealers in all the four districts have reported that ration is distributed regularly at their shops on a monthly basis. They all are getting commodities such as rice, sugar and kerosene, etc., as per the entitlement of the beneficiaries at their shops and the same is being distributed to all the beneficiaries as per their entitlements. The shops are kept open by all the dealers on all working days for the convenience of the users in the State of Andhra Pradesh.

3.4 Pre-AePDS vs AePDS comparison

An attempt was made to understand the quality of service delivery pre and during AePDS by comparing the difference observed by the dealers in various aspects of the PDS. The difference reported varies between districts across different aspects. However every district has seen an improvement in service delivery after the introduction of AePDS. The initiative has definitely resulted in making PDS more accountable, commodities are received at the FPS in accurate measurements and resulted in overall improvement of the system.

Prior to the implementation of AePDS, it was reported that there were more bogus cards (85 per cent), leakage in weighing the commodities in East Godavari district by 25 per cent of FPS dealers. Commodities were being sent off for sale in black market as reported by 30 per cent dealers in East Godavari district and 25 per cent dealers in Krishna district.

The responses of the FPS dealers on various aspects of service delivery and the impact of AePDS in terms of benefits reach the actual beneficiaries (100 per cent), more transparent (96 per cent), accurate (63 per cent) and timely distribution of commodities (59 per cent) and also observed more accountable (33 per cent) in PDS distribution. District wise findings are summarised in the following table:

Table 3.2: Pre-AePDS vs AePDS Service Delivery as Reported by FPS Dealers

Aspects of PDS	East Godavari	Srikaku- lam	Krishna	Anantapur	Andhra Pradesh
Pre –AePDS-Conditions					
More bogus cards	75%	100%	65%	100%	85%
Benefits given to non-beneficiaries	100%	95%	95%	95%	96%
Commodities are sent to black mar- kets	30%	5%	25%	0%	15%
Leakages during weighing the com- modities	25%	5%	10%	0%	10%
AePDS-impacts					
Benefits reach the actual beneficiaries	100%	100%	100%	100%	100%
Very Transparent	95%	100%	90%	100%	96%
Receiving accurate commodities	45%	85%	90%	30%	63%
Timely Distribution	70%	50%	50%	65%	59%
More Accountable	25%	50%	10%	45%	33%
Improved Service Delivery	10%	40%	15%	30%	24%

3.5 Cashless Transactions

All dealers (100 per cent) in the State were aware of the cashless transactions in PDS. However, none of their shops are covered under the scheme (0 per cent).

A majority of these individuals (99 per cent) have used/practiced cashless transactions in PDS and have found it useful because of the ease in payment (68 per cent), not having to carry hard cash (61 per cent) and also the process has helped resolve the issue of tendering change (21 per cent) in transactions for a lot of the FPS owners.

Table 3.3: Benefits of Cashless Transactions Experienced by Dealers of FPSs

Benefits of Cash-less transactions	East Godavari	Srikakulam	Krishna	Anantapur	Andhra pradesh
Easy payment	55%	90%	65%	60%	68%
No problems of carrying hard cash	55%	70%	60%	60%	61%
No change issue (Tender money)	15%	15%	0%	55%	21%

3.6 Portability (Anywhere Ration) programme

On an average 98 per cent FPS dealers in AP are aware of the portability programme under the PDS distribution system. A vast majority of them (99 per cent) have also reported that customers have purchased commodities from their shops through this programme over the last one year. Most of them (98 per cent) have opined that the programme was very useful especially for the migrant labourers.

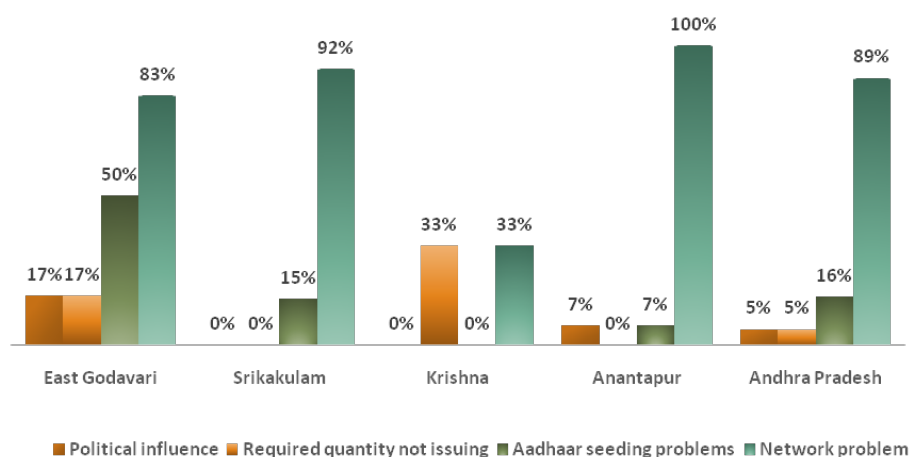
3.7 Complaints Regarding FPSs

A negligible number of dealers (three per cent, two shop dealers) reported that complaints were filed against their FPSs by the card holders in the State. The complaints were mainly related to the quantity of the commodities distributed and also regarding the behaviour of the dealer/employee with the customer. The complaints were mostly lodged using the toll-free number or with the Deputy Tahsildar/Superintendent.

3.8 Grievance Redressal System

On an average, 41 per cent dealers in AP reported that the information regarding grievance redressal (complaints) is displayed at the FPSs. This was lowest in Anantapur district with only 15 per cent dealers reporting that the information was displayed while it was highest in East Godavari (65 per cent). Once again, on an average 46 per cent dealers reported that the complaint register was prominently displayed in the shops. Two-third dealers (75 per cent) were aware of the process of lodging complaints.

Figure 3.2: Nature of Problems Reported by FPS Dealers



Many dealers (84 per cent) have lodged complaints regarding these problems about PDS. Most of these were oral complaints (94 per cent). A little more than half (52 per cent) of these complaints were resolved. All those who complained were satisfied with the problem resolution, some of them were completely satisfied (56 per cent) while others were partially satisfied (44 per cent).

3.8.1 Vigilance Committee

Many dealers of the FPSs (71 per cent) were aware of the existence of vigilance committees. A vast majority of the dealers (98 per cent) have reported that their shops do have shop level vigilance committee in Andhra Pradesh. Around, 72 per cent dealers have reported that the committee meets on a monthly basis. Most of the dealers (98 per cent) opine that these committees are useful to PDS users.

3.8.2 Consumer Helpline

On an average 78 per cent dealers were aware of the consumer helpline. A little less than half of the dealers (48 per cent) had used the helpline number to lodge complaints about the PDS. Many of those who had used the helpline (65 per cent) reported that they got a response from the helpline when they tried to lodge a complaint. The process of lodging a complaint using the helpline was found to be good and was able to be understood by many dealers in all the four districts.

Around 69 per cent of those who used the consumer helpline reported that their complaint was registered immediately. A little more than half of their complaints (53 per cent) were resolved. Many of those whose complaints were resolved (68 per cent) reported that there was a follow up call from the helpline once their problems were resolved.

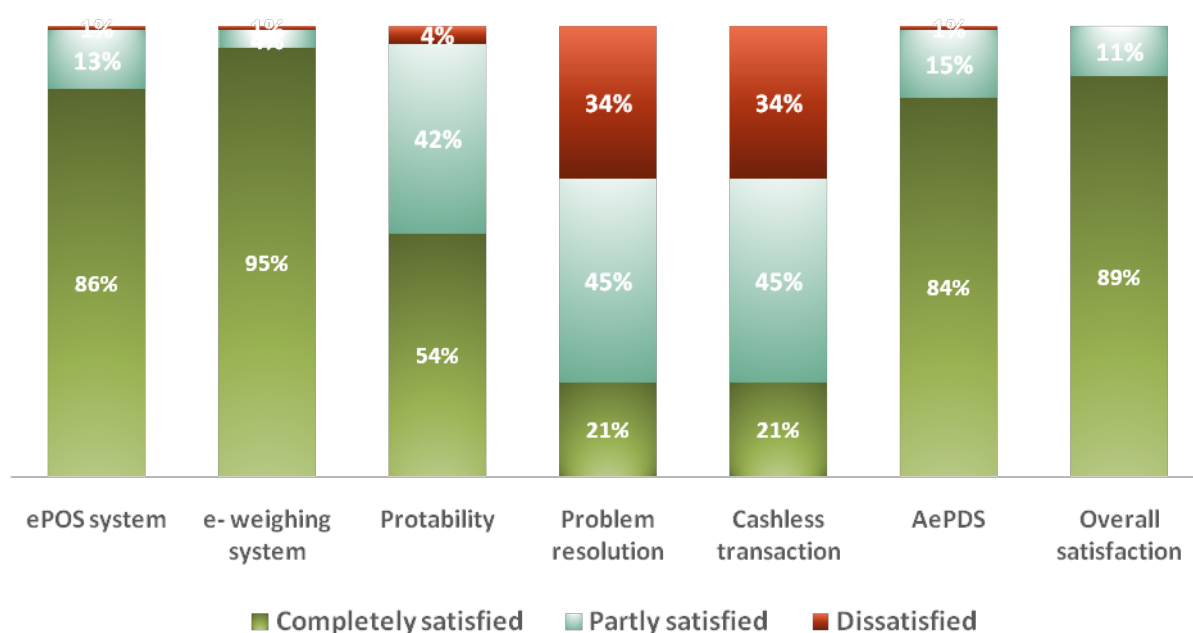
3.8.3 Citizen Charter

On an average 73 per cent of the dealers were aware of the PDS citizen charter. A majority of them (95 per cent) have gone through the charter and have found the charter to be very helpful as it provided information about their entitlements under PDS. They also found the information given in the charter to be complete.

3.9 Overall Satisfaction with PDS

On an average, a majority of the dealers of PDS shops were satisfied with the system. More than half of them are completely satisfied on various aspects of the system such as AePDS, e-weighing system and portability system, etc. However, complete satisfaction with problem resolution and cashless transaction was less at 21 per cent. Overall satisfaction with the PDS system across all the four districts was high.

Figure 3.3: Satisfaction Levels of Dealers across Various Aspects of PDS



3.10 Suggestions for Improvement

FPS dealers have shared a few suggestions which when implemented, in their opinion will make the existing PDS more efficient and effective. Some of these suggestions are listed below:

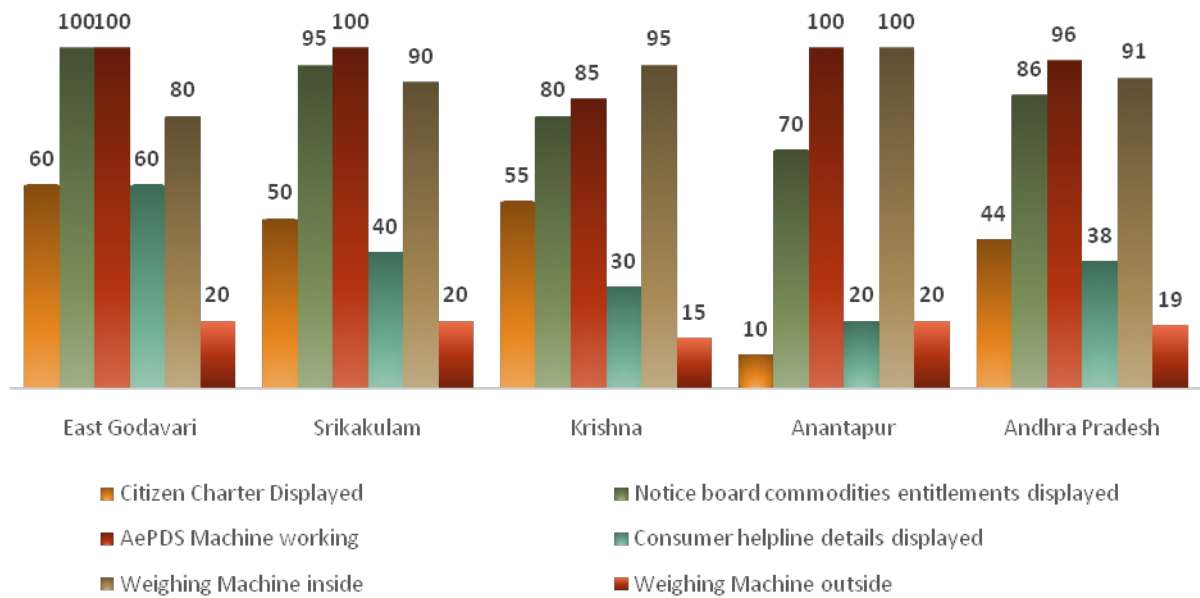
- Increase commission charges
- Add more commodities for distribution
- Introduce monthly salary
- Provide stationary
- Reduce weight loss at the stock point

3.11 Observations at the FPS

Every FPS was observed by the survey team to check if certain essential information was

displayed as well as if the essential infrastructure was available. The chart below shows the status of the same across the four districts.

Figure 3.4: Observations of the Survey Team about the FPS in the Four Districts



4.

Findings from PDS Officials

The study aimed at understanding the implementation of Aadhaar enabled PDS (AePDS) with electronic Point of Sale (ePoS) devices for automation of Fair Price Shop (FPS) in the districts of Andhra Pradesh from both supply and demand sides. Hence the staff members at the PDS department were surveyed to get their feedback on the implementation of the initiatives and how make it more efficient and effective for its users.

4.1 PROFILE OF FPS DEALERS

Age and Gender: Around 70 per cent of the respondents were male while the remaining were female. The average age of the respondents was 46 years.

Designation: the following officials from the PDS were interviewed during the survey. Nearly 55 per cent of the staff respondents were Deputy Tahsildars/Superintendents.

- District Supply Officer/Deputy Directors
- Asst. Supply Officer/Asst. Grain Purchasing officer/Asst. Director/Tahsildar
- Deputy Tahsildar/Civil supplies Deputy Tahsildar (CSDT)/Superintendents/Mandal Supply Officer (MSO)
- Senior Assistants/Senior Accountants
- Senior checking Inspectors/UD Revenue Inspectors

Educational qualification: On an average 80 per cent of the respondents were graduates.

Place of residence: Around 65 per cent respondents resided in the same place while the remaining 35 per cent were from different places. In East Godavari district, only 40 per cent staff members were from the same place.

Duration of employment: On an average, the staff members have been working with the PDS for 13 years, they have been in the current post for seven years, working in the same office for a period of five years.

PDS jurisdiction: On an average, 2,62,068 customers are being served by the all interviewed officials in their jurisdiction through 513 PDS shops, covering nearly 280 villages.

Nature of work: On a routine basis, the staff receives applications from consumers, forwards the application, address the consumer grievances and monitor the PDS shops as a part of their duty at the department. On an average, less than half of the staff (45 per cent) had opined that they were able to discharge their duties with the current office strength. However, East Godavari district is an exception where a larger number of staff members (80 per cent) have reported the same. Many of the positions being vacant was one of the main reasons cited by these staff members for not being able to discharge their duties. Another important reason

reported was also the insufficiency of sanctioned posts itself.

The three important actions that need to be taken to improve their work as reported by the staff are as follows:

- Improve internet signals strength and solve connectivity issues (60 per cent)
- Dealers commission to be increased or introduce salary to FPS dealers depending on the possibility (15 per cent)
- Recruit more staff (15 per cent)

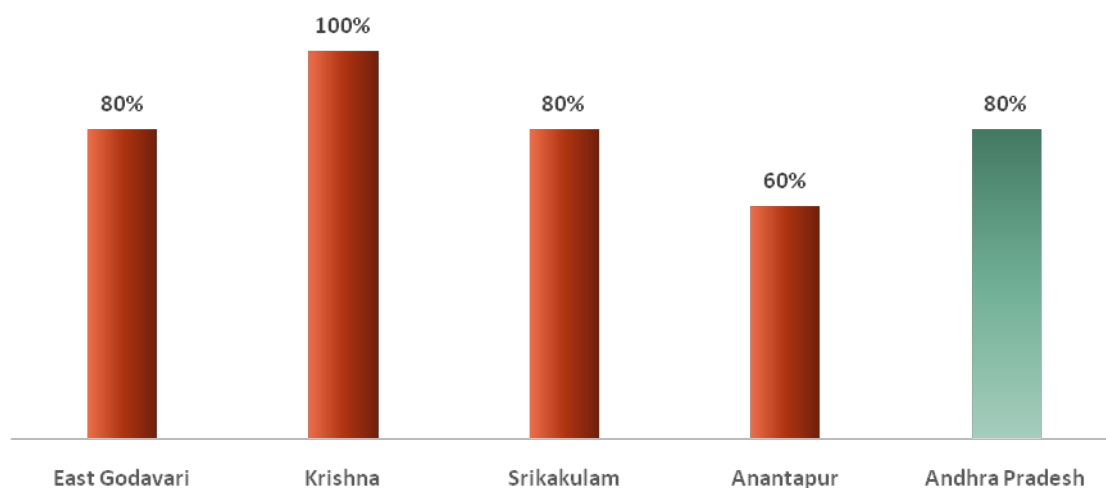
4.2 Quality of PDS Services

AePDS: All the staff members are aware of the AePDS across the four districts (100 per cent). On an average, 80 per cent shops in their jurisdictions were completely covered under the AePDS initiative while the remaining 20 per cent shops were partially covered. These shops are partially covered because of the connectivity issues as reported by the staff members.

The main issue reported with Aadhaar seeding is the difficulty in finger print recognition. This was reported as a main problem across all four districts by all the staff members (100 per cent). Around 30 per cent officials also reported that they faced difficulty in iris recognition.

A majority of the shops in their jurisdiction issue commodities through AePDS. Those few shops that do not issue commodities under this initiative do so because of the connectivity issues as reported by the staff members.

Figure 4.1: Ration Shops Issuing Commodities through AePDS in their Jurisdiction



All staff members in Andhra Pradesh are aware of how AePDS works. A majority of the staff members (90 per cent) have undergone training/orientation on the working of AePDS. The remaining 10 per cent staff members who have not undergone training are from East Godavari and Krishna district.

Problem incidence: PDS system has reported facing issues with AePDS in all four districts interviewed and all officials (90 per cent). Connectivity issue has been reported everywhere and it happened once in a while (83 per cent). Issues with software updates have been reported by staff members of all four districts. Many of those who faced problems (89 per cent) have lodged complaints regarding the same. A little more than half of those who lodged complaints (56 per cent) have reported that their problems were resolved.

4.3 Supply and Distribution of Commodities

All commodities are being issued by all the shops as reported by all staff members in four districts as per the entitlements of the beneficiaries. The FPSs are kept open by all the dealers on all working days as reported by the staff members in all the four districts.

Table 4.1: Distribution of Commodities at the FPS as Reported by Staff

	East Godavari	Krishna	Srikakulam	Anantapur	Andhra Pradesh
Rice	100%	100%	100%	100%	100%
Wheat	20%	0%	0%	0%	5%
Sugar	80%	100%	100%	100%	95%
others	80%	100%	100%	100%	95%

4.4 Pre- AePDS vs AePDS Comparison

Staff members were asked to share their experiences with the PDS efficiency pre and post-AePDS times. The difference reported varies between districts across different aspects. However every district has seen an improvement in service delivery after the introduction of AePDS. The initiative has definitely resulted in timely distribution of commodities, ensuring that the benefits reach the actual beneficiaries and improved the overall transparency of PDS, to name a few.

The interviewed officials reported that, prior to the implementation of AePDS, it was reported that there was leakage in weighing the commodities (75 per cent) and commodities were being sent off for sale in black market as reported by 80 per cent and more bogus cards (95 per cent).

The responses of the staff members on various aspects of service delivery and the impact of AePDS with Pre-AePDS conditions is summarised in the following table:

Table 4.2: Pre-AePDS vs AePDS Service Delivery as Reported by Staff Members

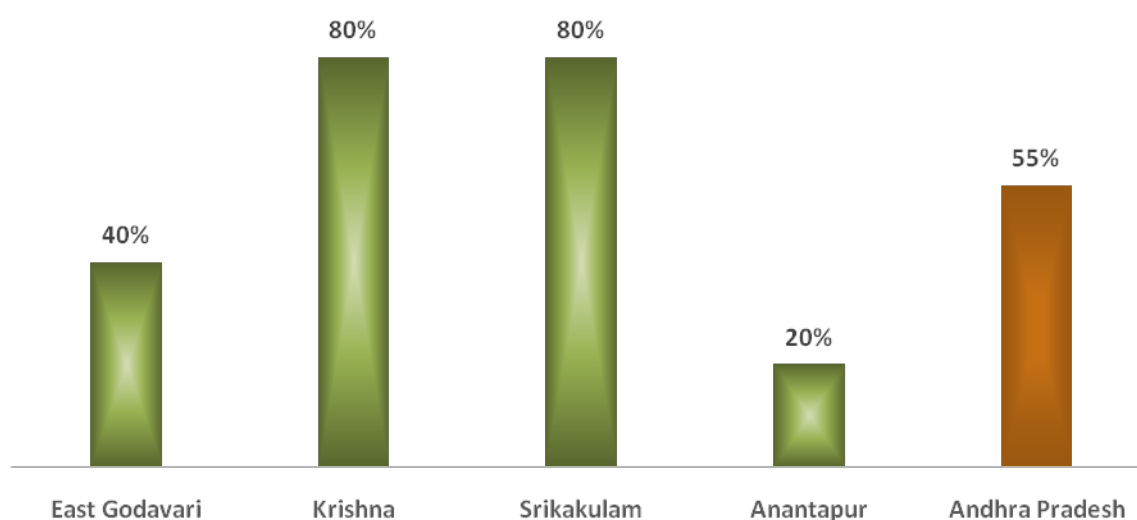
Aspects of PDS	East Godavari	Srikaku- lam	Krishna	Anantapur	Andhra Pradesh
Pre –AePDS -Conditions					
More bogus cards	100%	100%	100%	80%	95%
Benefits given to non-beneficiaries	80%	80%	100%	100%	90%
Commodities are sent to black markets	100%	100%	40%	80%	80%
Leakages during weighing the commodities	100%	100%	40%	60%	75%

Aspects of PDS	East Godavari	Srikakulam	Krishna	Anantapur	Total
AePDS - impacts					
Benefits reach the actual beneficiaries	100%	100%	100%	100%	100%
Very Transparent	100%	100%	100%	100%	100%
More Accountable	60%	80%	60%	100%	75%
Improved Service Delivery	20%	40%	40%	100%	50%
Timely Distribution	100%	100%	100%	100%	100%
Receiving accurate commodities	80%	100%	100%	100%	95%

4.5 Cashless Transactions

All staff members (100 per cent) were aware of the cashless transactions in PDS. On an average, 55 per cent shops in their jurisdiction were covered under the initiative. The lowest was in Anantapur district with only 20 per cent shops under cashless transactions. An insufficient fund in the bank account was the main reason for less coverage of cashless transactions (89 per cent).

Figure 4.2: PDS Shops Covered under Cashless Transactions in their Jurisdictions



The staff members report that the cashless transaction is useful because of the ease in payment, not having to carry hard cash and also the process helped to resolve the issue of tendering change in transactions to a lot of them.

Table 4.3: Benefits of Cashless Transactions as Reported by Staff Members

Benefits of Cashless transactions	East Godavari	Srikakulam	Krishna	Anantapur	Andhra Pradesh
Easy payment	80%	100%	100%	100%	95%
No problems of carrying hard cash	80%	60%	60%	100%	75%
No change issue (Tender money)	40%	80%	40%	80%	60%

But, due to insufficient fund in the beneficiaries bank account (89 per cent), higher transaction charges by the banks (93 per cent), problems with e-PoS machine, i.e., swiping machine (33 per cent) and Gateway issues (33 per cent) cashless transactions was not covered efficiently.

4.6 Portability (Anywhere Ration) programme

All staff members (100 per cent) were aware of the portability programme under the PDS distribution system in Andhra Pradesh. All staff members (100 per cent) reported that, beneficiaries obtained commodities as per their entitlement from shops in their jurisdiction

under this programme. They found the programme useful to poor migrant labourers. They also found the initiative helpful in saving time and money.

4.7 Complaints regarding FPSs

On an average, 80 per cent staff members in the State have reported that they have received complaints from ration card holders. A majority of these complaints were regarding the poor connectivity (88 per cent) and about the difficulty in Aadhaar authentication (81 per cent). Many staff members (81 per cent) reported that these complaints were resolved at their level while some were reported to senior officers (69 per cent).

4.8 Grievance Redressal System

On an average, 95 per cent staff members reported that the information regarding grievance redressal (complaints) was displayed at the FPSs in their jurisdiction. The reporting was lower in Anantapur district with 80 per cent staff reporting that the information was displayed.

A quarter of the staff members (25 per cent) reported that they faced problems while discharging their duties. The percentage is a little higher in Anantapur district where 40 per cent staff reported the same. The nature of problem reported by all staff members across all the four districts is the same i.e., issue with network.

All those staff members who faced problems have lodged complaints regarding their problems to District Supply Officer/Deputy Directors and (or) Asst. Supply Officer/Asst. Grain Purchasing officer/ Asst. Director/Tahsildar.

4.8.1 Vigilance Committee

All staff members except one official in Krishna district were aware of the existence of vigilance committees at the PDS shop-level. All the staff members in East Godavari, Krishna and Anantapur districts reported that they have shops with shop-level Vigilance Committees in their jurisdiction. Around 60 per cent staff members in Srikakulam have reported that they have shops with shop-level Vigilance Committees in their jurisdiction.

A little over half of the staff members (59 per cent) reported that these committees met on monthly basis, 35 per cent reported they meet quarterly. Around 33 per cent staff members in Srikakulam district reported that the committees meet whenever a problem arises. All staff members opine that the vigilance committees are helpful to consumers.

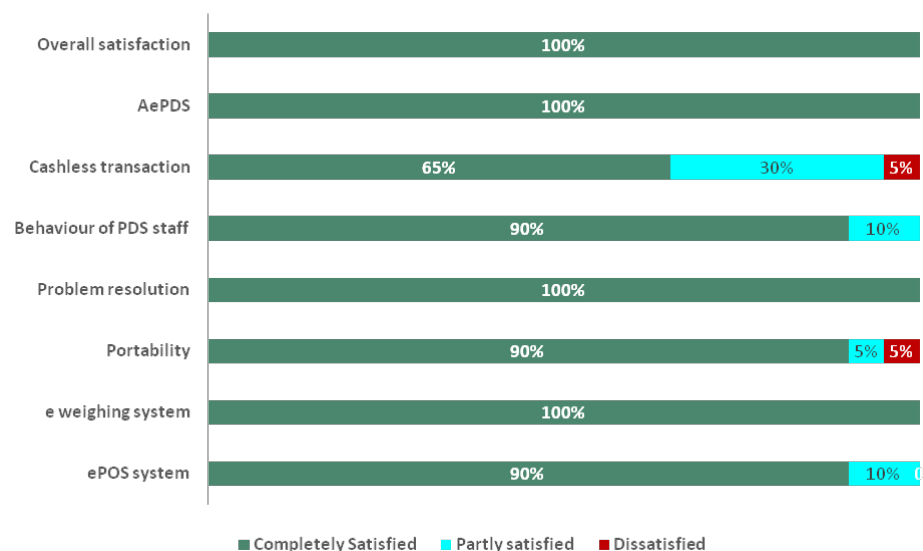
4.8.2 Consumer helpline and Citizen Charter

All staff members were aware of the consumer helpline and the citizen charter. They have all seen the citizen charter and opined that the information provided in the charter was helpful as it gives information about the entitlements of the beneficiaries. Most of the staff members (90 per cent) opined that the contents in the charter were complete.

4.9 Overall satisfaction with PDS

On an average, a majority of the PDS staff members are satisfied with the PD system. Apart from cashless transactions, a majority of the aspects of the PDS have completely satisfied more than 90 per cent of the staff members. Overall satisfaction with the PDS system across all the four districts was 100 per cent.

Figure 4.3: Overall satisfaction with PDS as reported by Staff members



4.10 Suggestions for Improvement

PDS staff members have come forward with some suggestions that can improve the existing service delivery. Some of these suggestions are as follows:

- Improve connectivity (45 per cent)
- Add more commodities for distribution (25 per cent)
- Introduce monthly salary to dealers (15 per cent)
- Recruit more staff (15 per cent)

5. Conclusion And Recommendations

1. Working and Supply of Ration at the Fair Price Shops

The Fair Price shops are kept open regularly in most cases. The supply of ration at the shops is extremely good. It is regular and the commodities supplied are also purchased as per their entitlements by a majority of the cardholders regularly. However, a few cardholders have raised a concern about the quality of the commodities.

It is suggested that the shop-level vigilance committee take a keen interest in checking the quality of the commodities supplied in each of these shops and ensure there are no sub-standard food items given to the cardholders.

2. AePDS

The AePDS initiative is found to be very useful by users, staff and the shop dealers. It has strengthened the process of ensuring that the commodities reach the actual beneficiaries and not into the black market. It has also improved the proper weighing of commodities during transactions at the FPSs. More users from other backward castes and SC had reported that all commodities were not being measured/weighed properly before the AePDS implementation. After the implementation of AePDS, this has improved. However, infrastructure issues such as power failure and internet connectivity problems have reduced the efficiency of this initiative. Also inability to recognise the fingerprint and iris has delayed/strangled the process of Aadhaar seeding for some beneficiaries.

It is very essential to ensure that the power supply and internet connectivity is improved to ensure that the supply of commodities through AePDS goes on smoothly without interruption. Alternate power sources such as generators and solar power, etc., can be explored where uninterrupted power supply from main grid seems difficult. Public Private Partnership models with digital companies can be a possible solution to improve internet connectivity.

3. Cashless Transactions

Cashless transaction initiative benefited the users and the FPS dealers as there is ease in payment, no hard cash transactions and the process has helped resolve the issue of tendering change in transactions. However, awareness about the initiative was not complete, it is less than average among the SC and ST users and coverage of shops under the initiative is not 100 per cent.

Investing on building awareness about the initiative can be very useful and was necessary

to ensure the success of the steps taken so far. Reasons for certain number of shops not being covered under the initiative should be understood and the department at the district as well as the State level should take appropriate measures to cover all the shops under the initiative if possible at once or in phased manner but without taking too long.

4. Portability Programme

The portability programme aims at making ration available for beneficiaries on the move. This is a very useful initiative for people who keep moving places such as migrant labourers. However, the awareness is only 60 per cent. People who have availed the benefits are very low.

Targeted and general awareness building activities have to be taken up by the district level PDS department to share more information about the initiative among beneficiaries. This will also help in increasing the number of recipients of the initiative.

5. Grievance Redressal

Generally reporting of problems related to PDS is low among users, shop dealers and department staff members. However, the pro-active measures taken by the department at the FPS level towards grievance redressal are far from satisfactory. The display of essential information to lodge complaints and prominent display of complaint register at the shops is found only in a few shops. General awareness about the process of lodging complaints is low among card holders. Awareness about vigilance committees at the FPSs, citizen charters and consumer helpline numbers, all of it is very low among beneficiaries hence the number of people who have used/approached any of these are also very few. Some of the shops do not have shop level functional vigilance committees.

Shop dealers on the contrary were aware of the process of grievance redressal to be followed. Many have used the helpline to lodge complaints or have approached higher officials in the department to lodge complaints and have got their grievances addressed.

It is very necessary to invest in building awareness among users about the various options/channels available to card holders for lodging their complaints about the PDS services available to them. The department has to have surprise checks of the FPSs to check if the complaint registers have been maintained and kept in prominent locations within the shop. Obtaining feedback from the cardholders on a regular basis at the shop-level can be introduced whereby they can be also educated on their entitlements and the available

channels of grievance redressal. Unless the system gets honest and regular feedback from its citizens, the areas of improvement become unknown and it also becomes difficult to measure the success of the initiatives.

6. Overall Satisfaction with PDS

Generally the overall satisfaction with the quality of PDS services is satisfactory among all stakeholders. Various aspects of the service such as behaviour of staff, AePDS and Portability programme, etc., have been rated highly by them.

S.No.	Areas for improvement	Suggested steps for improvement
1	Quality of the commodities	Shop-level vigilance committee should take a keen interest in checking the quality of the commodities supplied
AePDS		
2	Aadhaar seeding issues	Dedicated Aadhaar seeding campaigns to be incited at village level
	Infrastructure issues such as power failure and internet connectivity problems	Alternate power sources such as generators and solar power, etc., can be explored where uninterrupted power supply from main grid seems difficult
		Public Private Partnership models with digital companies can be a possible solution to improve internet connectivity
Cashless Transactions		
3	Low awareness about cashless transactions	Dedicated awareness initiatives and media campaigns should be planned and implemented
	Less coverage of shops under cashless transactions	Deeper investigation of reasons for less coverage and appropriate steps to increase the coverage to be taken by the State and district level PDS departments

Portability Programme		
4	Low awareness about Portability programme	Dedicated awareness initiatives and media campaign should be planned and implemented.
	Less number of cardholders have availed the benefits of the programme	This will also ensure more cardholders avail the benefits of the programme
Grievance Redressal		
5	Low awareness of complaint lodging method among card holders	General and Dedicated awareness programmes have to be conducted at the district level to build awareness among card holders.
	Low awareness about Vigilance committee, Citizen Charter and Helpline	Obtaining feedback from the cardholders on a regular basis at the shop level can be introduced whereby they can also be educated on their entitlements and the available channels of grievance redressal.
Overall satisfaction		
6	Though a larger number of users, dealers and staff have expressed that they are satisfied with the PDS, many of them are partially satisfied which shows that clearly there is a scope for improvement	By addressing the issues related to various aspects of the PDS such as internet connectivity and power issues, etc., the department can ensure that partial satisfaction can be transformed to complete

References

- Bhavya Goswami (2014) e-PDS Portal of India Leveraging technology to provide reliable and timely information on Public Distribution System , Case Studies on e-Governance in India .
- Chakraborty, M. (2000). The Public Distribution System in India. *Teaching Public Administration*, 20(2), 27–33. <https://doi.org/10.1177/014473940002000203>
- Commission, P. (2005). Performance Evaluation of Targeted Public Distribution System (PDS). *International Immunology*, 26(3), NP. <https://doi.org/10.1093/intimm/dxu021>
- Drèze, J., & Khera, R. (2013). Rural Poverty and the Public Distribution System. *Economic and Political Weekly*, XLVII (45 & 46), 55–60.
- Drèze, J., & Khera, R. (2013). Rural Poverty and the Public Distribution System. *Economic & Political Weekly*, XLVII (45 & 46), 55–60.
- Dreze, J., & Khera, R. (2015). Understanding Leakages in The Public Distribution System. *Economic and Political Weekly*, L (7), 39–42. <https://doi.org/10.1177/014473940002000203>
- Garg, S., & Sundar, K. (2013). A Mobile Solution for an Inclusive Public Distribution System in India. *Electronic Journal of E-Government*, 11(1), 210–227. Retrieved from <http://www.ejeg.com/issue/download.html?idArticle=304>
- Howes, S., & Jha, S. (1992). Urban Bias in Indian Public Distribution System. *Economic and Political Weekly*, 27(19), 1022–1030.
- Khera, R. (2011). India's public distribution system: Utilisation and impact. *Journal of Development Studies*, 47(7), 1038–1060. <https://doi.org/10.1080/00220388.2010.506917>
- Khera, R. (2011). Revival of the public distribution system: evidence and explanations. *Economic & Political Weekly*, 46(44), 36–50. Retrieved from <http://eprints.cscsarchive.org/343/>
- Khera, R. (2011). Trends in Diversion of Grain from the Public Distribution System. *Economic and Political Weekly*, xlv (21), 106–114. <https://doi.org/10.1177/014473940002000203>
- Kishore, A., & Chakrabarti, S. (2015). Is more inclusive more effective? The “New Style” public distribution system in India. *Food Policy*, 55, 117–130. <https://doi.org/10.1016/j.foodpol.2015.06.006>
- Krishnamurthy, P., Pathania, V., & Tandon, S. (2014). Public distribution system reforms and consumption in Chhattisgarh: A comparative empirical analysis. *Economic and Political Weekly*, 49(8), 74–81. Retrieved from <http://www.scopus.com/inward/record.url?eid=2-s2.0-84897826433&partnerID=tZOtx3y1>

Kumar, A., & Ayyappan, S. (2014). Food Security and Public Distribution System in India. *Agriculture Research*, 3(3), 271–277. <https://doi.org/10.1007/s40003-014-0115-9>

Lee, W. Bin, & Chang, C. C. (1996). Integrating authentication in public key distribution system. *Information Processing Letters*, 57(1), 49–52. [https://doi.org/10.1016/0020-0190\(95\)00177-8](https://doi.org/10.1016/0020-0190(95)00177-8)

Maurer, U. M., & Yacobi, Y. (1996). A non-interactive public-key distribution system. *Designs, Codes, and Cryptography*, 9(3).

Monastyrski, Tom (2004). Ukraine: Better Governance through Public Participation – The People’s Voice Project, A case study from “Reducing Poverty, Sustaining Growth. What Works, What Doesn’t, and Why,” A Global Exchange for Scaling Up Success Scaling Up Poverty Reduction: A Global Learning Process and Conference Shanghai, May 25.27, 2004

Nagavarapu, S., & Sekhri, S. (2016). Informal monitoring and enforcement mechanisms in public service delivery: Evidence from the public distribution system in India. *Journal of Development Economics*, 121, 63–78. <https://doi.org/10.1016/j.jdeveco.2016.01.006>

Nakkiran S (2004), “A Study on the Effectiveness of Public Distribution System in Rural Tamilnadu” Submitted to the Planning Commission Government of India, New Delhi

Nuutinen, P., Partanen, J., Peltoniemi, P., Salonen, P., Lana, A., Matikainen, M., Kaipia, T. (2013). Experiences from use of an LVDC system in public electricity distribution. 22nd *International Conference and Exhibition on Electricity Distribution (CIRED 2013)*, (776), 0776–0776. <https://doi.org/10.1049/cp.2013.0919>

Paul, Samuel (n.d.). Making Voice Work, The Report Card on Bangalore’s Public Services. Bangalore: Public Affairs Centre

Planning Commission, & Government of India. (2002). Public Distribution System. *Tenth Five-Year Plan 2002-2007*, (April 2000), 365–380. Retrieved from http://eprints.cscsarchive.org/338/1/planning_comm_on_pds_v2_ch3_4.pdf

Praveen Kumar Reddy N & Himachlam D “PDS and Tribal Development”, the Associated Publications, New Delhi, 2007

Puri, R. (2012). Reforming the Public Distribution System: Lessons from Chhattisgarh. *Economic and Political Weekly*, 42(5), 21–23.

Rahman, A. (2014). Revival of Rural Public Distribution System. *Economic & Political Weekly*, xlix (20), 62–68.

Rao, E. V. P. (2008). Food Security and Public Distribution System in India: A Review. *Asia-Pacific Journal of Rural Development*, 2(18), 175–186. <https://doi.org/10.1007/s40003-014-0115-9>

Sakshi Balani (2013) Functioning of the Public Distribution System, PRS Legislative Research

Sreedharan S, Prabhakar K, Srikant P. Venugopala Reddy A and Harish Poovaiah (2014), “Public Distribution System in Karnataka” A Study of the Effectiveness of its Monitoring Mechanisms by Public affairs Centre, Bangalore.

Svedberg, P. (2012). Reforming or Replacing the Public Distribution System with Cash Transfers? *Economic & Political Weekly*, 47(7), 53–62. Retrieved from http://eprints.cscsarchive.org/344/%5Chttp://eprints.cscsarchive.org/344/1/Reforming_or_Replacing_the_Public_Distribution_System_with_Cash_Transfers.pdf

Tanaka, K., Okamoto, A., & Saito, I. (2005). Public-key system using DNA as a one-way function for key distribution. *Biosystems*, 81(1), 25–29. <https://doi.org/10.1016/j.biosystems.2005.01.004>

The World Bank (2001). *Filipino Report Card on Pro-Poor Services*, Report No. 22181-PH. Washington, DC.

The World Bank (2004b). Citizen Report Card Surveys, a Note on the Concept and Methodology, Social Development Notes, Participation and Civic Engagement, No. 91, February 2004

Appendix I: about Citizen Report Cards (CRCs)

Citizen Report Card (CRC) as a Tool for Transparency and Accountability: The Citizen Report Card (CRC) is a simple and credible tool to provide systematic feedback to public agencies about various quantitative and qualitative aspects of their performance. CRCs elicit information about users' awareness, access, usage and satisfaction with public services. In the context of poverty reduction programmes, it often complements the expert analyses and conventional poverty monitoring indices with a "bottom-up" assessment of pro-poor services. CRC identifies the key constraints faced by the citizens, especially the poor and the underserved face in accessing public services, their appraisals of the quality, adequacy of public services and the quality of interactions they have with the providers of the services. CRC offers several recommendations on sector policies, strategies and programmes to address these constraints and improve service delivery.

CRCs entail a random sample survey of the users of different public services (utilities), and the aggregation of the users' experiences as a basis for rating the services. CRCs also help to convert individual problems into common sectoral issues. It facilitates prioritisation of reforms and corrective actions by drawing attention to the worst problems highlighted. CRCs also facilitate mixing of ideas and approaches by identifying good practices.

CRC studies provide a benchmark on quality of public services as experienced by citizens. Hence, they go beyond the specific problems that individual citizens may face, and place each issue in the perspective of other elements of service design and delivery, as well as a comparison with other services, so that a strategic set of actions can be initiated.

CRCs capture citizens' feedback in simple and unambiguous terms by indicating their level of satisfaction or dissatisfaction. For example, the most basic but clear feedback that a citizen may give about the provision of Primary Health is total dissatisfaction. To appreciate this feedback, we must relate it to the ratings given to other dimensions by the same person. For example, satisfaction with the behaviour of doctors may be rated worse than availability of medicines. When we look at these two pieces of information, we can conclude that provision of health services may be a cause of dissatisfaction, but the priority for corrective action may be on improving the attitude and behaviour of doctors. Hence measures of citizens' satisfaction across different dimensions of public services constitute the core of CRC studies.

With the help of the learnings from various projects carried out at the national and international arena, continuous efforts are being made to widen the scope and depth of the Citizen

Report Card approach. In some of the recent CRCs carried out, different advocacy methods involving closer community participation have been tried and tested and found effective. In the same manner, other stakeholders in addition to users, such as service providers themselves and community representatives, etc., are also being covered within the ambit of the CRC survey to bring about a balanced approach and comprehensiveness to the service(s)/programme(s) being covered.

CRC studies do not stop with measures of satisfaction - they go on to inquire into specific aspects of interaction between the service agency and the citizen, and seek to identify issues that emerge in connection with the same. In more simple terms, it suggests that dissatisfaction has causes, which may be related to the quality of service enjoyed by the citizen (like reliability of water supply or availability of learning materials in a public school), the type of difficulty encountered while dealing with the agency to solve service problems (like complaints of water supply breakdown), and hidden costs in making use of the public service (special tuition fees to teachers or investments in filters to purify “drinking water”). Therefore we can see that CRC studies go into different aspects of performance during interfacing with citizens, to provide indicators of problem areas in public services. An important aspect of CRCs is the credibility they have earned. The conclusions in CRC are not opinions of few persons who think in a particular manner, nor the complaints of a few aggrieved citizens. The methodology involves systematic sampling across all subsections or segments of citizens - including those who are satisfied as well as the aggrieved - and presents a picture that includes all opinions. This is possible because the methodology makes use of advanced techniques of social science research, for selecting samples, designing questionnaires, conducting interviews, and interpreting results. As a result, the CRCs provide reliable and comprehensive representation of citizens' feedback.

Outcomes of Citizen Report Cards: The concept of citizen feedback surveys to assess the performance of public services is relatively new and fast gaining wide acceptance. The responses to CRCs indicate impact at four levels:

Stimulating Reforms: CRC studies clearly brought to light wide panoply of issues, both quantitative and qualitative that sends strong signals to public service providers. The use of a rating scale permitted the respondents to quantify the extent of their satisfaction or dissatisfaction with the service of an agency, as well as different dimensions of its service. The inter-agency comparisons that a report card permits make possible quantification and rankings, which demand attention in a way that anecdotes do not.

Activating Stakeholder Responsiveness: Many agencies used the CRC findings as a diagnostic tool to trigger off further studies and internal reforms. These findings help senior leadership to monitor effectiveness of administration across wide areas, in a simple and direct manner, free of technical details. For administrators and planners, it provides insights into aspects of service delivery where greater care, supervision and investment may be required.

Raising Public Awareness: The CRC findings are always placed in public domain and disseminated widely through the media. Needless to say, specific findings and the novelty of the method used, make it useful and attractive for the media. Since issues of poor public service come up from time to time, the media as well as researchers link it to CRC findings, and use the valid and reliable base for raising issues and proposing changes.

Mobilisation of State – Public Partnerships: Seminars and meetings are an integral part of disseminating CRC findings, and involve both government officials and representatives of civil society organisations and NGOs. CRCs gave this critical segment a handy tool to focus on issues of concern and stimulated them to move from anecdotal and subjective issues to facts and figures while requesting public service agencies for specific improvements in priority areas. It also provided these groups with an opportunity to understand the constraints under which service providers` function, and explore options for community initiatives for problem solving.

In short, the insights derived from CRCs can shed light on the degree to which services are reaching the target groups, the extent of gaps in service delivery, and the factors that contribute to any misdirection of resources and services. They help identify issues that constrain effective access and usage of services, like availability, ease of access, quality, reliability and costs. CRCs also help to identify possible ways to improve service delivery by actively seeking suggestions from citizens.

Annexure –I: Systemic Randomly selected FOUR districts

S. No.	District Name	Total Shops	Total Ration Cards	Systematic randomly selected districts
1	Chittoor	2,461	14,98,326	
2	Kurnool	1,347	6,78,559	
3	YSR Kadapa	1,700	10,44,260	
4	Anantapur	2,964	11,93,204	Selected (3)
5	Nellore	1,725	7,57,004	
6	Prakasam	2,167	11,98,814	
7	Guntur	2,858	10,88,017	
8	Krishna	1,896	8,65,546	Selected (4)
9	East Godavari	2,758	14,30,076	Selected (1)
10	West Godavari	1,973	8,08,286	
11	Visakhapatnam	2,425	11,52,458	
12	Vizianagaram	2,125	9,36,747	
13	Srikakulam	2,292	12,40,166	Selected (2)

Source: <http://epostest.ap.gov.in/eposcmdashboard/>

Annexure –II: District/Mandal wise selected List of Fair Price Shops/Dealers List

District	Mandal	1	2	3	4	5
Ananta-pur	Somande-palle	Sakamma (1254003)	Narasimhulu (1254008)	Parvatamma (1254009)	K. Janardhan (1254023)	Manjula (1254030)
	Pedda-vadugur	R. Rajanamma (1207005)	Shakuntalamma (1207013)	B. Adinarayna (1207025)	C. Nayanamma (1207032)	Devana Ramadevi (1207045)
	Kalyandurg	Ramanjaneyulu (1223012)	Mahesh (1223016)	Hanumantha Reddy (1223019)	Vijyalakshmi (1223033)	B. Sujatha (1223079)
	Talupula	Smd. Gouse (1239002)	M. Prasannarani (1239010)	Saritha (1239018)	P. Lakshmi Devi (1239026)	Parvathamma (1239036)
	Rayavaram	Vdmss (S Pushpa (T)) (440004)	Kota Thrinadha Rao (440012)	K. Sarada (440020)	Polinati Abbayi (440029)	Bodaballa Satyana-rayana (440037)
East Go-davari	Allavaram	Karem Venkatrao (455001)	Bonthu Sarojini (455009)	Akula Achiyyana-yudu (455019)	Chitturi Sriniva-sarao (455027)	Yeeti Krishnarao (455035)
	Yeleswaram	V. V. V. S. Ap-palaraju (411006)	R. Satyanarayana (411015)	V.V. S. N. Murthy (411024)	Sk. Ahmadun-nisa (411033)	S. Naveena (411042)
		Batthina Va-ralaxmi (426005)	Gurajapur Dhanal-axmi (426011)	Gangadhar (426017)	Galla Lakshmi (426023)	Thutta Srinivasu (426029)
	Rangampeta					

District	Mandal	1	2	3	4	5
krishna	Agiripalli	Pennamramaramba (622002)	Lakshmi (622008)	Varalakshmi (622011)	Prabhudas (622019)	Silva raju (622031)
		Ede Siva Kumari (638006)	Noor Nehar Begum I/C (638014)	Nageswara Rao (638024)	Srinivasa Rao (638029)	Katakam Venkata Sub- bamma (638038)
	Gudur	K. Venkateswararao (630005)	Tata Seeta Mahalakshmi (630013)	Aarepalli Prameela Devi (630021)	K. R. K. Murthy (630029)	M. Sastulamma (630037)
		M. Subrahman Rao (640003)	Atmakuri Ram Babu (640007)	Kodali Bhavani Katak- sham (640011)	Chiruvolu Nagaraju (640015)	Sajja Vasantha Rao (640019)
	Pedaparupudi	B. Bhasakar Rao (120001)	Y. Reyamma (120011)	Adilakshmi (120022)	Uma (120031)	A. Sarada (120041)
		U. Golla (106004)	J. Sridevi (106015)	R. Dal Naidu (106026)	Appala Naidu (106037)	Veerababu (106047)
	Ponduru	Buddhepu Ja- gadamba (109005)	Konchada Ravi (109017)	R. Ramulamma (109029)	S. Vijayalakshmi (109041)	K. Deepika (109053)
		Bhagyalakshmi (134003)	Duddi Mohini (134013)	P. Janardhana Rao (134024)	Narayana Rao (134037)	P. Yadavathi (134048)
	Sompeta					
Srikakulam	Gara					
	Laveru					
	Ponduru					



TRAINING
& CAPACITY
BUILDING



RESEARCH
& CONSULTANCY



POLICY
FORMULATION
& ADVOCACY



TECHNOLOGY
TRANSFER



ACADEMIC
PROGRAMMES



INNOVATIVE
SKILLING
& LIVELIHOOD

www.nirdpr.org.in