

**PUBLIC DISTRIBUTION SYSTEM AND ITS IMPACT ON
FOOD SECURITY – A CASE STUDY OF KHAMMAM AND
SRIKAKULAM DISTRICTS OF ANDHRA PRADESH (UNITED)**

**A Thesis submitted to the University of Hyderabad in partial fulfillment of the
requirements for the award of the degree of**

DOCTOR OF PHILOSOPHY

In

ECONOMICS

By

RAMESH VADLAMUDI

Under the Supervision of

PROF. N.A.KHAN



**SCHOOL OF ECONOMICS
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January - 2019**

DECLARATION

I, **Ramesh Vadlamudi** hereby declare that this thesis entitled "**Public Distribution System and its Impact on Food Security – A case study of Khammam and Srikakulam Districts of Andhra Pradesh (United)** " submitted by me under the guidance and Supervision of **Prof.N.A.Khan** is a bonafide research work which is also free from plagiarism. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma. I hereby agree that my thesis can be deposited in Shodganga/INFLIBNET.

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I. Research Paper on

1. Ramesh Vadlamudi. 2018. “Land and Food”, *edited by Trinadh Nookathoti, Hyderabad, Paramount publishing house. ISBN: 978-93-85101-06-9, First edition-2018.*

II. Presentations on

1. Ramesh Vadlamudi. 2017. “Targeting Errors in Public Distribution System: A Village study in Srikakulam District in Andhra Pradesh” and presented paper at Central University of Karnataka, 10--11 March, 2017.

2. Ramesh Vadlamudi. 2018. “Biometric system in Public Distribution System: A brief review in Andhra Pradesh”. and presented paper at Department of Economics, Satavahana University, Karimnagar, 28--29 March, 2018.

Further, the student has passed the following courses towards fulfillment of coursework requirement for Ph.D was exempted from doing coursework (recommended by Doctoral Committee) on the basis of the following courses passed during his M.Phil program and the M.Phil degree was awarded.

Course Code	Name	Credits	Pass/Fail
SE600	Research Methodology	4.0	Pass
SE601	Social Accounting and Data Base	4.0	Pass
SE602	Advanced Economics Theory	4.0	Pass
SE603	Study Area	4.0	Pass
SE680	Dissertation	16.0	Pass

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Acknowledgement

*I thank and praise my **lord Jesus** for being with me in every step of my life.*

This is indeed a blessed opportunity to thank all those who stood by me from the beginning of my research. This work would not have been possible without invaluable help that I received from several people. It is my pleasure and responsibility to convey gratitude to them.

*I would like to thank my supervisor **Prof. N. A. Khan** for his constant support and encouragement throughout my research and the door of his office is always open to drive me in the right direction when I am in confusion or when the research got jammed. His constructive ideas, suggestions and research experience helped me a lot to complete the thesis.*

*I thank **Prof. Naresh Kumar Sharma**, Dean School of Economics for his support and encouragement. I would like to thank my Doctoral Committee Members **Dr. G. Sridevi**, **Prof. Phanindra Goyari** for their valuable suggestions during this research.*

*I would like to convey my gratefulness for support and help that I have received from the office staff. I would like to thank them. I would like to thank the staff of **Indira Gandhi Memorial Library**, University of Hyderabad.*

*I specially thank **Umamaheswararao Gujju**, **Gopi Swamy**, **Madhava Kakani** for editing and proof reading of the thesis. I special thanks to **Dr.Ch.Manikya Rao**, **Dr.L.Rajeev Babu**, for their support. I express my deep thanks to all the friends, well-wishers and friends in HCU.*

*I owe my gratitude to my parents **Venkateswarlu (Father)**, **Adhilakshmi (Mother)**, **David Raju (Father – in –law)** and **Vijaya (Mother – in- law)**. Also owe my special gratitude to my family members and relatives for their support and encouragement.*

*I would like to thank my gorgeous life partner **Suneetha** and children's **Sanjith Riyan**, **Rincy Rayen** for giving their lovable support. And I would like to owe it to them for their firm belief on my attempts to success.*

(RAMESH VADLAMUDI)

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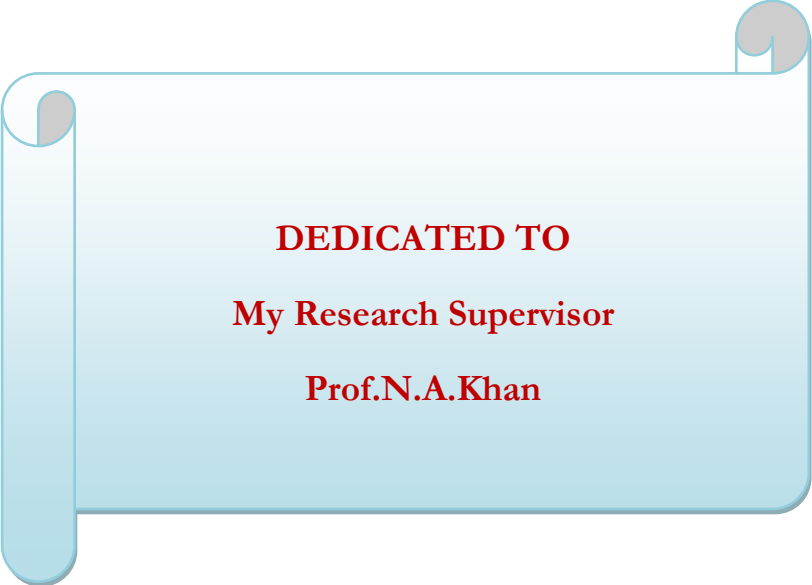
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Acronyms

PDS	:	Public Distribution System
FS	:	Food Security
RC	:	Ration Card
FPS	:	Fair Price Shop
FCI	:	Food Corporation of India
BPL	:	Below Poverty Line
APL	:	Above Poverty Line
RPDS	:	Revamped Public Distribution System
TPDS	:	Targeted Public Distribution System
IE	:	Inclusion Errors
EE	:	Exclusion Errors
IG	:	Income Gain
FAO	:	Food Agriculture Organization
EGS	:	Employment Guaranty Scheme
NSSO	:	National Sample Survey Organization
SERP	:	Society for Elimination of Rural Poverty
NREP	:	National Rural Employment Programme
RLEGP	:	Rural Landless Employment Generating Programme
JRY	:	Jawahar Rozgar Yojana
ITDP	:	Integrated Tribal Development Programme
FPS	:	Fair Price Shops
CIP	:	Central Issue Price
ICDS	:	Integrated Child Development Services

MSP	:	Minimum Support Prices
PMRY	:	Prime Minister Rozgar Yojana
CIP	:	Central Issue Price
APSCSC	:	Andhra Pradesh Civil Supplies Corporation
OC	:	Open Category
OBC	:	Other Backward Classes
SC	:	Scheduled Caste
ST	:	Scheduled Tribe
HH	:	House Holds
HHRC	:	House Holds with Ration Card
HHNC	:	House Holds with No Card
AB	:	APL House Holds having BPL cards
BA	:	BPL House Holds having APL Cards
FB	:	Fictitious BPL Cards
IBNC	:	Identified BPL Households No Card
UBNC	:	Unidentified BPL Households No Card



DEDICATED TO
My Research Supervisor
Prof.N.A.Khan

CHAPTER: I

INTRODUCTION

1.1 Introduction

India has, since independence, been facing the issues regarding food insecurity. Majority of people in India lack sufficient earning and purchasing power. Indian government presumes about these problems and gives food to the country's susceptible population. So, for supplying food grains at reasonable prices, the government has initiated food support system, which main objective is to secure food prices and allocate the food grains to consumers with low income at domestic stage. In our country, food policy started to materialize after the Bengal famine that occurred in 1943¹, It produced adverse foodgrain supply during the Second World War in the eastern region of India, especially in Bengal. In such circumstances, the Indian government started importing rice from countries with surplus production. (During 1931-41, India had imported foodgrains and pulses annually ranging from 6, 00,000 to 22, 00,000 tons)².

The famine which occurred in 1943, the disadvantageous food condition was persisted in various regions of the country, resulted in the selected foodgrains policy committee (1943). It advocated for procuring foodgrains from such areas where it was surplus, controlling for Public Distribution and checking on increasing prices by means of statutory price control. Irrigated areas, production of cereals, and food shortage were still more adverse between 1943 and 1947. In 1947, a decision was taken to appoint a new

¹ Evaluation of food policy in India (1981) – R.N.Chopra.

² Ibid.

foodgrains policy committee, which identified that the importation was essential to accomplish the substantial rationing commitments because the production of domestic foodgrains was not sufficient. This committee recommended to improve the production of indigenous foodgrains to counter the country's insufficient foodgrains production. Due to war conditions and natural calamities such as Bengal famine, the prices of foodgrains rose. In September 1948, the Indian government brought in decontrol policy.

The government appointed the foodgrains procurement committee in 1950 and proposed to decrease the importation in deficit states and increase the exports in such states with surplus production. Between 1950 and 1957, the government tried to decrease the foodgrains prices, imports and several exports were permitted. However, the prices of foodgrains began to increase very fast in 1956, exports were consequently prevented, imports were organized and fair price shops began to come out. In 1957, the government appointed foodgrains enquiry committee and enquired that the food problem persisted in India and stated to bring out Fair Price Shops allowing zonal policy for putting together surplus and deficit areas within zones and curbing prices within each zone. After 1957, the foodgrains policy committee was appointed in 1966. This committee assessed the food situation and recommended for the national management of food in order to find a solution for the food problem. This committee suggested for procurement, distribution, and partial control of foodgrains in the country.

1.2. Definition of Food Security

Over the years the definition of food security has been changing. Food security comprises four important elements viz, availability, accessibility, absorption and sustainability (Vidyasagar – 2005). Food insecurity could be of two types i.e. temporary food insecurity is a short-term decline in the admittance to food needed a household due to the fluctuations in the price of rations items. On the other hand chronic food insecurity is the persistent consumption of inadequate diet. Food availability plays major role in ensuring food security it's depends upon agricultural growth. Before 1970 importance to the physical access to food after 1980 it importance to the economic access to food and after 1990 importance to the utilization of food and recently right food. Here mention the food security definition given by FAO.(Food and Agriculture Organization)

“In 1983, Food and Agriculture Organization (FAO) analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: “Ensuring that all people at all times have both physical and economic access to the basic food that they need” (FAO, 1983).”

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. (World Food Summit, 1996)”

1.3. Public Distribution System in India

Unlike private distribution, PDS warrants control executed by public authority and the purpose here is primarily social welfare, but not private gain. Beginning from the procurement stage to finally delivering the goods to the consumers, the system generally incorporates all the associated agencies. In the process of procurement, transportation, storage and distribution, the agency that is involved is Food Corporation of India (FCI). The agencies concerned in the supply of PDS at the level of states. However, the fair price shops (FPS), which are usually possessed by private individuals, are the ultimate loop in this process. Therefore, the most significant feature that characterizes PDS is that the government agencies are involved in the distribution system and also the government controls over the entire system.

PDS is recognized with fair price shops in its narrow connotation. Dholakia and Khurana remark that PDS is “a retailing framework regulated and guided by the State”. Advancement Evaluation Organization (Government of India 1985) explains PDS as a “set up under which determined wares of ordinary use are secured and made accessible to buyers through a system of FPS in urban just as in provincial zones”.

At the behest of central government, FC1 is involved in the procurement of cereals. Grain is also procured by various state government agencies for the central pool and for their own account as well. Central government is taking a lead role in allotment to specific states. The responsibility of allocation to FPS and supervision of its functioning is undertaken by the state level civil supply organizations. Since FPS’s are controlled by

government, these are not permitted to sell any commodity other than that is supplied by government. These are all based on the number of RC attached to the FPS, each FPS is allotted specified quantities. It is completely at the choice of the government to fix the prices of such commodities. The FPS dealers must obtain a license for operating a shop and maintaining proper records of the stocks received by them.

British government was introduced rationing in 1939 in Bombay. It's been eight decades that PDS has been implementing in India, to gain the food items to urban people. The core objective of PDS is to deliver food grains and significant goods at lowest cost by subsidizing to urban people. This policy was emerged mainly to stabilize the food prices. Until the point when 1970's the PDS was centered around town and ration lack region. In the middle of 1980's this arrangement was stretched out into the country regions, starts from southern part of India and after all the states in India. P.S.George (1980) evaluated that offtake in the urban territories was around 85 percent of the complete offtake from people in general conveyance framework (presently this rate was decreased)³. The extent of welfare gained to the poor on proper target of the PDS.

The Indian government has expected achievement, stockpiling, transportation and mass designation of foodgrains to the state governments through the FCI. The operational obligation incorporating portion within the state. Identify the BPL households and issue the cards and distribute the food grains through the FPS are under state government.

³ Public Distribution System in India: Some critical issues – SIB RANJAN MISRA, Food Security and PDS Today failures and success. – AMALESH BENARJEE, Kaniska publisher's distributors – New Delhi, p.no. 47-58.

On June, 1992, Indian government introduced Revamped Public Distribution System to reinforce PDS and modernize the PDS to get better its reach remote areas. The main purpose of the RPDS is to develop the low income coverage people, to increase range of commodities supplied to ration card holders and to provide food grains and other commodities and prices lower than the regular PDS.

On 1st June, 1997, India launched Targeted PDS⁴. The main features of the Targeted PDS are, targeting BPL and APL families and distribute the ration, base on the rural poverty defined by the planning commission in 1993-94. In Andhra Pradesh 5 kg of rice distributed to white card holders and also distributed essential goods to the cheap price.

1.4. Review of Literature

There are a number of micro and macro level studies carried out by a number of researchers about food security and PDS in India. The reviews of past studies are very help to formulate the objectives and methodology of the present study and further direction of the research. The review of literature is devoted to review the earlier studies on the PDS in India. This review mainly focused on different issues on food security and PDS in India. It will help to identify the research gaps, if any, which would help in formulating the methodology, objectives of the present study and further directions of the research. The review deals with different issues on PDS i.e. PDS and procurement of food grains, food security, is PDS urban biased and pro rich?, Errors of targeting PDS, targeting efficiency in the PDS, Coverage and leakages in PDS, poverty and food security, food security PDS vs. EGS etc. Here we mentioned different studies in the area

⁴ Report of the Performance evaluation of targeted public distribution system (TPDS) – Programme evaluation organization , Planning commission, Government of India – New Delhi – March 2005

undertaken by several researches in India. Here we explained different issues on food security and PDS in India. From these important issues coming out from literature we frame my objectives.

1.5. Objective of the study

The main objectives of the study are as follows:-

- 1) To analyze the changing structure of Public Distribution System in India.
- 2) To review the role of Public Distribution System as a policy to measure provides food security in Andhra Pradesh.
- 3) To analyze the performance of Public Distribution System in the selected two districts i.e., Khammam and Srikakulam of Andhra Pradesh.
- 4) To look into the targeting errors and its implications on household food security at village level.

1.6. Hypothesis of the study

- ▲ Errors of exclusion will have negative impact on the household food security.

It means, if actual beneficiaries are exclude from this policy they purchase their essential commodities from open market with highest prices, so their household food security was adversely impact. They spent more money to purchase minimum goods from open market.

1.7. Sources of data

The exhaustive primary and secondary data will be collected from different sources, like the Civil Supplies Department in Andhra Pradesh – Hyderabad, National Sample Survey Organization (NSSO) data, Directorate of Economics and Statistics- Hyderabad, Census of India, Society for Elimination of Rural Poverty (SERP), Hyderabad and other important government reports and books. The primary data collected from selected villages, Belagam from Kaviti Mandal, Srikakulam district and Chunchupally village from Kothagudem Mandal (Now Kothagudem Mandal divided as a separate district that is Bhadrachalam Kothagudem), Khammam district through structural questionnaire.

1.8. Research problem

After reviewed a few articles related to Public Distribution System and Food Security, the main objective of this policy is to provide food security to the vulnerable sections and backward people in the society. But unfortunately the policy is not reaching some of the needy people. Those who are not eligible (Based on norms formulated by Government of Andhra Pradesh) and those who have income, purchasing power to purchase commodities from open market they are getting commodities from Fair Price Shops. Why it's happened? What are the reasons behind that and how to provide the food security to the needy people? This study made an effort to explain these issues and errors in Public Distribution System in selected villages.

1.9. Methodology of the study

The present study deals with targeting errors at household level in the selected villages, for the study purpose selected the *Two Villages* in the two districts of Andhra Pradesh (United). One Village name Chunchupally from Kothagudem Mandal (Now Kothagudem Mandal divided as a separate district that is Bhadrachalam Kothagudem) in Khammam District where the percentages of the poorest of the poor households are *high*. The Second village is Belagam from Kaviti Mandal in Srikakulam District where the *poorest of the poor households are very low*. The *planned and actual sample* of the study was *300 households, and 150 households* were taken in each village in the selected area by using the *purposeful sampling method*. We used a tool of *structured questionnaire* and used SPSS for the tabulation.

Table 1.1 Households in Belagamu sample village

Si.No	Name of village or Hamlet	Category	No.of HH
1	Belagamu	OC	46
		BC	390
		SC	9
		ST	4
2	Rapakaputtuga	OC	1
		BC	174
		SC	0
		ST	0
3	Savasanaputtuga	OC	0
		BC	42
		SC	0
		ST	0
4	Golla Belagamu	OC	0
		BC	136
		SC	0
		ST	0
5	Basavakotturu	OC	1
		BC	169
		SC	0
		ST	0
		Total	972

Source: Field Work

Table 1.2 Household particulars in Chunchupally sample village

Sl. NO	Name of village or hamlet	Category	No.of HH
1	Chunchupally village	OC	34
		BC	155
		SC	47
		ST	59
		Minority	8
2	Chunchupally Tanda	OC	0
		BC	0
		SC	0
		ST	250
		Minority	0
3	Chunchupally -2	OC	3
		BC	10
		SC	0
		ST	251
		Minority	0
4	Chunchupally (Ambedker colony)	OC	11
		BC	62
		SC	6
		ST	96
		Minority	0
		Total	992

Source: Field Work

Table 1.3 Village wise category wise Particulars

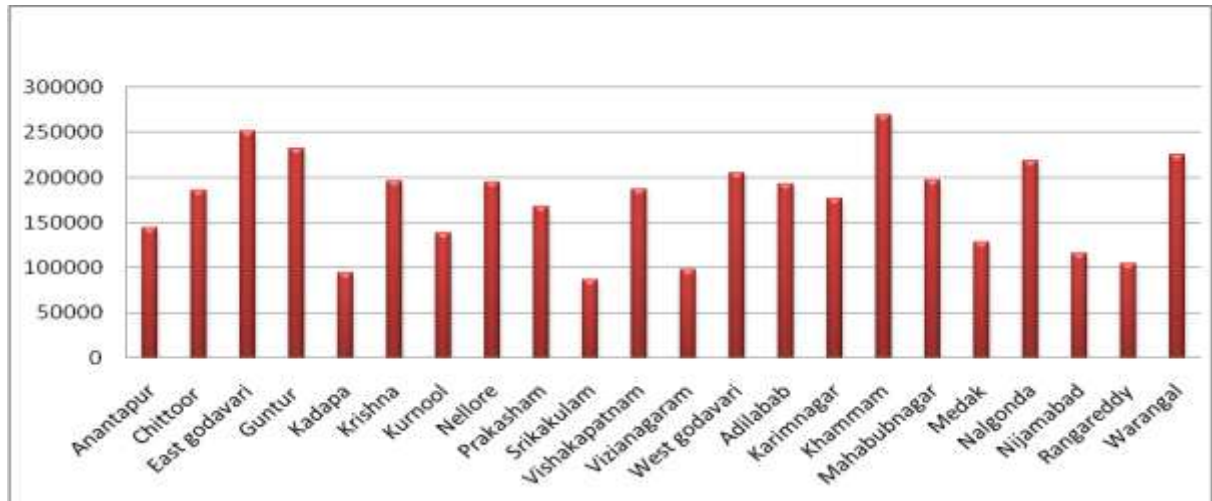
VILLAGE			Village wise Category					Total
			SC	ST	OBC	OC	OTHERS	
	BELAGAMU	Count	9	4	122 (911)	15 (48)	0	150
		% of Total	3.0%	1.3%	40.7%	5.0%	0.0%	50.0%
	CHUNCHUPALLY	Count	22 (53)	80 (656)	37 (227)	9 (48)	2 (8)	150
		% of Total	7.3%	26.7%	12.3%	3.0%	.7%	50.0%
Total		Count	31	84	159	24	2	300
		% of Total	10.3%	28.0%	53.0%	8.0%	.7%	100.0%

Source: Field Work

Here category of the respondents in the selected villages for the study. For about 53% (Belagamu 40.7% & Chunchupally 12.3%) of the respondents are belongs Other Backward Community (OBC), 28 % (Belagamu 1.3% & Chunchupally 26.7%) are belongs

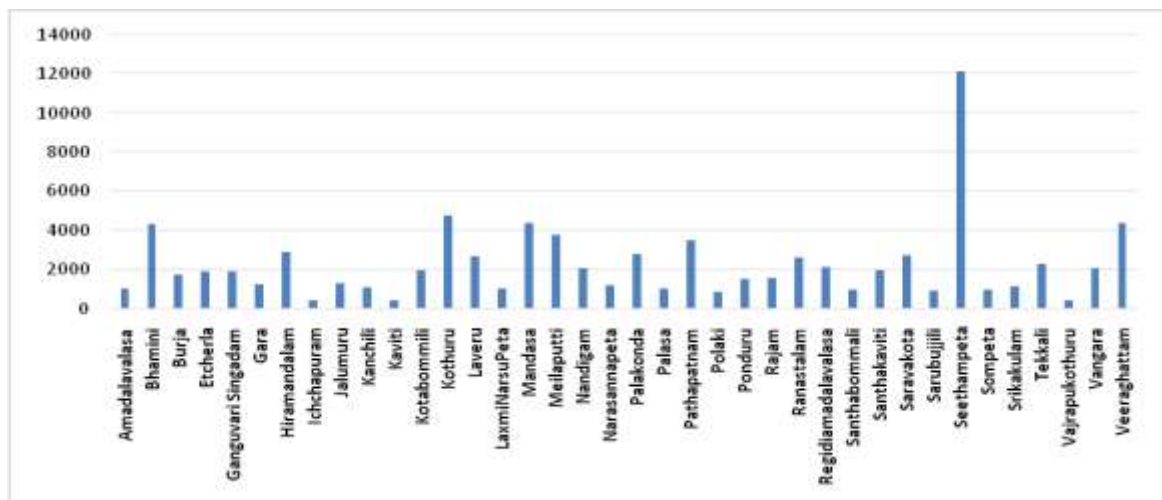
to Scheduled Tribe (ST), 10.3% are (Belagamu 3% &Chunchupally 7.3%) are from Scheduled Caste, 8% (Belagamu 5% &Chunchupally 3%) are belongs to Forward Community (OC) and 0.7% are from others Christian and Muslim minorities.

Graph.1.1.Distract wise Poorest of the poor SC/ST Households in Andhra Pradesh -2014-15



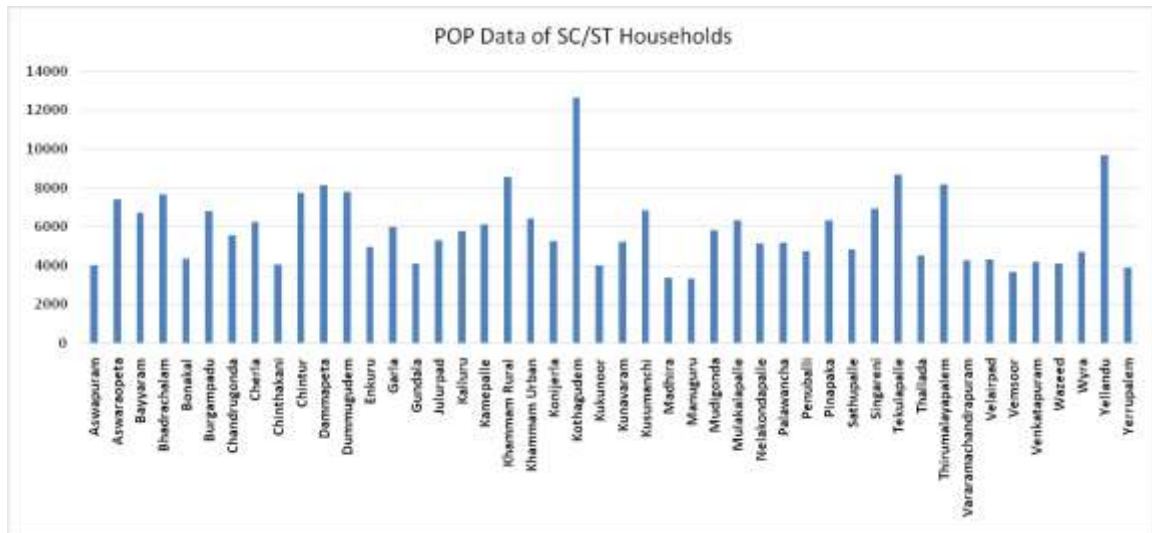
Source: SERP Office, Hyderabad

Graph.1.2.Mandal wise poorest of the poor SC/ST households in Srikakulam district- 2014-15



Source: SERP Office, Hyderabad

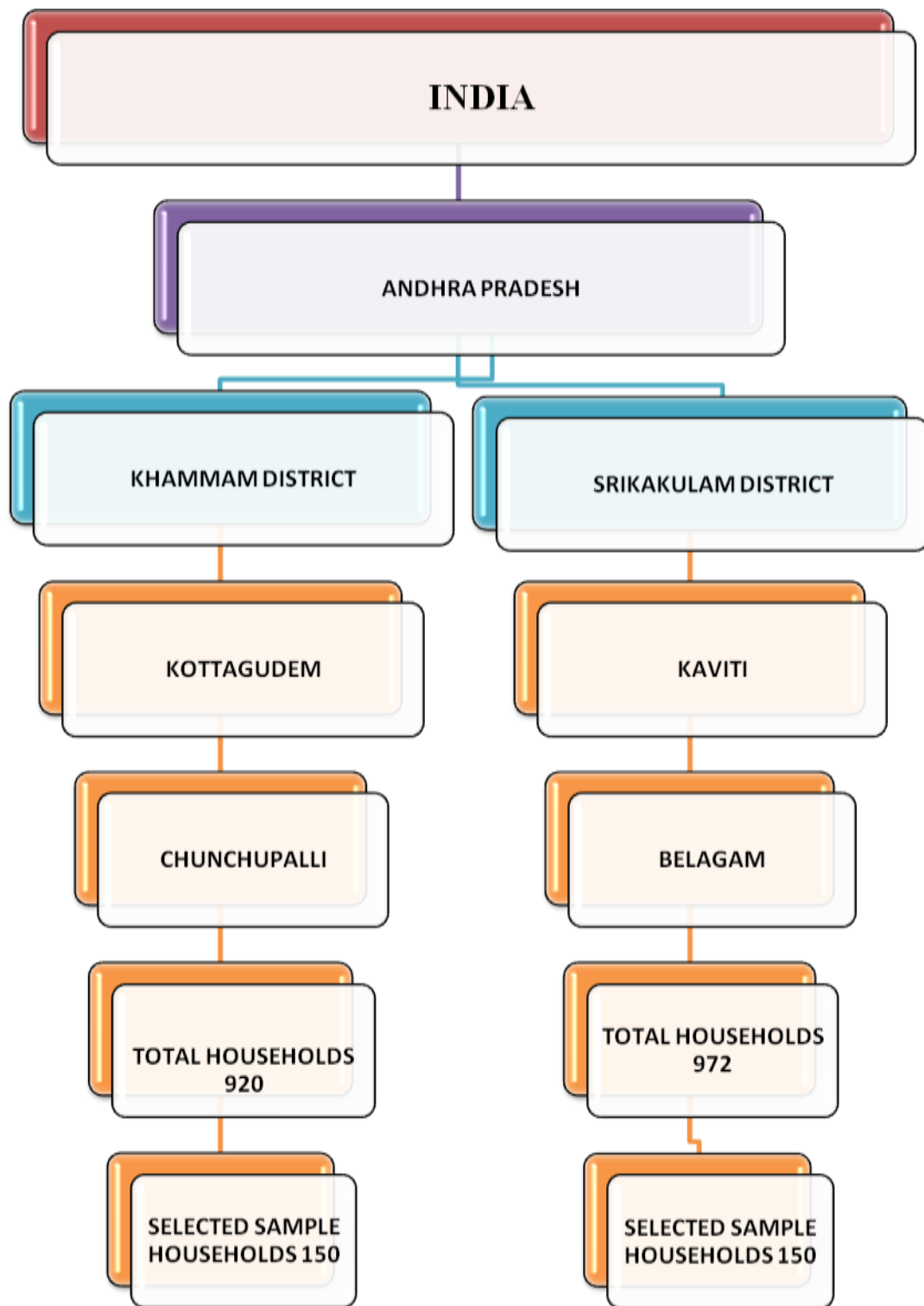
Graph.1.3. Mandal wise poorest of the poor SC/ST households in Khammam district- 2014-15



Source: SERP Office, Hyderabad

The graphs 1.1, 1.2, 1.3 revealed that the poorest of the poor households in district and Mandals selected for the study. The data related to the above graphs are enclosed in the appendix II.

Figure. 1.1 shows structure of selected villages



1.10. Limitations of the study

The present study selected two districts of Andhra Pradesh and selected two villages from each district based on the available data of poorest of the poor household. This study only focused on targeting errors in Public Distribution System at household level and how to reduce these errors and provide food security to the actual beneficiaries at cheap price. No statistical tools are used only we used SPSS for the tabulation.

1.11. Scheme of the thesis

The present study organized into seven chapters,

- 1) The first chapter deals with the **Introduction**.
- 2) The second chapter focuses on **Review of Literature**.
- 3) The third chapter analyzes the **Working of Public Distribution System India**.
- 4) The fourth chapter reviews the **Role of Public Distribution System and Food security in Andhra Pradesh**.
- 5) The fifth chapter analyzes the **Performance of Public Distribution System in selected districts**.
- 6) The sixth chapter looks into the **Targeting errors and its implications on household food security in selected villages**.
- 7) The final chapter is **Summary and Conclusion**.

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CHAPTER: II

REVIEW OF LITERATURE

2.1. Introduction

The present chapter made an attempt to review the earlier studies on the *Public Distribution System* (PDS) in India. It mainly focused on different issues on food security in India along with the PDS. It will help to identify the research gaps, if any, which would help in formulating the methodology, objectives of the present study and further directions of the research. The review deals with different issues on public distribution system i.e. PDS and procuring food grains, food security, also try to know how far PDS is biased towards urban and rich population? Errors of targeting PDS, targeting efficiency in the PDS, Coverage and leakages in PDS, poverty and food security, food security PDS vs. EGS etc. Here we mentioned different studies in the area undertaken by several researches in India. Here we explained different issues related to food security and PDS in India.

2.2.1. Food Security and Public Distribution System

Rao.V.M. (1995)⁴ explained the food security in the changing context. He recommended the states to take over the responsibility of PDS to reduce the burden of Central Government including to come out from its dominance over PDS. He suggested governments to create an environment for more participation of local level organization which ensures that the public services would reach in each and every corner of the

country and the schemes/programmes related to food security for needy people also will be succeeded.

***Madhura Swaminathan (1996)*¹** studied on structural adjustment, food security and system of Public Distribution of food. The author focused on changes in the Public Distribution System or subsidized food delivery system during this period of structural adjustment and she reviewed some of the international experience on changes in food subsidy programmes during the structural adjustment. She discussed the major policy changes in India since 1991, and also discussed the some aspects of variations in the PDS and its effects on food security. She focused in this paper on Maharashtra. The main findings of this study, there is a high level of nutritional deprivation among adults and children, the quantity of cereals purchased from the Public Distribution System is on average very low and finally a large proportion of the poorer households do not utilize the Public Distribution System because of market provides cheaper food the Public Distribution System. She concluded that the PDS in the country need to reform to deliver basic food to majority of the population in the nation.

***Indrakant.S (2000)*³** has done a study on five villages in the state of Andhra Pradesh on PDS. The five villages are varying each in the economic development, irrigation potential and cropping patterns. The five villages are Nettempadu, Singtham, Jaggasagar, Narsayapalem and Machavaram. Here Nettempadu (Mahabubnagar District) and Singtham (Medak District) villages are backward villages in back ward districts. The third village of Jaggasagar (Karimnagar District) is moderately developed. At the other extreme, two villages are developed villages namely Narsayapalem and Machavaram from (Guntur District) a developed district were selected. He discussed several tendencies

in the production, procurement and the delivery of rice and other cereals. His study reveals that seven districts in the state were always in deficit in production of rice. He surveyed total 219 households from the five villages and he used stratified random sampling method. The author used structured questionnaire for field survey, his survey consisted of two rounds. He used three criteria's to categorize the household. They are, extend of operational holdings, consumer expenditure level and average employment per worker. He used three measures to study the extent of Public Distribution System support to food security i.e. total rice purchased, total rice consumption and total cereal consumption. He also studied levels of living, consumer expenditure pattern, consumption of rice and cereals, Public Distribution System support to food security, distribution of card holders, errors of targeting in the selected five villages in Andhra Pradesh. Finally he suggested some alternative schemes for improving food security among the poor at a lower burden on the state.

Susmita Priyadarshini (2004)² article on Food security –A case study focused in Assam state in India. She explained the functioning of Targeted PDS in Assam, it was introduced in 1997, under the system they distributed rice for the BPL family's 10 k.g per family per month at Rs/- 4.00 per k.g. This rice distributed only special cards (Red) in Assam. For this study she collected primary data from the state of Assam. She conducted survey among 75 randomly selected TPDS beneficiaries and 45 fair price shop holders. TPDS beneficiaries in this survey she included rickshaw pullers, coolies, fruit & flower sellers, blacksmiths and slum dwellers. She prepared two separate questionnaires for TPDS beneficiaries and fair price shop holders. From this study she found that there are many problems or complaints from customers and fair price shop holders. She selected Kamrup

District in Assam. For the sample of TPDS survey she selected 25 sample households from Jarhat village and 50 sample households from Guwahati city area from Kamrup district. In this study from the sample district she found that many bogus cards, irregularity and inadequacy, lack of vigilance and no consultation with BPL families. For the study of fair price shop holders she selected total 45 fair price shop holders, from the village of Jarhat 15, 30 from Guwahati in Kamrup district. She found that low transportation charges is given to the fair price shop holders, godown problems like godowns are very far away from the ration shops and storage facility is not proper in the godown.

Amalendu Jyotishi and Satyasiba Bedamatta (2010)⁵ article on Indian Agriculture Sector towards Food Security: Some policy Issues. The author's explained about the Food security comprises four important elements viz. availability, accessibility, absorption and sustainability. This paper intend to understand the agriculture scenario in last few decades, they analyzed the overall scenario of agriculture sector, especially from the food security point of view. They look in to demand side, supply side factors along with the ecological factors, technology, credits and retailing a marketing opportunities. Finally the authors concluded that with policy implications to improve the food security at the national level.

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security point of view. They look in to demand side, supply side factors along with the ecological factors, technology, credits and retailing a marketing opportunities. Finally the authors concluded that with policy implications to improve the food security at the national level.

2.2.2. Food security and Poverty

Krishnan.T.N (1992)⁸, examined the causes of successes and failures of Indian economy in assimilating population by relating the concerns with development planning and what were, or would be, the costs of quick growth of population for lessening the poverty in the country. He interlinked the growth of population and food grains and also explained that how growth of population affected on the production of food grains and how these factors determined the differences among inter-state in consuming foodgrains. Though production of foodgrains increased substantially, it could not stop the poverty, or availing food for poor as the production flows to deficit state from a surplus state, thus, the percapita availability more or less continued the same relatively for decades. However, in recent times the greater shift is that the India is exporting food grains to shortfall countries as the tendencies show that the percapita availability has increased. Internally, the disparities in percapita of production of food among the states increased over the years. He explained the foodgrains are shifted through Public Distribution System (PDS) to the state under the deficiency from surplus production states which caused to reduce the interstate disparity in per capita consumption. Also this provided the grains to poor with fair price through shops at subsidized prices. According to him, the “compare to

early 1980's the *interstate inequalities in per capita consumption of cereals were declined*". (P.2486).

Mahendra Dev.S (1996)⁶ examines the issues of poverty and food security by interpreting the PDS and Employment Guarantee Scheme (EGS) relatively in two big Indian states of Maharashtra and West Bengal. His study based on the data in two rounds of the National Sample Survey (NSSO), the 42nd and 43rd rounds, referring respectively to 1986-87 and 1987-88. He has examined the rural food security in the states compared to urban areas. The study mainly focused on four aspects i.e. poverty and unemployment, access of the poor to public distribution system, PDS vs. EGS, targeting and effective functioning of the public distribution system. He says that proper targeting of public distribution system can reduce the poverty. He argues that coverage of public distribution system includes food security, to avoid the distress purchase. He examined that the wider spread of public distribution system makes it more operative than the employment guarantee schemes. Finally he noted the public distribution system does not offer food security among poor as it is helping only those who have purchasing power. He suggested that implementation of various anti-poverty schemes like self employment, provision of health facilities, public distribution system etc, these schemes are affected to the food security.

Balakrishnan.P and Bharat Ramaswami (1997)¹⁰ argued in their study that it cannot be fully understand the price formation in foodgrain markets without mentioning to consumer switches concerning the open market and PDS induced by quality dissimilarities. They also studied the implications for policy form and they argued that quality differences are adversely affected the living conditions of the poor. They analyzed the issues of price of wheat in the open market. They tested the price of wheat on monthly

average based on the data available during 1971-1994, within this period the issue price of wheat was changed. They stated that the consumers demanded the subsidized good in the domain of quality variations in the delivered goods.

Mahendra Dev.S (2000)⁷ highlighted that there were not many schemes or programmes initiated to curb the alarming trends in agriculture, rural development and poverty. He explained about the growth of agriculture and agriculture development. This paper discussed the strategies needed for agriculture development and effectiveness of the Public Distribution System. He argued that for achieving of higher growth of agriculture commodities, public investment on irrigation and agriculture research are important. He criticized the budget for not given due attention on the technological improvements which can enable Indian agriculture to find all the solutions of food security. He strongly recommended improving the investment of agriculture research. He suggested that to access buffer stocks, export of foodgrains were promoted and linking foodgrains with the public work programmes.

ShikaJha and P.V.Srinivasan.P.V (2001)⁹ have examined critically the cost and benefits allied with the process of PDS for foodgrains in India. Their article titled “*Taking the PDS to the poor: Directions for future reform*” explained the how the benefits-cost ratio for the Public Distribution System increases when subsidies are targeted at the poor. The authors pointed out to the direct benefits by Public Distribution System implementation in terms of increase in consumer surplus as well as producer’s surplus. They examined the inadequacies in the system, role of the Indian food corporation and distribution operations in relation to those of private agents especially in recent years. They also discussed the issues complicated in the targeting of PDS to the poor and examined the potential benefits

that can be obtained through geographic targeting. Here they explained the Public Distribution System provides food security to the poor has been low. This is mainly due to two reasons i.e. before 1980 the Public Distribution System has been universal, implemented only urban areas and not specifically targeted at the poor a large proportion of the subsidy has gone to the non poor. The Public Distribution System faces acute challenges from possible leakages. It is due to the larger difference between market and ration price for BPL families. Finally they suggested the reducing the cost inefficiencies in the procurement and distribution system and control the diversion of grain from Public Distribution System to the open market and central government provide food subsidy to the states to procure foodgrains to serve their Public Distribution System.

Indrakant.S and HariKishan.S (2010)¹¹ article on Impact of PDS on Poverty – A micro level study. In this article they explained about the Public Distribution System (PDS) is one of the instruments used in India for enhancing the conditions of poor who suffer from persistent poverty and malnutrition. This study attempts to answer the some of the important questions i.e. Impact of subsidies on poverty is uniform across the villages having different levels of development? and whether benefits match with the costs? This paper also reviewed the ration coupon scheme introduced by government of Andhra Pradesh in late 1990's. This paper concluded with changes in effectiveness of PDS as an antipoverty instrument with passage of time. The study also finds that the coupon scheme has not been able to eliminate the bogus cards.

Arindam Banerjee (2010)¹² tried to examine whether there is any evidence of successful food importing strategy across the regions thereby maintaining or increasing their per capita food availability even as per capita food production was declined due to exports oriented agriculture strategies, for this analysis he covered nine geographical regions consisting of 141 countries, primarily developing or underdeveloped nations. He also examined that what happened to overall cereal availability in these regions during those periods when the normative production was declined. Finally he observed that the food production has increased moderately in few regions like Latin America, North Africa and SE Asia, and the regions like the Caribbean and West Asia have faced a decline in food output even in the same period, while there is no meaningful increase for Central America and South Asia.

2.2.3. Public Distribution System (PDS) and Urban biased

Radhakrishna.R and Indrakant.S (1987)¹⁷ examined how market intervention effected welfare policies in India by taking a case study of rice markets in A.P. The model was organized to switch policy consequences on the welfare of consumers on the gross income accumulating to manufacturers and millers of rice. The comprehend interaction of a rice market encompassing; “*a four-market, four-price system*”. However, the state A.P. as a rice-surplus state, and it is concluded that the study generalisable up to the level of that state only.

Mahendra Dev.S and Suryanarayana.M.H (1991)¹³ examined that in India the PDS is providing food security to the vulnerable population, but it was biased towards urban and it profited largely to middle and upper income groups. Their study based on secondary

data he used 42nd round NSS data in the year of 1986-87 on social consumption. They collected the data, 47,827 rural households and 27,736 urban households were contacted. They collected data four different criteria, i.e. rural sector's share in total public distribution system given by ratio of PDS purchase to total purchases, PDS quantity purchased per capita and PDS quantity purchased per market dependent were taken into consideration to examine whether PDS was urban-biased or not. The results of the data they studied the all India level data showed that the PDS was not favoring the middle or richer groups, more or less all the population groups depended the PDS with respect to all commodities in rural areas.

Stephen Howes and ShikhaJha (1992)¹⁵ examined the variations in the level of urban bias as between the different states to use three important measures i.e., 1. Urban Bias, 2. Quantities of PDS grains consumed, 3. The implicit subsidies and accessibility of ration shops. They defined in terms of the crowd and distances of rations shops in rural India are more accessible than the urban areas in many states of India. According to them the PDS foodgrains consumption in rural residents was an average about 70 percent and which improved 20 percent in 1978 comparatively. However, in terms of implied subsidies in case of sugar, the urban residents are availing sugar through PDS on par with the rural areas. They need to examine the distribution of PDS consumption within the urban and rural sectors of the population.

Jos E Mooij (1994)¹⁶ article focused about the public distribution in India during the liberalization and structural adjustment programmes. She discussed about the viability and spread of benefits of the Public Distribution System. The author selected Karnataka state to study the food distribution and how much PDS food is allocated to Karnataka and

she compared to the Kerala state. For this study she collected data from the field survey of foodgrains production and allocation of foodgrains in Karnataka state in the year of 1990-91. She interviewed about the 150 rural consumers in 15 different villages. Here she covered all the fair price shops owners, managers of warehouses and money lenders. Finally she concluded that Karnataka state consumers were experienced only marginal benefits through Public Distribution System.

Suryanarayana.M.H. (1995)¹⁴, said that that the evaluation of the PDS has impacted a lot in the context of enormous growth of agriculture, and its policies, evolution of integrated food, the shifting objectives has resulted in the design and framework of PDS, scope and policies for PDS reformed considerably by delinking food policy from agricultural policy. According to him the food security includes both physical and economic availability of food for the total population. PDS took care of physical accessibility, whereas poverty alleviation programmes were meant to raise economic accessibility. He says that the initially food policy in India concentrated only physical access to food in urban and food deficit areas later on its implemented economic access to food for the poor and vulnerable households.

2.2.4. Revamped Public Distribution System

Geetha.S and Suryanarayana.M.H (1993)¹⁸ examined the critical issues of reorganizing the public distribution system. They attempts in this paper what are the objectives of public distribution system and is there any disparities in the state level distribution of public distribution system. This study was based on the secondary data and data related to public distribution of foodgrains obtained from various documents, reports of central and

state governments. They covered the several plans during 1973 to 1989. In early 1970s the scale of subsidy was not that upsetting as it was in the 1990s. Though, the subsidy on food security has not augmented in national budget, the economists and policy makers felt to provide subsidy on par with the development. Several attempts were made to restrict subsidies in food through reforming PDS. The reforms majorly focused on providing subsidized foodgrains to the poor and not including the better-offs from the scheme. Of late, there has been a lot of emphasis on refurbishing the PDS connecting to backward areas and classes by eliminating the non-poor from the scheme. Such methods not only safeguarding the weaker sections and also reduce the food subsidy. Hence, budgetary deficit of the central government. They concluded the revamping of public distribution system was not merely a question of targeting but also involved the creation of necessary infrastructure, like storage facilities and distribution network particularly in the state of Bihar and Orissa.

Kripa Shankar (1997)¹⁹article on “*Revamped Public Distribution System – who benefits and how much*” says that the scheme of PDS initially concentrated in urban areas. Later period, it extended to rural and remote regions after refurbishing the PDS. The study was conducted in 21 remote tribal villages of Hallia block in Mirzapur district of Uttar Pradesh; this is village of bordering Madhya Pradesh. There were in all 1569 households out of which 599 or 38 percent were landless. 13 percent were marginal farmers and 11 percent of the households owned more than two acres. The study found that the supplies of PDS are not getting to 21 remote tribal villages After implemented the Revamped Public Distribution System in 1992, the poor and hilly remote areas households are utilized the scheme.

2.2.5. Public Distribution System and Procurement

Gulati.I.S and Krishnan.T.N (1975)²⁰, study on “PDS and Its Coverage of Vulnerable Sections of the Society covered the both deficit and surplus states. According to them the economically vulnerable sections comprised of households in urban regions and the non-agricultural rural households, including the agricultural labourers. The author’s said that the levy procurement system is inequitable which lead to several problems to the farmers.

2.2.6. Public Distribution System and Targeting Errors

Indrakant.S (1997)²² study was to find out whether the food reaching the deserving persons or is unable to do so due to leakages. He has chosen the Andhra Pradesh to study the coverage and leakages in public distribution system in Andhra Pradesh. The main reason of selected of the state Andhra Pradesh is following a vigorous public distribution policy since early eighties and Andhra Pradesh has rich in rice production. The author used 42nd NSS data to show that households in the range of 60 to 70 percent depended particularly or wholly on public distribution system. He explained the large number of poor household doesn’t have ration cards and at the same time rich households having white cards, they enjoyed the benefits. This study shows that only leakages in village and town level in Andhra Pradesh. He studied the main reason of the leakages in rural area because low level of income and malpractice of fair price shops dealers. In rural households are go for white cards to avail the concessional medical facility in government hospitals leaving their quota insured, white card holders in rice surplus districts depended on their home-grown stock, again leaving their quota unused and some

of the poor households may not buy their full quota which may also be delivered to the market. He derived the leakages are two types i.e. FCI godown level and village or town level. Finally he concluded in India most of the people has access to food from PDS in the developing villages. But a large percentage of beneficiaries were non poor.

Madhura Swaminathan, Neeta Misra (2001)²¹ examined the Errors of Targeting Public Distribution of food in a Maharashtra village during the 1995 to 2000. They selected Mohakal village, Pune district in Maharashtra. They collected the primary data from the village during the two different years i.e. Swaminathan conducted first survey in December-1995 and Neeta Misra surveyed in June-2000 with very similar questionnaire. They conducted the survey in two different situation first survey in during the universal public distribution system and second survey conducted after implementation of targeting public distribution system. They found that the errors of wrong inclusion fell sharply with the shift from universal to targeting public distribution system (TPDS) but the errors of wrong exclusion raised at the same time. The author's also identified that weakness in the official identification procedure.

Bhaskar Dutta and Bharat Ramaswami (2001)²³ study on "Targeting efficiency in the PDS – Case of Andhra Pradesh and Maharashtra" for this study they used data on household consumption from the National Sample Survey (NSS) for 1993-1994. That is during the period of universal Public Distribution System, compared the utilization of the Public Distribution System in Andhra Pradesh and Maharashtra. They found that the proportion of households used the Public Distribution System was much higher in Andhra Pradesh (57% of all households) than in Maharashtra (33% of all households). They pointed out that the geographical coverage of Public Distribution System retail outlets in

Andhra Pradesh was almost universal whereas the coverage in Maharashtra was not so. They examined the use of the Public Distribution System by declines of income groups, rural Andhra Pradesh must be better than rural Maharashtra in terms of lower errors of exclusion while the errors of inclusion are comparable between two states. They found that the participation rate declined with income groups, relatively more rapidly in Andhra Pradesh than in Maharashtra. In short in Andhra Pradesh a state with a better functioning Public Distribution System having widespread coverage the overall utilization was higher. The errors of exclusion of the poor were lower and the utilization fell relatively rapidly with income level. Here they examined the two targeting errors moved in opposite directions; Andhra Pradesh had higher errors of wrong inclusion but lower errors of wrong exclusion than Maharashtra.

2.2.7. Public Distribution System and Subsidy

George.P.S (1996)²⁴ discussed “Public Distribution System, food subsidy and production incentives”. He states the public distribution system is mainly focused on price stability for the consumers in urban and major food deficit areas and another main objective of the Public Distribution System regulated the movement of foodgrains from the surplus production states to deficit states formed on of the core elements of the food management system. He says Public Distribution System in India has close links with food security for the vulnerable population, to provide budgetary support for food subsidy and price policy. He criticized the Public Distribution System on three counts; firstly there is a sectoral bias towards urban area, secondly there is a regional bias and thirdly the leakage in the system introduces class bias especially when it does not provide food security for the poor class.

Finally he suggested the providing minimum support prices (MSP) to the farmers for increasing the foodgrains production.

2.2.8. Food Prices

R.N.Chopra (1981)²⁸, explained the brief history of food policy in India. He deals mainly with the marketing aspects of food policy, such as procurement, public distribution, storage, buffer stocks and the role of Food Corporation. This book begins with food situation in pre world war II. Here he explained different foodgrains policy committees appointed by the government of India from time to time to survey the developments, suggestions and policy alternatives. The author focused on entire food situation in India, why the food policy was appointed and the main features of the food policy and also explained the role food policy in India.

SwarnaSadasivamVepa (2010)²⁵ article on Food policy in the context of Liberalization and the Rising Food Prices. In this paper she examined the food inflation scenario and explained why the government measures have been ineffective in controlling inflation. The second section of this paper explored the understanding causes of food prices increase and their relative importance and the third section explained why the government measures have not only been effective but also counterproductive. She found that the government measures are ineffective for two reasons, if the supply shortage is not the main reason for the food inflation import of food from international market with higher food inflation than India will only push the prices further up since the imported commodities cannot be sold at lower prices in the domestic market and the second

important problem has been that of procuring too much and stocking too much without proper supply chain management and stock management.

Parmod Kumar (2010)²⁶, made an attempt to estimate supply and demand balances in Foodgrains and edible oils in the medium term by the end of XIth five year plan. This paper examined past growth performance of Foodgrains and oil seeds production as well as developments in the growth and patterns of Foodgrains and edible oil consumption. This analysis based on the trends in the production and consumption of Foodgrains and oilseeds/edible oils observed at the state and regions level. Finally he conclude that at the all India level, negative trends in consumption were observed for rice, wheat and coarse cereals during both pre and post liberalization periods and for both rural as well as urban areas.

S.Bisaliah (2010)²⁷, article on Growth of Agriculture - Horticulture Sectors and Livelihood Security. In this paper he explained the Spatial and Social distribution of poverty and growth performance of crop production of Agriculture vs. Horticulture sector. He also deals with the concepts of Food Nutrition-Livelihood Security. He explained the Agriculture and Horticulture sectors for livelihood security through the technological interventions, institutional interventions and policy- programme interventions.

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CHAPTER: III

DISTRIBUTION SYSTEM IN INDIA

3.1. Introduction

Public distribution system (PDS) in India is a very large- scale food rationing program across the world, main purpose of PDS is to amplify food safety at both state and household levels. PDS main objective is to provide necessary goods to the vulnerable households at very low price. The present chapter discussed about the status of PDS in India, and explains various food policies in India and their direct and indirect effects on food consumption via prices and real incomes. In this chapter selected 16 major states in India to analyze about the production, procurement, allotment and distribution of mainly wheat and rice. It also explained food grains production, distribution, yield per hectare, net availability of food grains. The present chapter used secondary data collect from different government reports and other important secondary sources.

3.2. Changing the context of Food Policy in India

In 1939, after Second World the British Government introduced distribution system. The regime thought that distribution of the foodgrains to the poor at cheap costs. Initially the distribution scheme was gone only a few urban cities and subsequently on it's stretched to other urban centers in India. During the Second World War, India's food production was very low and net availability of food grains production was declined. When war was started domestic production of foodgrains was very low and the supply of foodgrains was adverse condition. In this situation, foodgrains prices increased due to conjecture after the fall of Myanmar in 1942, the imports from Burma halted. The period of 1940-43, when

the government failed to provide commodities to the poor. In this condition Indian government was formulated a policy called food distribution system thus, a watershed in considering food dispersion and exchange controls. The Main objective of the food distribution policy, such as procurement, inspection and price stabilization.

In 1943, the Foodgrains Policy Committee was formulated under the chairman of Theodore Gregory. This committee observed that the food policy issues are really affected on poor people's income, who is to receive subsidies? and may be food subsidy untargeted or it may be targeted specific groups? They finally recommended that the available supplies through intensive procurement in surplus areas, introduced the rationing in urban areas of India. After these committee recommendations in the Indian food production was same due to Bengal famine and distribution of foodgrains only in the urban areas, due to this reason this committee recommendation was not successful.

In this situation, Second Foodgrains Policy Committee was appointed by Government of India in 1947. This committee mainly recommended increasing the domestic production and also observed that the imports were necessary to fulfill the heavy commitments of the rationing. When the domestic production was increased automatically imports were gradually decreased. So that this committee mainly suggested that increasing the domestic production with-in the probable time, step by step decrease reliance on imports and continuously abrogate the responsibilities towards buyers and making a cradle stock. Anyway the Government of India dismissed these proposals by the weight of M.K. Gandhi. In this situation the Government of India introduced decontrol policy. After the policy of decontrol, fluctuations were started due to floods and low foodgrains costs

adversely affected foodgrains creation. At that point the Government reintroduced a food arrangement dependent on authority over costs, acquisition and dispersion of essential foodgrains.

The system of procurement and distribution was adversely affected due to the not coordinated foodgrains price levels between the states. So that all states are treated Fair Price shops as a substitute for rationing. In this confusion the Government of India appointed the Foodgrains Procurement Committee in 1950. This committee observed that the system of procurement and distribution and suggested that some changes in the system of procurement and distribution. Finally the committee concluded that the uniform system of procurement must be established, then only to fulfill the main objective of the food policy to supply of foodgrains at reasonable worth to the consumers. Between 1950-1957, the government of India tried to reduce the prices of foodgrains, imports and some exports were allowed. But in 1956 the foodgrains prices were starting to rise quite rapidly, consequently exports were prohibited, imports were approved and FP shops were introduced.

The Government of India was appointed the Foodgrains Enquiry Committee in 1957 to investigate the causes of the rise in foodgrains prices. This committee mainly argued that opening all the more reasonable value shops and proceeding zonal strategy of uniting surplus and deficiency zones within zones and controlling costs inside each zone. This committee suggested that the increasing investments on growth, then the demand for food would go up.

In 1966 the Government of India appointed the Foodgrains Policy Committee. The committee main view to bringing about an equitable distribution of foodgrains within the country at reasonable prices. This committee reviewed the food situation and suggested that the national management of food for the arrangement of food issues and also recommended partial control, distribution and procurement of food grains in India.

In 2002 the Government of India delegated the High Level Committee on Long-Term Grain strategy under the director of Abhijit Sen. The committee mainly examined that the Price Support Operations, Functioning of the Public Distribution System (PDS), Minimum Support Prices (MSP), the role of Food Corporation of India (FCI), Policies with respect to cushion stocks, open market deals and outside exchange and assignment of grain for Rural advancement and other welfare programs. They saw that India's arrangement of grain the executives is in emergency. The main objective of the public food security system is to maintain price stability, price support to farmers and making grain “affordable” through distribution from surplus to deficit regions to the poor. They found that cereal demand in the country has grown at less than population over the past decade, and is now less than productive. The committee emphatically trusted that India ought to have the capacity to keep up independence in grains with satisfactory generation exertion. Be that as it may, there can be no smugness with respect to this exertion. The principle proposals of the board of trustees diminishing the Central Issue Price (CIP) for Above Poverty Line (APL) populace, expanding the distribution for Below Poverty Line (BPL) populace, making more grain accessible for “food for work” business plans and Revamped PDS zones, the valuable Nutrition Program (SNP) of ICDS might be fortified. The committee strongly argued that ways of expanding programs of employment

generations to create an effective demand for food grains. After these committee recommendations the government of India introduced so many poverty alleviation programs like PMRY, NREGP etc. But so many targeting errors found in the PDS.

The Indian government recently introduced “National Food Security Bill, 2010, is to give a statutory structure to entitle families living beneath the destitution line to certain base amounts of foodgrains every month through the focused on open dissemination framework (TPDS). This bill might be called as the National Food Security Act. This bill divided into five chapters, First chapter explained the definitions of the different schemes and second chapter discussed the food security to BPL families, TPDS and welfare schemes. Third chapter discussed implementation and monitoring authorities, their responsibilities like Central, State governments, and local governments, fourth chapter examined the organisation of a food security reserve and food security remittance reserves. Finally, this bill was passed in Parliament and called as a National food security act. The main objective of this act is to give basic products like rice and wheat to the BPL and APL families at low prices through the fair price shops.

3.3 Production of foodgrains

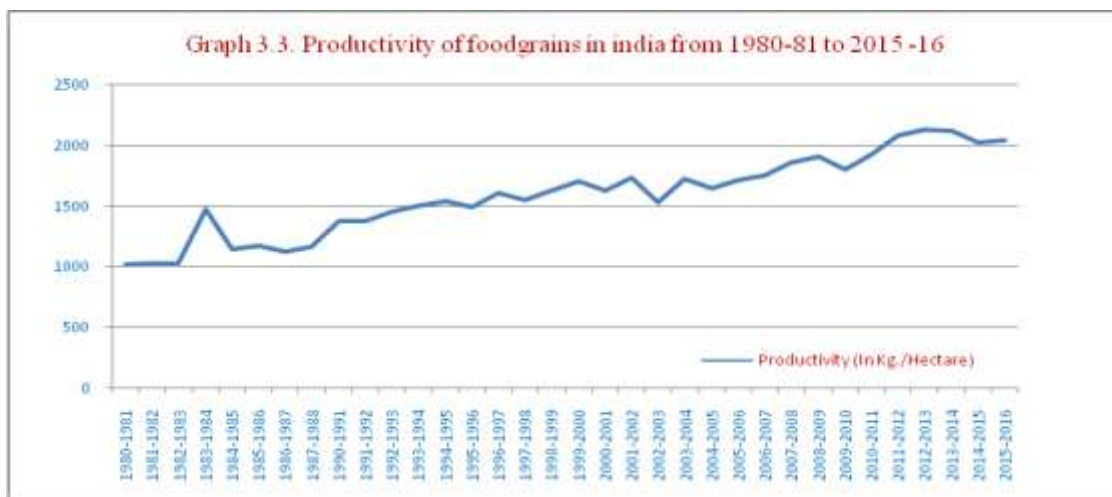
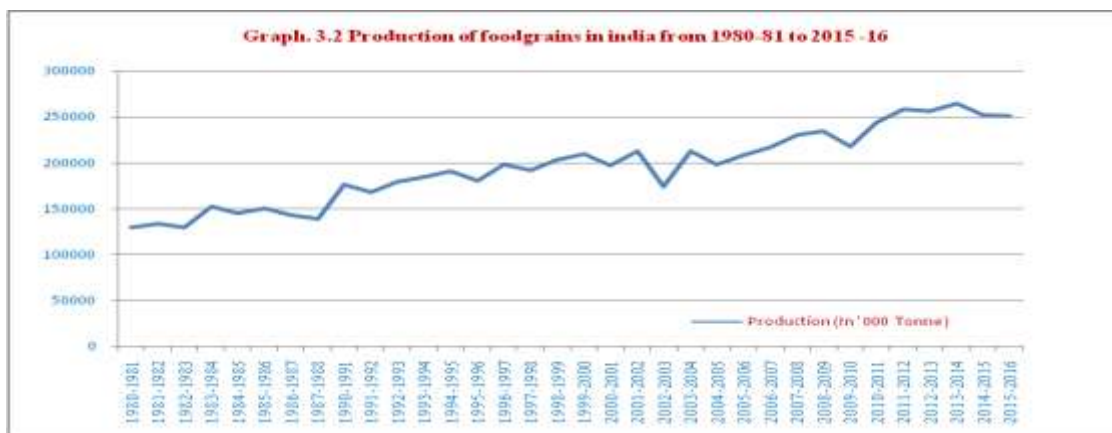
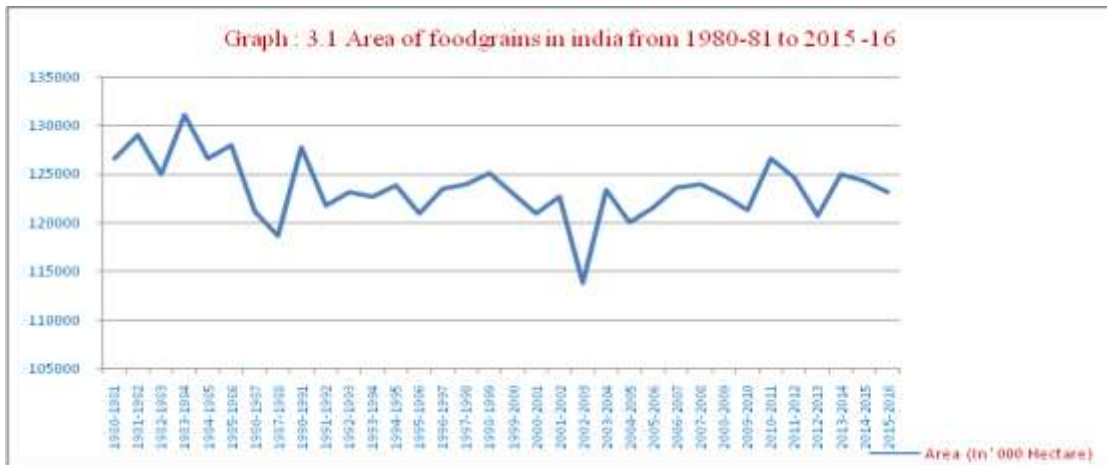
So as to guarantee food get to, a satisfactory measure of food must be first made accessible and second it ought to be set inside the monetary reach of vulnerable area. To meet this condition, a nation needs satisfactory and proceeded with supply of food, which will incorporate imports when residential creation is lacking. Broadly, ampleness of food can be checked based on all out supply with respect to add up to necessities. Here supply should be comprehended as all out creation and the per capita generation speaks to

ampleness. So as to discover the supply circumstance as reflected from creation of foodgrains, we have dissected the execution of foodgrains production for a time of 35 years (1980-81 to 2015-16). The table 3.1 shows that Area, Production, Productivity of food grains in India.

Table 3.1: Area ,Production and productivity of foodgrains in india from 1980-81 to 2015 -16

Years	Area (In ' 000 Hectare)	Production (In ' 000 Tonne)	Productivity (In Kg./Hectare)
1980-1981	126667	129588	1023
1981-1982	129138	133295	1032
1982-1983	125095	129519	1035
1983-1984	131162	152374	1478
1984-1985	126673	145539	1149
1985-1986	128023	150440	1175
1986-1987	121195	143418	1128
1987-1988	118706	138414	1166
1990-1991	127835	176390	1380
1991-1992	121871	168373	1382
1992-1993	123148	179483	1457
1993-1994	122754	184260	1501
1994-1995	123860	191495	1546
1995-1996	121015	180415	1491
1996-1997	123581	198343	1605
1997-1998	124068	192263	1550
1998-1999	125167	203607	1627
1999-2000	123104	209801	1704
2000-2001	121048	196814	1626
2001-2002	122780	212851	1734
2002-2003	113860	174771	1535
2003-2004	123447	213189	1727
2004-2005	120078	198363	1652
2005-2006	121600	208602	1715
2006-2007	123708	217282	1756
2007-2008	124068	230775	1860
2008-2009	122834	234466	1909
2009-2010	121334	218107	1798
2010-2011	126671	244482	1930
2011-2012	124755	259286	2078
2012-2013	120771	257135	2129
2013-2014	125047	265045	2120
2014-2015	124299	252023	2028
2015-2016	123217	251566	2042

Source: computed from Agriculture statistics at a glance, various issues



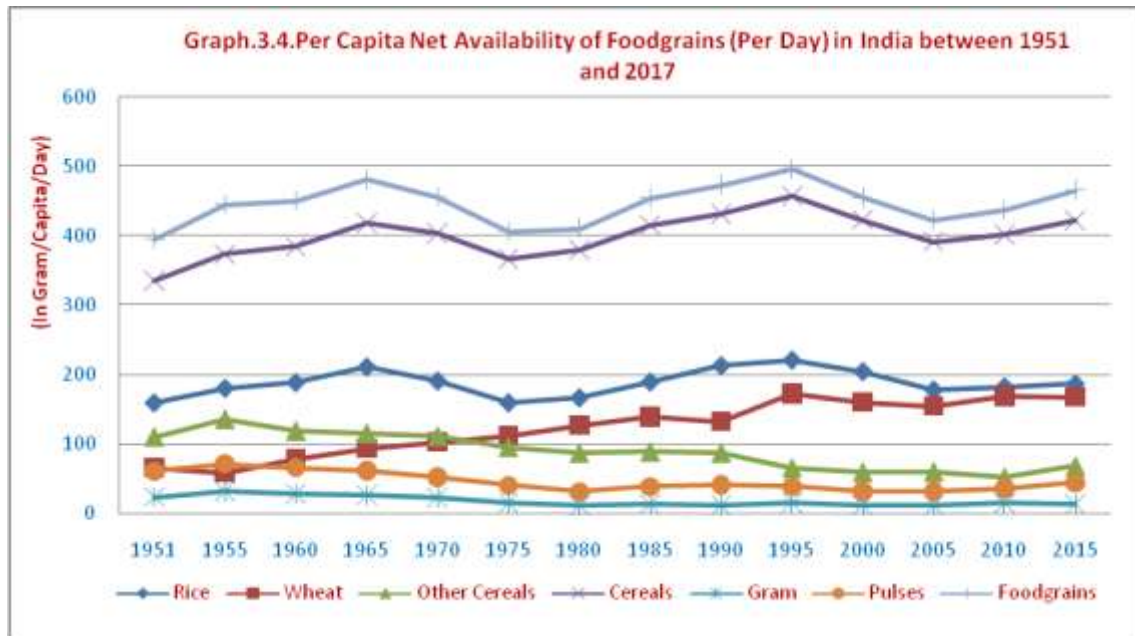
The graphs 3.1, 3.2, 3.3 demonstrates the Area, Production and Productivity of Food Grains in India during 1980-81 to 2015-16. The *Area* of production mentioned in *000 Hectares*. In 1980-81, produced of food grains are 129588000 tons in the Area of 126667000 Hectares. Then 1023 Kg. of produced in each Hectare. Interestingly, the production size of Area reduced to 123217000 Hectares, but the production of food grains increased to 251566000 tons and the production was double in the last three and half decades. In 1983-84, 1985-86, 1990-91, the Area in Hectares increased little, but the growth of production levels of food grains was slow and steady.

3.4 Per capita net availability

Food security at national dimension can be seen from per capita net accessibility of food in the nation. The per capita accessibility of food is a component of population and food creation with alteration made for fares, imports and changes in the Government stocks toward the start of the year. The table 3.2 explained the Per capita net availability of foodgrains (Per day) from 1951 to 2015.

Table 3.2 Per Capita Net Availability of Foodgrains (Per Day) in India (1951 to 2015) (In Gram/Capita/Day)							
	Rice	Wheat	Other Cereals	Cereals	Gram	Pulses	Foodgrains
1951	158.9	65.7	109.6	334.2	22.5	60.7	394.9
1952	158.5	57.6	109.3	325.4	19.8	59.1	384.5
1953	165.9	62.5	121.5	349.9	24.2	62.7	412.6
1954	194.1	58	136	388.1	27.3	69.7	457.8
1955	179.7	58.3	134.9	372.9	31	71.1	444
1956	187.7	61.5	111.2	360.4	29	70.3	430.7
1957	192.7	71.6	111	375.3	32.8	71.8	447.1
1958	164.8	66.5	119	350.3	25.3	58.5	408.8
1959	191	78.5	123.9	393.4	35.5	74.9	468.3
1960	187.8	78.3	118	384.1	27.7	65.5	449.6
1961	201.1	79.1	119.5	399.7	30.2	69	468.7
1962	203.2	84.2	111.5	398.9	27.3	62	460.9
1963	186.9	79.2	117.9	384	24.7	59.8	443.8
1964	201.4	90.1	109.5	401	20.3	51	452
1965	210.2	93.6	114.7	418.5	25.5	61.6	480.1
1966	161.9	95.4	102.6	359.9	18.3	48.2	408.1
1967	154	90.5	117.3	361.8	15.3	39.6	401.4
1968	183.7	95.8	124.6	404.1	24.6	56.1	460.2
1969	190.5	100.5	106.8	397.8	17.4	47.3	445.1
1970	190.2	102.3	110.6	403.1	21.9	51.9	455
1971	192.6	103.6	121.4	417.6	20	51.2	468.8
1972	197.8	126	95.3	419.1	19	47	466.1
1973	172	118.1	90.4	380.5	16.7	41.1	421.6
1974	190.4	108.8	111.2	410.4	14.8	40.8	451.2
1975	158.9	112.1	94.8	365.8	14.2	39.7	405.5
1976	187.2	79.5	107.1	373.8	20.2	50.5	424.3
1977	168.8	114.5	103	386.3	18.4	43.3	429.6
1978	196.2	126.3	100	422.5	17.8	45.5	468
1979	200.3	132.3	99.2	431.8	18.6	44.7	476.5
1980	166.1	126.8	86.6	379.5	10.7	30.9	410.4
1981	197.8	129.6	89.9	417.3	13.4	37.5	454.8
1982	193.2	127.9	94.8	415.9	14	39.2	455.1
1983	169.8	144.4	83.3	397.5	15.6	39.5	437
1984	197.8	140.8	98.9	437.6	13.7	41.9	479.5
1985	188.8	138.6	87.9	415.3	12.9	38.1	453.4
1986	212	151	70.7	433.7	16.2	43.8	477.5
1987	206	157.8	71	434.8	12.3	36.4	471.2
1988	188.2	154.2	68.8	411.2	9.6	36.4	447.6
1989	215	156.2	80.3	451.5	13.4	41.9	493.4
1990	212.1	132.6	86.8	431.5	10.7	41.1	472.6
1991	221.7	166.8	80	468.5	13.4	41.6	510.1
1992	217	158.6	58.9	434.5	10.1	34.3	468.8
1993	201.1	140.2	86.6	427.9	10.7	36.2	464.1
1994	207.4	159.5	67.1	434	11.8	37.2	471.2
1995	220	172.7	64.9	457.6	14.9	37.8	495.5
1996	204.4	176	62	442.5	11.3	32.7	475.2
1997	214	179.1	72.9	466	12.4	37.1	503.1
1998	200.3	151.5	62.4	414.2	13.4	32.8	447
1999	203.4	162.3	63.4	429.2	14.6	36.5	465.7
2000	203.7	160	59	422.7	10.8	31.8	454.4
2001	190.5	135.8	56.2	386.2	8	30	416.2
2002	228.7	166.6	63.4	458.7	10.7	35.4	494.1
2003	181.4	180.4	46.7	408.5	8.5	29.1	437.6
2004	195.4	162.2	69.3	426.9	11.2	35.8	462.7
2005	177.3	154.3	59.4	390.9	10.6	31.5	422.4
2006	198	154.3	60.5	412.8	10.7	32.5	445.3
2007	194	157.8	55.5	407.4	11.9	35.5	442.8
2008	175.4	145.1	54.1	394.2	10.6	15.3	436
2009	188.4	154.7	63.9	407	12.9	37	444
2010	182	168.2	51.4	401.7	13.5	35.4	437.1
2011	181.5	163.5	65.6	410.6	14.6	43	453.6
2012	190.2	158.4	60	408.6	13.5	41.7	450.3
2013	159.6	145.8	52.7	358.1	15.3	43.3	491.9
2014	199	183.1	62	444.1	16.3	46.4	489.3
2015	186	168	67.4	421.4	12.4	43.8	465.1

Source: Computed from Agriculture statistics at a glance, various issues



The graph 3.4. exhibits the Per Capita Net Availability of food grains, Rice, Wheat, etc. in 1951, 158.9 grams of rice was availed for head in India which was increased to 186 grams in 2015, following it, the net availability of wheat has increased enormously from 65.7 grams to 168 grams, in Cereals were also increase from 334.2 grams to 421.4 grams. But, interestingly in case of other cereals, Gram and Pulses the net availability reduced immensely. The net availability of food grains showed good progress from 394 .9 grams to 465. 1 grams between the above mentioned years.

3.5 Public Distribution System and Definition

Unlike private distribution, PDS warrants control executed by public authority and the purpose here is primarily social welfare, but not private gain. Beginning from the procurement stage to finally delivering the goods to the consumers, the system generally incorporates all the associated agencies. In the process of procurement, transportation, storage and distribution, the agency that is involved is Food Corporation of India (FCI).

The agencies concerned in the supply of PDS at the level of states. However, the fair price shops (FPS), which are usually possessed by private individuals, are the ultimate loop in this process. Therefore, the most significant feature that characterizes PDS is that the government agencies are involved in the distribution system and also the government controls over the entire system.

PDS is recognized with fair price shops in its narrow connotation. Dholakia and Khurana remark that PDS is “a retailing framework regulated and guided by the State”. Advancement Evaluation Organization (Government of India 1985) explains PDS as a “set up under which determined wares of ordinary use are secured and made accessible to buyers through a system of FPS in urban just as in provincial zones”.

At the behest of central government, FC1 is involved in the procurement of cereals. Grain is also procured by various state government agencies for the central pool and for their own account as well. Central government is taking a lead role in allotment to specific states. The responsibility of allocation to FPS and supervision of its functioning is undertaken by the state level civil supply organizations. Since FPS's are controlled by government, these are not permitted to sell any commodity other than that is supplied by government. These are all based on the number of ration cards attached to the FPS, each FPS is allotted specified quantities. It is completely at the choice of the government to fix the prices of such commodities. The FPS dealers must obtain a license for operating a shop and maintaining proper records of the stocks received by them.

3.6. Evolution of Public Distribution System

The PDS has gradually developed after a long period. Famines and droughts precipitated severe shortage conditions and the government took steps to help the victims in the way leading to the formation of the food security system. Therefore, the steps have the characteristics of the fire-fighting operation "concerned only with putting out the flames and providing a modest measure of temporary relief to the affected population." For the first time under the British rule in 1939, such an attempt was taken up when the World War-II began. In some selected cities, which faced acute scarcity conditions, the government decided to distribute food grains to the poor because they were unable to avail commodities at an affordable price from the private agencies. This system was prolonged to many other cities and towns after the great Bengal Famine later in 1943. A form of food security system emerged after the long periods of economic stress of wars and famines. In the beginning, it concerned itself mainly with execution of scarce food supplies, and later implemented a more organized and institutionalized approach including measures that suspended usual markets and trade activities. In the form of statutory rationing in select urban areas, this system of food security existed in India for many years, and now it also continues in some urban centers.

In India, the development of PDS can be ordered into four timeframes. These are

- a) From 1939 to 1965,
- b) From 1965 to 1975, and
- c) From 1975 to 1997
- d) From 1997 onwards

During the period of 1939 to 1965, the PDS was taken as a sheer "ration system" to distribute the rare items and thereafter it was seen as a "FPS" when contrasted with the private exchange. Rice and wheat held a very high offer in the dispersion of food grains. It was acknowledged to stretch out the PDS to rustic zones, yet it was not executed. The working of PDS was not customary and with minimal inner obtainment, it relied upon imports of PL 480 food grains. Actually, amid this period, imports represented real rate in the provisions for PDS. In addition, the offered acquirement costs were not fiscally fulfilling.

It was chosen by the mid 60's to see much past administration of rare supplies in basic circumstances. Blockage of PL 480 imports constrained the legislature to acquire grains inside. India attempted a quantum jump with the end goal of giving a progressively sustainable institutional system for guaranteeing food security. The setting of FCI and "Rural Prices Commission (APC)" presently identified as "Department of Agricultural Costs and Prices (BACP) Commission" watched the beginning of this stage in 1965. In view of this commission recommended costs, the FCI gets the food grains to designate through PDS and a part of the acquired amount is put aside as "buffer stocks" to satisfy any unexpected emergency circumstance. The key components of this framework were regulated courses of action and strategies for acquirement, stocking and dissemination of food grains.

The more significant matter is that the food security system developed gradually as an essential part of a development policy during this period to effect an outstanding technological change in selected food crops, particularly wheat and rice. For farmers, it

brought forth effectual price and market support and exploited a broad range of measures to create employment and income for the poor people in the rural areas in order to improve the intensity of their well-being along with better physical and economic access to food grains.

In the third time frame, there was development in the production of food grains in the nation. The “support stock gathering” too expanded significantly. With this, the rudimentary weight on “buffer stock” upkeep and value adjustment changed to support the provisions of PDS. In the fourth plan 69-74, it expresses that in so far as food grains are concerned the essential goal is to give a viable PDS. The obtained amounts were in abundance contrasted with the need PDS needs and least hold was kept up. In fifth year plan, projects, for example, Food for work, Antyodaya and so on, started to lessen neediness and to limit the overloading of FCI godowns too. Amid this period, there was a steady decrease of imports and there was a net fare of food grains in 1975 however it was a lesser sum. Imports continued with similarly little amounts to safeguard the dimension of buffer stocks. The central government developed the PDS more grounded in this period, so it continued to end up a "steady and lasting element of our technique to control costs, lessen variances in them and accomplish an evenhanded conveyance of basic consumer goods.

Till late seventies, the PDS was mostly limited to urban population without assuring sufficient food to the poor people in rural areas during crisis. A few state governments augmented the inclusion of PDS to country territories amid the late 1970's, and mid eighties and furthermore brought into being the "target group approach". These states are

Andhra Pradesh, Gujarat, Kerala, and Tamil Nadu. This was because of the way that there was a perceptible change in the food circumstance; explicitly in the later years, amid the 80's and mid 90's. In this manner, the net openness of food grains, which had seen the expansion from 74 million tons in 1968 to 99 million tons in 1977, saw a quick ascent in later years touching base at 158 million tons in 1991 (Government of India 1994). Along these lines, at first when the PDS started to meet the emergency circumstance, by the Sixth Five Year plan, the PDS was seen "as an instrument for productive management of fundamental consumer goods" essential for "keeping up stable value contemplations".

Rao (1995) views, "from a situation where the policies remained pre-occupied with management of scarce supplies, the economy has now seems to have reached a stage where the food grain sector could provide a powerful stimulus to overall growth and development.

In 1997, the Government of India introduced Targeting Public Distribution System (TPDS), this system operated by central and state Government. Procurement of Food grains through FCI and distribution of food grains to the states in under control of central government and distribution of food grains to district wise and control of FP Shops is under state government. This system mainly divided in to two major section of the population that is Below Poverty (BPL) and Above Poverty line (APL) people. They distributed food and essential goods to the particular targeted group of the people. In TPDS found many targeting errors, so the present study mainly focused on the targeting errors at household level.

3.7. Five year plans - Public Distribution System

In India, the transformation of the PDS was also congruous with the planning for PDS and the changes in the perspectives of plans over a period of time. The requirement for PDS on a regular basis from the beginning of First Five-Year Plan (1951-56) for the entire country to extend aid to the poor and to some degree for creating descending pressure on prices has been stressed. The initial emphasis in the Fourth Five-Year plan (1969-74) on “buffer stock” preservation and cost stabilization was shifted to increased Public Distribution System supplies. For example, it was mentioned in the document of the Fourth Five Year Plan (1969-74) that to the extent the food grains are concerned, the fundamental objective is to manage a successful Public Distribution System. By 5th Five-Year Plan (1974-79), a chief role for PDS was foreseen in ascertaining supplies of indispensable goods of mass utilization to people at affordable price specifically to the poor people in the society. During the 6th Five Year Plan (1980-85), Public Distribution System was anticipated to grow in a way that it continue to be a steady and lasting feature of the strategy to curb costs, decrease fluctuations and attain equitable distribution of basic consumer goods. At the time of emergency during 1975, extension of Public Distribution System to include all areas was made a significant point of achievement under the 20-point programme. The 7th Plan (1985-90) mentions that the Public Distribution System will be a lasting characteristic of the strategy to curb prices, reduce fluctuations and attain equitable distribution of basic consumer goods. Extension of PDS to include all areas has been taken under the 20-point programme as a vital point of achievement. It also declared a unique scheme for supplying food grains at a specific concessional price to the inhabitants in areas that come under “Integrated Tribal

Development Programme” (ITDP). An intricate arrangement for procurement process and allocation through the PDS outlets came out and this included a specific amount of subsidy by government. Supplementary procurement was connected with the strategy of giving a “minimum support price” to the farmers. Therefore, the PDS in India, by the Seventh Plan, had close connections with food security for the “weaker sections” of the society, “policy implications” concerning budgetary support for “food subsidy”, and a “food price” policy.

During the 8th Five Year Plan (1990-95), the supply of food grains was increased through PDS by covering other rural areas and making the use of food grains for “employment generation” programmes, like “National Rural Employment Programme (NREP)” and the “Rural Landless Employment Generating Programme (RLEGP)”. As a result, these programmes were revised and merged into the “Jawahar Rozgar Yojana (JRY)”. The inception of providing “food security” through “employment generation”, and connecting it to programmes of “poverty alleviation” has supplemented yet another facet to the policies.

3.8. Public Distribution System and Features

In 1939, the food supplies program began to the starvation and dry spell exploited people. In addition, the PDS raised its degree of work to contain a greater range of activities for procurement, and distribution of food grains and other "civil supplies", "price policies, etc. The fundamental highlights of the PDS can be outlined as pursues:

- 1) It is a distribution arrangement of certain essential goods through the "fair price shops" (generally known as "ration shops" or "co-operatives" possessed by the administration) which are worked by private merchants under the control and course of the legislature.
- 2) Rice, wheat and sugar have persevered to take up a critical position all through the period. The other basic products are lamp oil, palatable oil, and so on.
- 3) The activity of the PDS did not hamper the working of the free market instrument at all aside from in the limited statutory proportioning regions yet practiced alongside it. Along these lines, this might be viewed as a "double economy" in the essential products. Purchasers are permitted either to purchase through "Reasonable Price Shops" or in the "open market".
- 4) The vital measure of food grains and different merchandise are acquired by the administration through household obtainment as well as through imports and a "cradle stock" is kept up so as to meet shortage circumstance. The legislature furnishes the PDS with provisions, supports the appropriation cost, chooses regarding which merchandise to supply, at what rates, what add up to be sold per head or per family and so on.
- 5) The target is to supply no less than a fundamental least measure of basic things at sensible costs especially to the flimsier segments of the general public and furthermore to relentless their open market costs or if nothing else to turn away a baseless ascent in such costs under states of shortage. The costs charged are

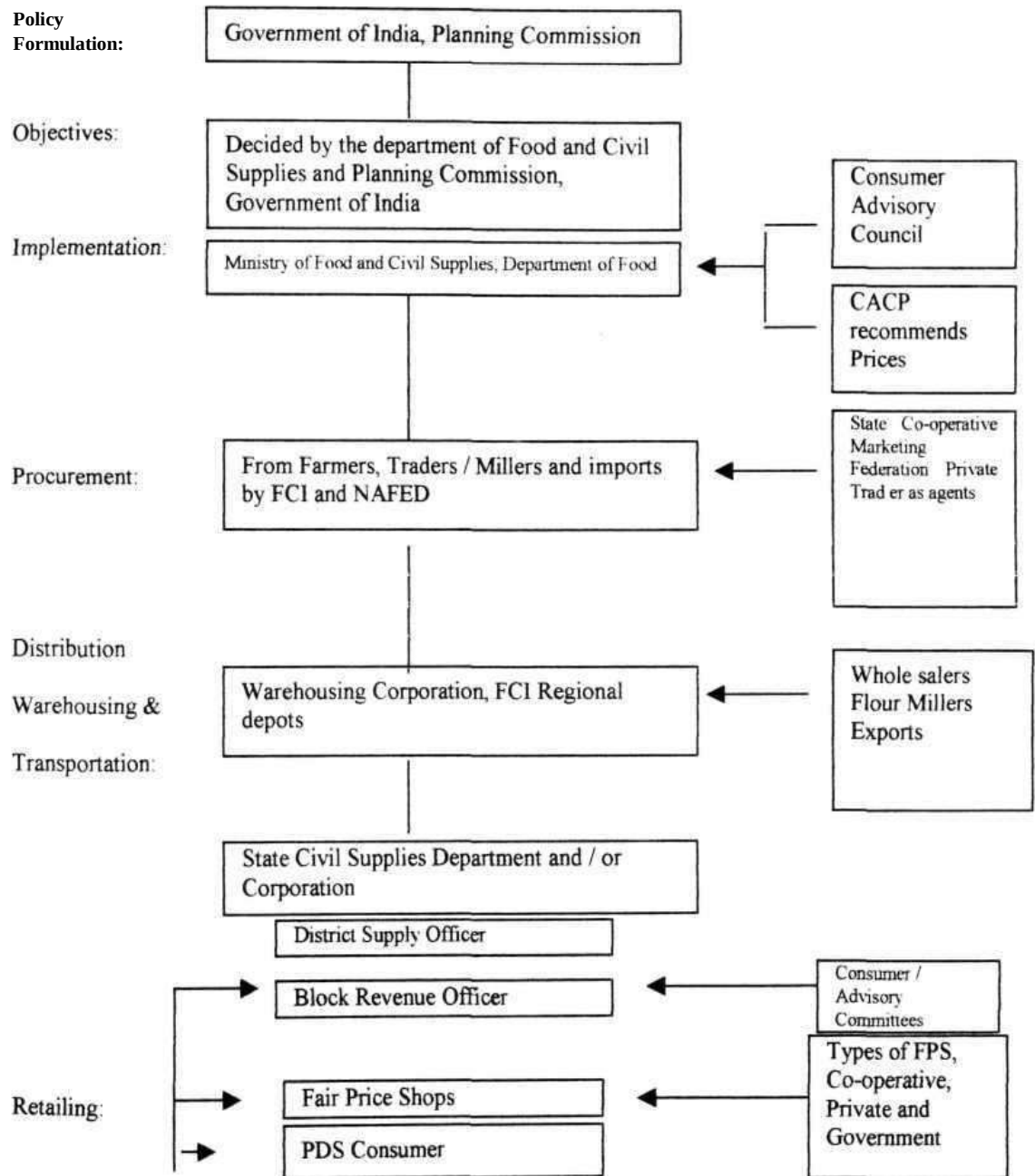
commonly not exactly "open market" costs and furthermore lower than the obtainment and different expenses brought about by the government.

- 6) It has been for the most part an urban-arranged plan. Its beginning just as development has been in those delicate urban zones where an insufficiency of food grains and other indispensable wares could end up political liabilities of government.

The PDS has been arranged and executed by both the central and state governments. Central government principally handles the "buffer stock" tasks (FCI) and furthermore controls the outside and inside exchange of food grains. Through its obtainment movement, the focal government attempts to try and out the incongruities of surplus and shortage food grain creating states.

3.9. Organizational Design of PDS in India

Figure.3.1: PDS design in India



Source: From Tyagi & V.S Vyas (1990): *Increasing Access to Food: The Asian Experience*, Sage Publications, New Delhi.

The essential way to deal with the PDS is chosen by the Planning Commission, Government of India after definite talks by master gatherings. Different arrangement records contain the announcement of targets of the PDS as portrayed before. The arranging Commission, the primary arrangement planning body of the legislature chooses about the goals. The PDS has been doled out various targets, for example,

- 1) Stabilizing costs of basic merchandise.
- 2) Aiming at an evenhanded circulation of basic products.
- 3) Providing basic things to helpless areas of the populace at sensible costs.

To accomplish the above targets of obtainment and dissemination of the PDS, the Department of Food Ministry of Food and Civil Supplies readies the plans.

3.10. Production

So as to security food get to, a satisfactory measure of food must be first made accessible and second it ought to be put inside the monetary reach of defenseless segment. To meet this condition, a nation needs satisfactory and proceeded with supply of food, which will incorporate imports when household creation is insufficient. Broadly, sufficiency of food can be checked based on all out supply with respect to add up to prerequisites. Here supply should be comprehended as absolute creation and the per capita generation speaks to sufficiency. Here all India rice generation and 16 noteworthy rice creation states determined given below.

Table 3.3: State wise Production of Rice from 1985-86 to 20015-16 ('000 Tonnes)

Years	Andhra Pradesh	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Kerala
1985-86	7614	6016	454	1636	125	587	1943	1173
1986-87	6591	6044	446	1543	106	591	2313	1134
1987-88	7069	4610	279	1073	76	421	1909	1039
1988-89	10621	6351	866	1437	88	580	2510	1007
1989-90	9959	6349	817	1698	95	549	2377	1074
1990-91	9654	6564	791	1834	107	555	2415	1087
1991-92	9249	4753	830	1812	103	550	2826	1060
1992-93	8792	3641	830	1869	110	509	3069	1085
1993-94	9562	6109	839	2057	102	507	3183	1004
1994-95	9277	6298	942	2227	112	585	3168	975
1995-96	9014	6640	827	1847	111	509	3024	953
1996-97	10686	7281	946	2463	109	431	3212	832
1997-98	8510	7133	1042	2556	120	549	3213	765
1998-99	11878	6769	1016	2425	118	589	3657	727
1999-00	10638	7252	985	2583	120	391	3716	771
2000-01	12458	5443	473	2695	125	414	3846	751
2001-02	11390	5203	1040	2726	137	421	3234	703
2002-03	7327	5085	541	2468	86	421	2390	689
2003-04	8953	5448	1277	2790	120	504	2550	570
2004-05	9601	2472	1238	3023	122	492	3547	667
2005-06	11704	3495	1298	3210	112	557	5744	627
2006-07	11872	4989	1390	3371	123	554	3446	631
2007-08	13324	4418	1474	3613	121	561	3717	528
2008-09	14241	5590	1303	3298	118	563	3802	590
2009-10	10538	3599	1292	3625	106	497	3691	598
2010-11	14417*	3102	1496	3472	128	507	4188	522
2011-12	12894*	7162	1790	3759	131	544	3955	569
2012-13	11509*	7529	1541	3976	125	818	3364	508
2013-14	12724*	5505	1636	3998	120	610	3572	509
2014-15	11673*	6356	1830	4006	125	517	3541	562
2015-16	10536*	6802	1702	4145	103	646	3021	549

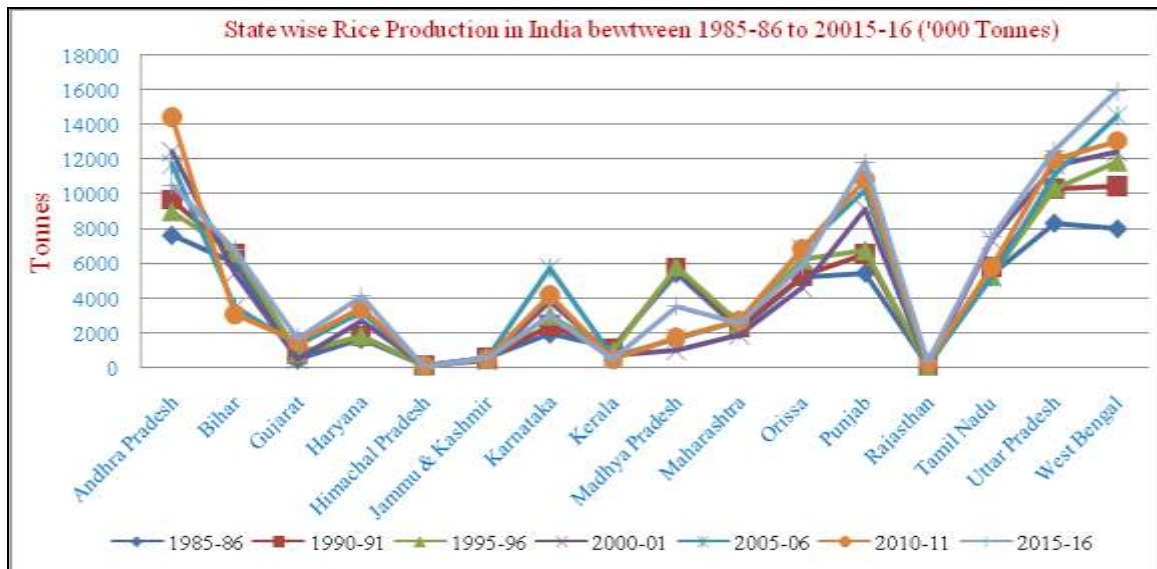
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Madhya Pradesh	Maharashtra	Orissa	Punjab	Rajasthan	Tamil Nadu	Uttar Pradesh	West Bengal	All India
5418	2182	5226	5449	119	5371	8315	7991	63825
4178	1752	4834	6022	129	5333	7509	8463	60557
4100	1713	3481	5431	79	5604	6221	9272	56433
4667	2652	5297	4925	186	5590	9288	10560	70489
4493	2319	6284	6697	151	6063	9477	10924	73573
5738	2314	5275	6535	142	5782	10260	10437	74291
5249	2100	6660	6755	120	6596	9411	11954	74677
5283	2364	5388	7002	175	6806	9709	11445	72867
5963	2484	6616	7642	143	6750	10210	12111	80298
6463	2397	6353	7703	173	7563	10365	12236	81814
5839	2563	6226	6768	118	5290	10363	11887	76975
5939	2614	4438	7334	174	5805	11771	12637	81737
4528	2395	6205	7904	190	6894	12165	13237	82535
5061	2468	5392	7940	206	8141	11387	13317	80676
6377	2559	5187	8716	253	7532	13231	13760	77479
982	1929	4614	9154	156	7366	11679	12428	72778
1693	2651	7148	8816	180	6584	12856	15257	80522
1032	1854	3277	8880	68	3577	9595	14389	71821
1750	2835	6734	9656	165	3222	13019	14662	88526
1169	2164	6466	10437	150	5062	9556	14885	83131
1656	2695	6859	10193	153	5220	11134	14511	91794
1388	2569	6825	10138	170	6610	11124	14746	93355
1462	2996	7541	10489	260	5040	11780	14720	96692
1560	2284	6813	11000	241	5183	13097	18037	99182
1260	2183	6917	11236	228	5665	10807	14341	89093
1772	2696	6827	10837	265	5792	11992	13045	95970
2227	2841	5807	10542	253	7458	14022	14605	105301
2775	3057	7295	11374	222	4049	14416	15023	105241
2844	3120	7613	11267	312	5349	14636	15370	106645
3625	2946	8298	11107	366	5727	12167	14677	105481
3547	2593	5875	11823	370	7517	12501	15954	104408

Source: computed from Agriculture statistics at a glance, various issues

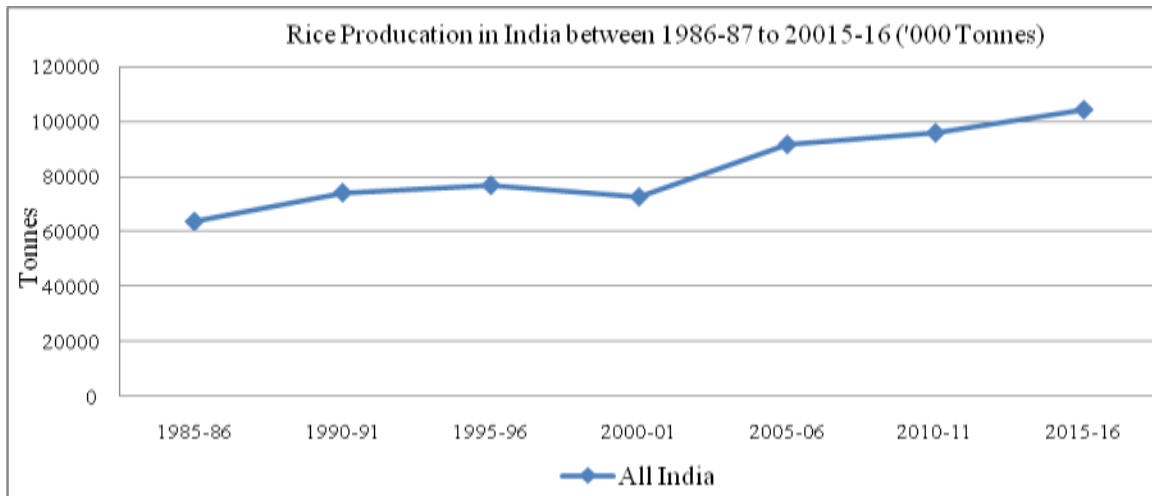
*Note: * Included Telangana state Rice Production.*

Graph 3.5: Production of Rice in 16 major states in India



The graph 3.5 displays the production of rice (*in 000 tonnes*) in different states during 1985-86 to 2015-16. Rice production in the state of West Bengal (WB) has enormously increased in the last two decades from 7991000 tons to 15954000 tons. Uttar Pradesh (UP) 12501000, Punjab 11823000, Andhra Pradesh (AP) 10536000 are behind the WB in the rice production during this period. States like Himachal Pradesh (HP) 103000, Rajasthan 370000, Kerala 549000, and Jammu & Kashmir (J&K) 646000 did not even reach the one lakh tons in the rice production in the same period.

Graph 3.6. Rice production in India between 1986-87 to 2015-16



The graph 3.6 shows the production of rice in India during 1985-86 to 2015-16. In 1985-86 the rice production in the country was 6, 38, 25,000 tons and it has been increasing year by year and reached to 10,44,08,000 tons in 2015-16. But, it shows several trends in these decades as there is a *up and downs* in the rice production. For instance, in 1987-88 the rice production was 56433000 tons which was less than the production 6, 38, 25,000 tons in 1985-86. It has shown down fall in the following years 1995-96, 1999-00, 2000-01, 2002-03, 2009-10, 2014-15, 2015-16 than the previous years.

Table.3.4: State wise Production of Wheat from 1986-87 TO 2015-16 ('000 Tonnes)

Years	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Madhya Pradesh
1986-87	2863	662	5055	451	212	142	4264
1987-88	2777	351	4861	651	212	134	4329
1988-89	3557	1513	6225	513	246	166	4797
1989-90	3270	1102	5913	544	262	89	4120
1990-91	3560	1444	6440	602	297	125	5833
1991-92	3594	906	6502	596	308	142	5138
1992-93	3540	1360	7083	594	347	158	5243
1993-94	4357	928	7231	413	352	192	6767
1994-95	4275	1962	7303	599	349	172	7279
1995-96	4239	1124	7291	537	399	146	6667
1996-97	4560	1336	7826	531	412	190	7793
1997-98	4848	1647	7554	641	396	118	7220
1998-99	4403	1702	8568	641	368	219	8333
1999-00	4687	1020	9650	853	434	217	8685

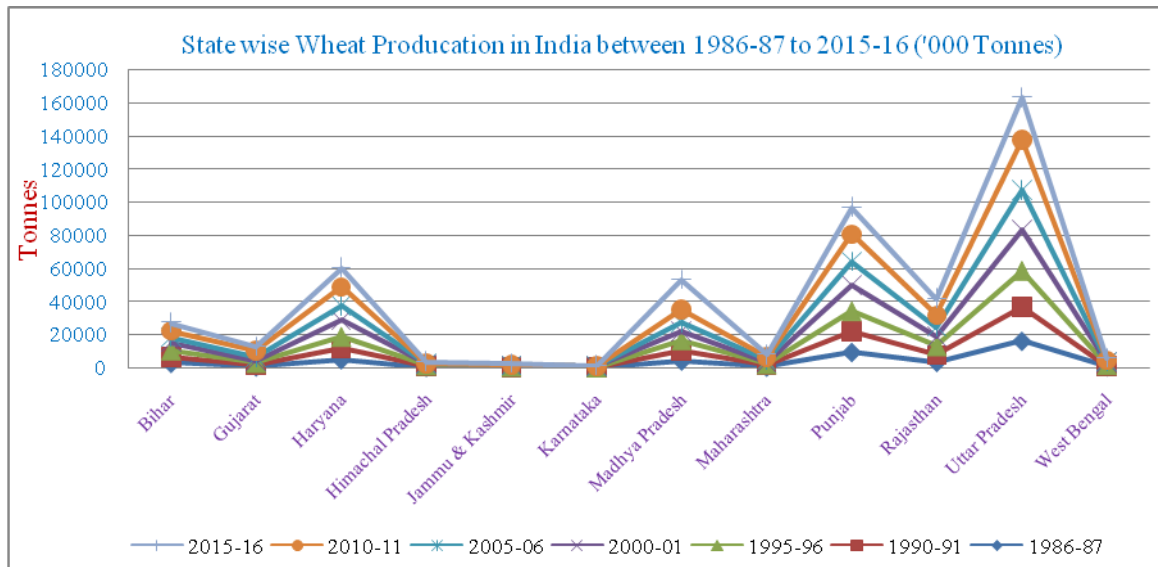
2000-01	4438	649	9669	251	148	244	4869
2001-02	4391	1144	9437	637	343	198	6001
2002-03	4040	856	9188	495	401	147	4923
2003-04	3688	2036	9114	498	459	96	7364
2004-05	3263	1805	9058	684	474	179	7177
2005-06	3239	2473	8857	679	444	217	5959
2006-07	3911	3000	10055	501	492	205	7326
2007-08	4450	3838	10236	504	495	261	6032
2008-09	4410	2593	10808	547	483	247	6521
2009-10	4623	2648	10500	568	492	251	7846
2010-11	4097	4019	11630	546	446	279	7627
2011-12	4725	4072	12685	596	500	193	11563
2012-13	5357	2944	11117	608	462	179	13133
2013-14	4738	4694	11800	670	601	210	12937
2014-15	3987	3059	10354	646	314	261	17103
2015-16	4736	2484	11352	667	541	156	17688

Continued...

Maharashtra	Punjab	Rajasthan	Uttar Pradesh	West Bengal	All India
536	9458	3402	16236	683	44326
633	11066	2910	16463	674	45092
1043	11580	3964	17684	625	54110
907	11681	3400	18600	569	49850
919	12155	4309	20229	530	55135
626	12295	4478	20229	558	55689
798	12369	5148	19834	587	57210
1056	13377	3460	20822	632	59840
1111	13542	5613	22560	745	65767
898	12518	5493	21816	725	62097
1167	13672	6782	24049	839	69350
671	12715	6701	22833	810	66345
1308	14460	6879	23465	778	71287
1436	15910	6731	25976	850	76368
948	15551	5547	25168	1058	69680
1077	15499	6389	25498	961	72766
984	14175	4878	23612	887	65095
778	14489	5875	25567	985	72156
1016	14698	5706	22514	841	68637
1300	14493	5865	24073	773	69355
1635	14596	7055	25031	799	75807
2078	15720	7124	25679	917	78570
1516	15733	7287	28554	764	80679
1757	15263	6828	27810	837	80803
2301	16472	7214	30001	874	86873
1313	17280	9319	30292	873	94882
1181	16591	9275	30301	895	93506
1602	17620	8663	29890	927	95849
1308	15050	9823	22417	939	86526
981	16077	9871	25425	960	92287

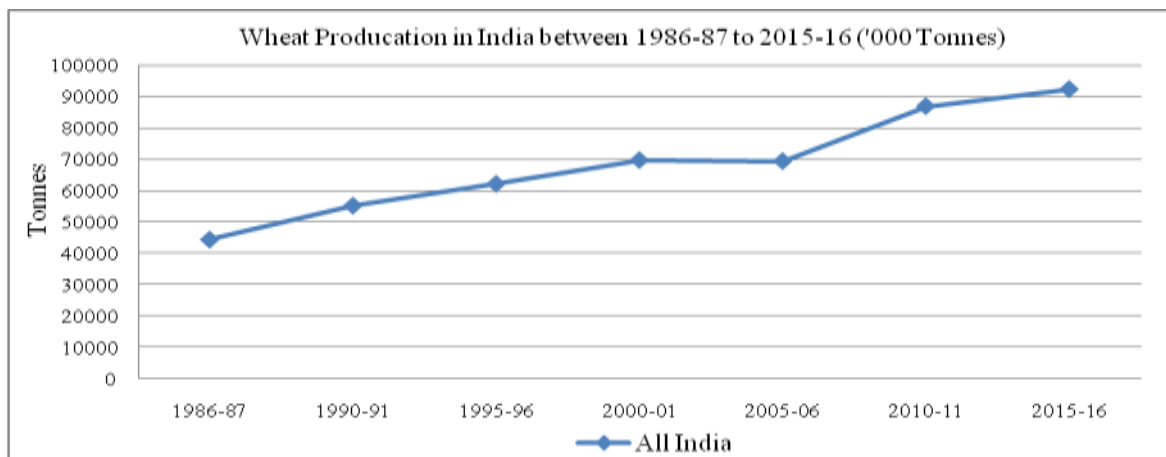
Source: computed from Agriculture statistics at a glance, various issues

Graph 3.7: Production of Wheat in 12 major states in India



The graph 3.7 demonstrates the trends in the *wheat production (in 000 tons)* in different states in India during 1985-86 to 2015-16. The State Uttar Pradesh (UP) stood in first place with 25425000 tons of wheat in 2015-16, following it Madhya Pradesh (MP) 17688000, Punjab 16077000, and Haryana 11352000. But, the states like Karnataka 156000, Jammu & Kashmir 541000, and Himachal Pradesh (HP) 667000 stood in the last row in this regard.

Graph 3.8. Wheat Production in India between 1986-87 to 2015-16



The graph 3.8 presents the growth of wheat production in India during 1986-87 to 2015-16. The production of wheat till 2005-06 was constantly increasing with fewer fluctuations. In 1986-87, India produced 4432600 tons of wheat and it increased to 69355000 tons in 2005-06. But, the graph of the wheat production had crossed 700000000 tons during the annual years of 1998-99, 1999-2000, 2001-02 and 2003-04. In the last two decades the production has increased tremendously from 69355000 tons in 2005-06 to 92287000 tons in 2015-16. It clearly exhibited the rapid growth of wheat production in India in last two decades.

3.11. Procurement

Food grains must be obtained so as to satisfy the necessities of the PDS. Preceding the foundation of the Food Corporation of India (FCI) in 1965, acquisition from local sources was confined. It was the responsibility of the "State Department of Revenue" and the "Bureau of Civil Supplies" to obtain food grains by charging an impose on agriculturists, merchants and mill operators. Before the mid-sixties, the fundamental wellspring of obtainment was imports under PL-480 constrained by the Government of India through the "State Trading Corporations". As pointed out before, inner acquisition has been practiced by the FCI since 1965 and the state organizations, for example, the "Common Supplies Departments" or "Common Supplies Corporations". As a component of the acquisition methodology, cooperatives were likewise inspired as offices through which these associations could obtain Food grains.

The "Food Corporation of India" ordinarily buys food grains in the managed markets and pays a commission to the specialists for their administrations. The cost paid is chosen by the legislature on the exhortation of the "Commission at Agricultural Costs and Costs". For encouraging acquirement, the costs in surplus states are discouraged by constraining the development of grains outside the zones so the costs intently take after the help costs. Currently, zoning is officially banned. It has been stated that in comparison to the prices in the open market in consuming states, the price offered by the FCI is generally less which does not justify its being called as "incentive price".

The important decisions in procurement are about the amount to be procured and the prices to be offered. As noted earlier, prices to be offered are suggested by CACP. The Commission considers the cost of production for agricultural commodities, crop situation and so on while fixing the price. The government generally accepts the recommendation and instructs the FCI to procure goods at the suggested price.

The procurement price mostly acts as a support price in the case of wheat whereas for rice, it is a levy on the millers. Even in the case of wheat, sometimes it is a pressure on farmers to sell to the FCI at the procurement price when it falls below market prices. This could happen in several ways. For example, the traders are not permitted to bid in the procurement season until the FCI has attained its target for procurement.

The decision about the amount to be purchased is complicated. Usually, a target is fixed keeping in view the situation of the crop. However, since a support price is provided to farmers, the FCI has to buy whatever is offered by farmers. In order to manage its

operations, the FCI has numerous regional offices and for the purpose of administration, the country has been divided into 135 FCI districts.

A large percentage of procurement for wheat is concentrated in four states of Haryana, Punjab, Madhya Pradesh, and Uttar Pradesh, whereas in the case of rice, Andhra Pradesh, Haryana, Punjab, and Tamil Nadu are the key states. Procurement of rice from millers is in the form of levy. The levy is also being imposed on traders.

The FCI exercises all the operations at the behest of the Central Government, and looks after all the features of the system from procurement, renting of storehouses, and storage to allocation to states. The net costs that it sustains in this process over and above sales realization through PDS is compensated to it by the Central Government and is referred to as “food subsidy” in all government documents. The FCI maintains a “buffer stock” for stabilizing prices of grain and to offer “minimum support prices” to protect the farmers.

Table 3.5: State wise Procurement of Rice from 1985-86 TO 2010-11 ('000 Tonnes)

Years	Andhra Pradesh	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Kerala
1985-86	1574	0	0	1033	0	0	0	0
1986-87	1471	0	0	678	0	0	0	0
1987-88	1522	0	0	318	0	0	0	0
1988-89	1483	0	0	674	0	0	0	0
1989-90	2490	0	0	957	0	0	0	0
1990-91	3335	0	21	1062	0	7	146	0
1991-92	2262	0	14	921	0	3	116	0
1992-93	3296	0	28	909	0	0	116	0
1993-94	3987	3	20	1248	0	0	134	0
1994-95	4023	1	11	1425	0	0	44	0
1995-96	3682	0	0	690	0	0	78	0
1996-97	4525	0	0	1204	0	0	83	0
1997-98	3855	22	0	1268	0	0	92	0
1998-99	5119	0	0	300	0	0	100	0

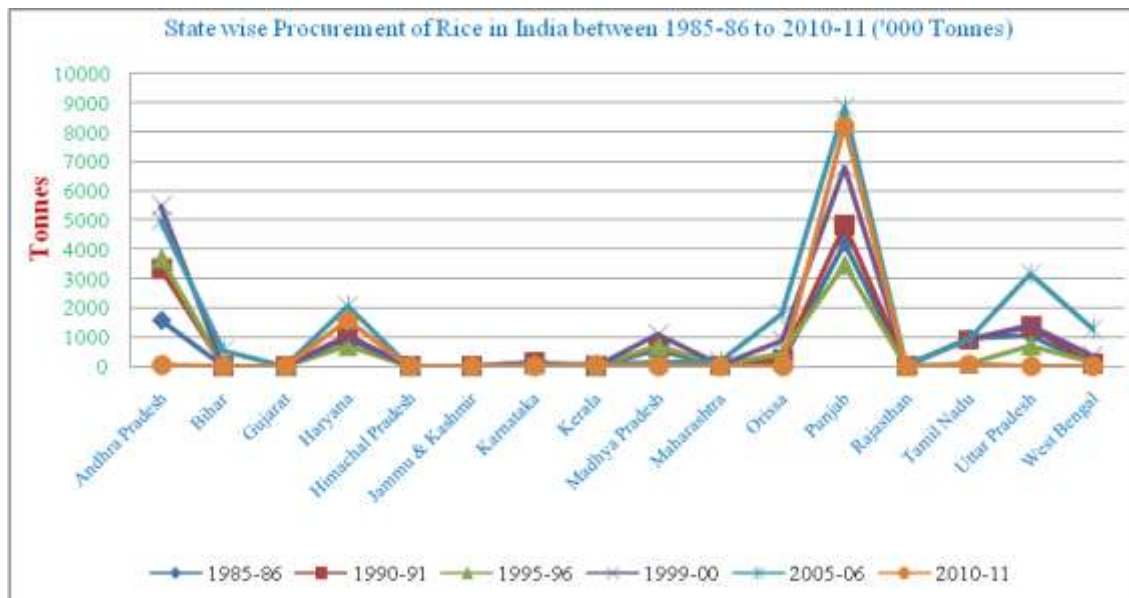
1999-00	5498	20	0	987	0	0	111	0
2000-01	7174	20	0	1481	0	0	230	0
2001-02	6426	89	0	1484	0	0	137	0
2002-03	2623	158	0	1324	0	0	0	0
2003-04	4237	349	0	1334	0	0	0	0
2004-05	3906	343	0	1662	2	1	21	33
2005-06	4971	524	0	2054	0	3	48	94
2006-07	5327	476	0	1773	0	0	22	151
2007-08	7597	556	23	1574	0	0	19	19
2008-09	9058	1083	0	1425	0	7	107	237
2009-10	7555	890	0	1819	0	0	86	261
2010-11	48	0	0	1569	0	0	0	42

Continued...

Madhya Pradesh	Maharashtra	Orissa	Punjab	Rajasthan	Tamil Nadu	Uttar Pradesh	West Bengal
569	0	140	4217	0	950	1068	69
459	0	123	4378	0	887	1015	49
279	0	68	3365	0	564	607	64
285	0	134	2859	0	755	1216	98
342	0	235	5003	0	950	1516	102
631	23	214	4821	29	899	1373	103
404	53	266	4249	20	997	831	80
689	70	380	4905	21	1232	1186	170
804	86	388	5487	21	589	1295	161
759	66	328	5827	25	291	727	151
687	38	456	3462	2	97	720	133
580	32	476	4231	3	738	910	159
1027	32	701	6036	7	1250	1074	203
429	5	481	4384	4	744	868	141
1104	51	889	6815	32	919	1421	351
176	36	918	6935	26	1675	1174	434
274	135	1253	7283	39	852	1936	48
159	152	889	7940	41	107	1360	126
112	321	1373	8662	41	207	2554	925
42	205	1590	9106	22	652	2971	944
136	194	1785	8855	23	926	3151	1275
74	96	1993	7928	10	1078	2549	644
168	69	2357	7981	19	969	2891	1429
247	261	2801	8554	11	1201	4007	1744
255	229	2497	9275	0	1241	2901	1240
0	0	0	8223	0	74	21	0

Source: Computed from Agriculture statistics at a glance, various issues

Graph 3.9. Procurement of Rice in 16 major states in India



The graph 3.9 clearly demonstrates the procurement of rice in different states in India during 1985-86 to 2010-11. There are very interesting thing can be observed particularly in case of procurement of rice. The state stood in the top five in the rice production could not procure rice as it produced except the state Punjab. In the year 2010-11 the Andhra Pradesh produced 14417000 tons of rice but it procured only 48000 tons, by following West Bengal produced 13045000 tons of rice, but obtained nothing, Uttar Pradesh procured 21000 tons of rice out of 11992000 tons of production and even Orissa obtained nothing from the 6827000 tons of rice production. But, in case of Punjab, the procurement of rice was 8223000 tons from its production of 10837000 tons which was about more than 81% of the rice procured. Even in case of Haryana, the procurement of rice from the production was more than 55%. The below graph displayed the procurement of rice across the state.

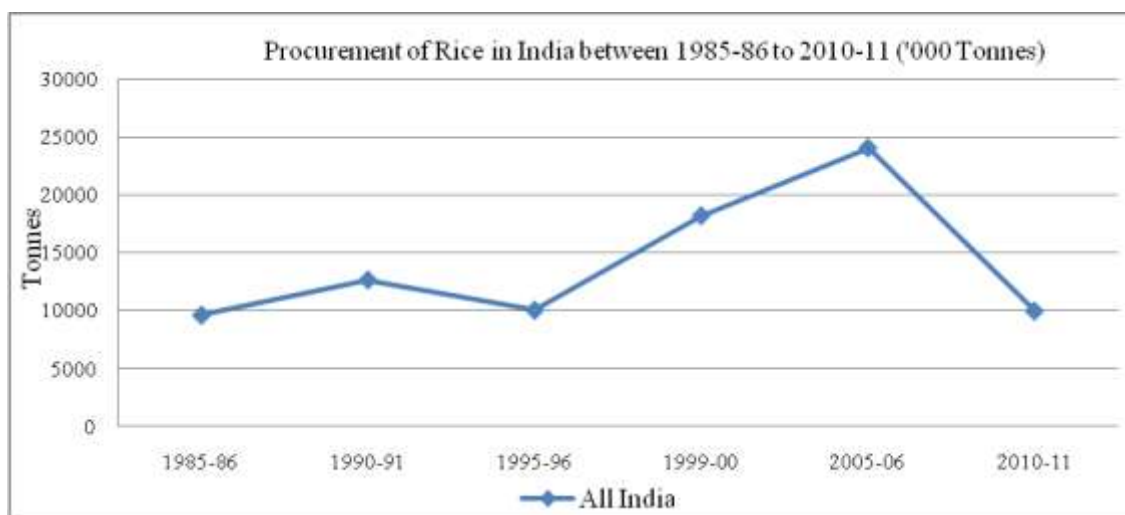


Table 3.6. State wise procurement of wheat from 1986-87 TO 2009-10 ('000 Tonnes)

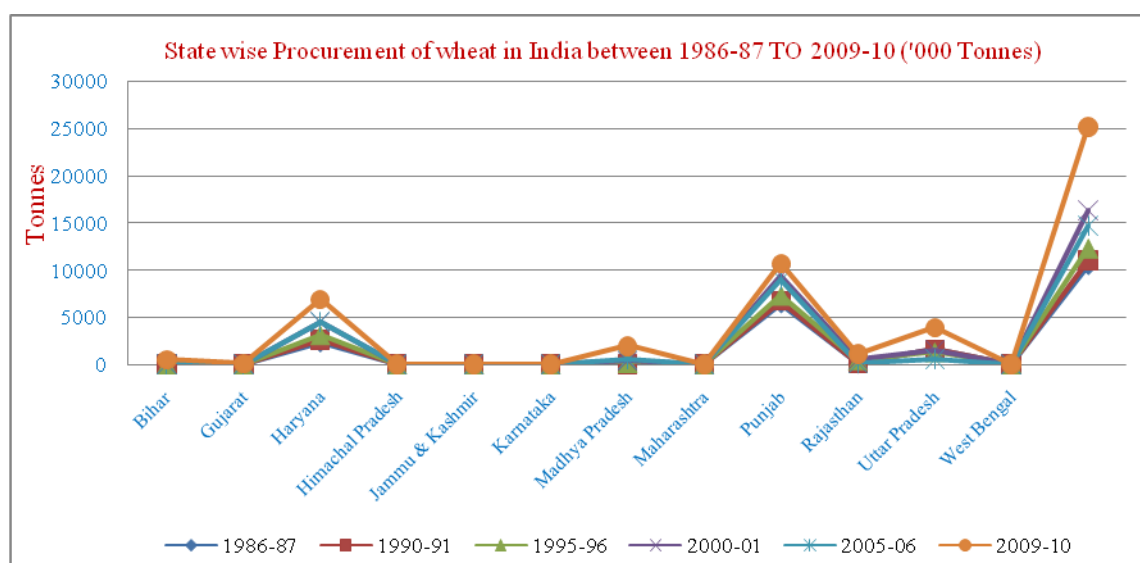
Years	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Madhya Pradesh
1986-87	0	0	2339	0	0	0	0
1987-88	0	0	2247	0	0	0	0
1988-89	0	0	1260	0	0	0	0
1989-90	0	0	1971	0	0	0	0
1990-91	0	0	2595	0	0	0	0
1991-92	0	0	1834	0	0	0	0
1992-93	0	0	1372	0	0	0	0
1993-94	0	0	3454	0	0	0	242
1994-95	0	0	3047	0	0	0	66
1995-96	0	0	3102	0	0	0	168
1996-97	0	0	2022	0	0	0	4
1997-98	0	0	2290	0	0	0	107
1998-99	0	0	3158	0	0	0	530
1999-00	0	0	3870	0	0	0	542
2000-01	0	0	4498	0	0	0	351
2001-02	43	0	6407	2	0	0	294
2002-03	41	0	5887	2	0	0	438
2003-04	1	0	5122	1	0	0	188
2004-05	15	0	5115	0	0	0	349
2005-06	1	0	4529	0	0	0	484
2006-07	0	0	2228	0	0	0	0
2007-08	8	0	3350	0	0	0	57
2008-09	500	415	5237	0	1	0	2410
2009-10	497	75	6924	1	1	0	1968

Continued...

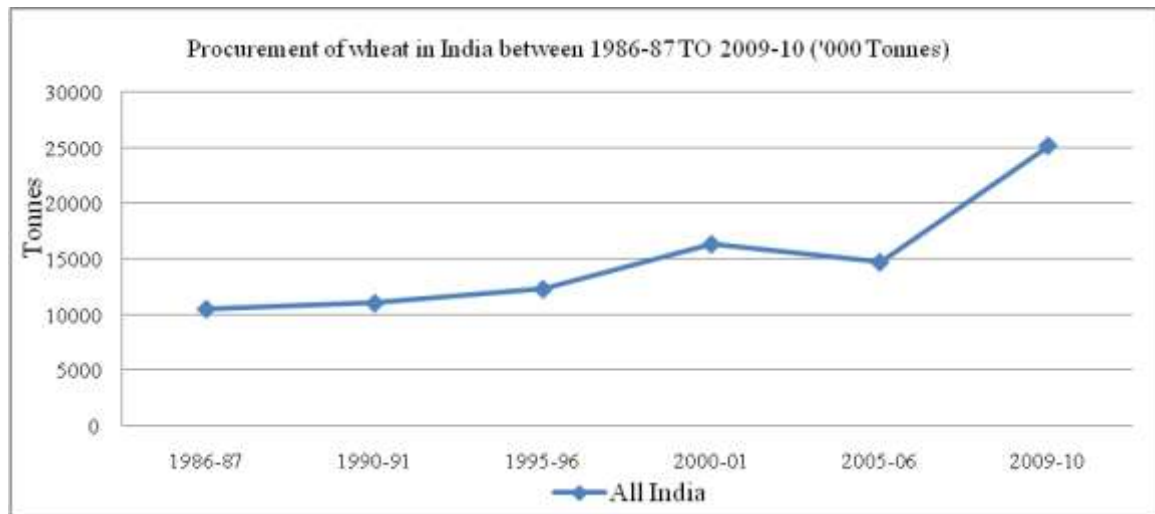
Maharashtra	Punjab	Rajasthan	Uttar Pradesh	West Bengal
0	6484	104	1598	0
0	4419	62	1152	0
0	4749	0	521	0
0	5600	106	1265	0
0	6744	135	1583	0
0	5543	8	368	0
0	4489	22	497	0
0	6494	496	2128	0
0	7285	65	1406	0
0	7299	454	1302	0
0	5641	229	261	0
0	5961	320	618	0
0	6146	667	2141	0
0	7832	637	1261	0
0	9424	539	1545	0
0	10560	676	2446	0
0	9880	461	2110	0
0	8938	259	1213	0
0	9240	279	1741	0
0	9010	159	560	0
0	6927	2	36	0
0	6781	383	546	0
10	9941	935	3137	0
0	10725	1152	3882	0

Source: Computed from Agriculture statistics at a glance, various issues

Graph 3.10. Procurement of wheat in 12 major states in India



The graph 3.10 reveals the procurement of *Wheat* in different states in India during 1986-87 to 2009-10. The procured wheat in Uttar Pradesh 3882000 tons from the 27810000 tons of production in the said year, the state Haryana procured more than (6924000) 60% of the wheat from the 10500000 tons of production, Madhya Pradesh procured less 1968000 tons of wheat from the 7846000 tons of production and Punjab obtained 10725000 tons of wheat from the 15263000 tons of wheat production. And several states like Karnataka, West Bengal, Jammu & Kashmir, Himachal Pradesh, and Maharashtra's procurement of wheat ended with nothing or 1000 tons from the production. Procurement of wheat across the can be observed in the chart given in following.



3.12. Distribution

Allocation of food grains is as intricate as the procurement policy. It includes the following decisions.

1. What amount of food grains have to be allocated to various states,

2. What should be the issue price?
3. What should be the distribution agency at the retail level and the allocation agency at the different regional levels?
4. What should be the arrangements for transportation, storage and coordination?
5. What should be the retail price and margins of different agencies?

It is the responsibility of the FCI for storage and transportation of commodities upto the regional depots, but the private contractors generally do the arrangement of transportation. The state governments are responsible for lifting grains from the regional depot. The “fair price shops” are responsible from the depot. However, transportation is provided by the state government up to the “Fair Price Shops” level in some states such as Andhra Pradesh.

Keeping the food grains production in view in the state and the off-take in the previous months, the central government take the decision for settling the issue of the total quota to be allocated to each state. Prices for the consumers are determined by taking open market prices, marketing costs, fiscal burden and the paying capacity of the consumer into consideration. If the prices are less than the cost of marketing and procurement, the FCI is reimbursed by the government. A part of this reimbursement is the cost of administration, and the other part of it is the subsidy to the consumer. The decision about the amount of food grains to be purchased is difficult. Keeping the situation of crops in view, a target is generally fixed. However, the FCI has to purchase whatever is offered by farmers because a “support price” is given to farmers. The FCI has numerous regional

offices in order to control its operations and the country is divided into 135 FCI districts for the purpose of administration.

Table 3.7. State wise allotment and offtake of Rice from 2003-04 TO 2013-14 ('000 Tonnes)

Rice	2003-04			2004-05		
	Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake
Andhra Pradesh	3819.444	2069.101	54.17	3819.444	2819.953	73.83
Arunanchal Pradesh	91.251	84.554	92.66	106.626	83.87	78.66
Assam	1275.66	865.807	67.87	1275.66	881.03	69.06
Bihar	1972.284	208.635	10.58	1972.284	267.528	13.56
Chhatisgarh	1220.603	553.989	45.39	1298.061	653.557	50.35
Delhi	331.5	71.48	21.56	331.5	140.773	42.47
Goa	88.896	11.286	12.70	88.896	5.04	5.67
Gujrat	1281.444	134.379	10.49	1281.246	231.048	18.03
Haryana	NA	NA	NA	NA	NA	NA
HP	360.516	149.868	41.57	323.016	156.518	48.46
J & K	514.568	374.616	72.80	516.817	361.352	69.92
Jharkhand	711.476	148.107	20.82	724.452	256.712	35.44
Karnataka	2707.906	1763.277	65.12	2707.899	1760.63	65.02
Kerala	1981.944	533.534	26.92	1891.892	619.428	32.74
Madhya Pradesh	723.875	218.445	30.18	640.175	260.005	40.61
Maharashtra	2610.924	703.929	26.96	2696.623	884.85	32.81
Manipur	84.3	55.74	66.12	84.5	39.251	46.45
Meghalaya	114.108	94.776	83.06	114.108	90.128	78.98
Mizoram	71.124	68.712	96.61	110.4	86.967	78.77
Nagaland	81.02	65.932	81.38	85.872	72.213	84.09
Odisha	2492.256	849.338	34.08	2492.256	1360.707	54.60
Punjab	NA	0.077	NA	NA	1.296	NA
Rajasthan	78.432	0.633	0.81	78.432	0.345	0.44
Sikkim	37.652	29.039	77.12	33.852	31.842	94.06
Tamilnadu	5710.356	2275.45	39.85	5710.356	2660.566	46.59
Tripura	279.48	139.925	50.07	255.192	164.935	64.63
Uttar Pradesh	3717.386	948.502	25.52	3855.063	1670.141	43.32
Uttarakhand	247.908	113.489	45.78	247.908	153.65	61.98
West Bengal	1587.924	690.261	43.47	1587.924	744.069	46.86
A&N Islands	34.5	14.666	42.51	34.49	2.023	5.87
Chandigarh	13.816	0.888	6.43	15.816	0.361	2.28
D&N Haveli	10.86	3.786	34.86	10.86	NA	NA
Damen& DIU	9.492	0.851	8.97	9.492	NA	NA
Lakshadweep	3.744	2.85	76.12	3.744	NA	NA
Puducherry	47.112	21.151	44.90	47.112	3.885	8.25

Continued...

2005-06			2006-07			2007-08		
Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake
3819.444	3166.77	82.91	3819.444	3153.481	82.56	3819.444	3595.596	94.14
101.466	73.77	72.70	92.054	55.243	60.01	92.121	67.741	73.53
1418.636	940.91	66.32	1460.52	1261.867	86.40	1081.116	1132.942	104.79
2267.745	310.85	13.71	2856.247	529.526	18.54	1886.328	970.013	51.42
1395.468	685.762	49.14	1479.678	811.506	54.84	773.92	747.139	96.54
342.524	103.38	30.18	350.16	146.687	41.89	238.368	215.549	90.43
93.479	8.521	9.12	91.226	21.44	23.50	22.568	21.918	97.12
1284.479	235.96	18.37	1471.508	394.044	26.78	596.808	446.22	74.77
249.545	33.18	13.30	366.365	61.627	16.82	69.72	61.146	87.70
323.016	169.46	52.46	270.354	192.327	71.14	251.16	234.099	93.21
537.808	422.56	78.57	548.544	430.482	78.48	551.172	486.915	88.34
761.668	323.96	42.53	847.078	455.179	53.74	714.381	539.152	75.47
2701.908	1755.09	64.96	2485.814	1786.547	71.87	2335.429	1633.054	69.93
1902.3	584.207	30.71	1926.885	744.133	38.62	876.06	864.182	98.64
960.316	324.73	33.81	1142.37	441.915	38.68	443.768	432.331	97.42
2740.316	947.63	34.58	2943.486	1124.789	38.21	1369.056	1124.62	82.15
86.84	44.64	51.40	99.472	70.13	70.50	96.635	91.585	94.77
114.108	93.06	81.55	114.108	108.392	94.99	130.112	124.926	96.01
88.58	76	85.80	61.862	60.056	97.08	75.423	77.479	102.73
99.717	83.65	83.89	94.37	113.487	120.26	94.284	94.488	100.22
2501.144	1249.321	49.95	2379.948	1115.981	46.89	1762.86	1483.85	84.17
327.936	2.46	0.75	515.914	31.955	6.19	39.372	8.028	20.39
654.609	20.69	3.16	1023.19	110.46	10.80	215.28	156.349	72.63
36.852	37.76	102.46	39.337	38.807	98.65	41.283	41.856	101.39
5710.356	3635.047	63.66	5710.356	3349.226	58.65	4753.809	3622.889	76.21
255.192	158.32	62.04	273.798	203.866	74.46	237.96	229.347	96.38
5593.124	2422.328	43.31	6248.499	3001.899	48.04	3020.884	2578.575	85.36
332.983	150.228	45.12	353.64	156.153	44.16	219.9	162.753	74.01
3158.441	955.469	30.25	4013.796	1107.724	27.60	1397.976	1152.892	82.47
34.632	13.82	39.91	22.964	12.43	54.13	23.124	14.033	60.69
23.08	NA	NA	25.816	0.28	1.08	3.42	2.782	81.35
10.827	2.53	23.37	11.774	4.08	34.65	10.668	9.886	92.67
9.532	0.62	6.50	9.852	0.96	9.74	2.256	0.646	28.63
3.672	3.75	102.12	3.721	3.18	85.46	4.537	5.263	116.00
47.112	24.63	52.28	83.112	17.13	20.61	63.552	21.64	34.05

Continued...

2008-09			2009-10			2010-11		
Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake
3542.384	3499.935	98.80	313.532	309.781	98.80	3520.058	3384.056	96.1
92.124	81.949	88.96	7.677	7.678	100.01	92.124	77.184	83.8
1181.892	1180.86	99.91	98.491	100.763	102.31	1346.190	1283.251	95.3
1884.518	916.863	48.65	157.078	66.289	42.20	1949.208	1722.223	88.4
768.196	767.748	99.94	64.427	64.427	100.00	926.280	907.191	97.9
152.408	140.139	91.95	12.267	14.281	116.42	148.476	145.838	98.2
29.646	27.568	92.99	3.186	4.473	140.40	54.465	42.116	77.3
303.666	288.139	94.89	27.454	23.395	85.22	369.270	332.099	89.9
11.74	10.425	88.80	0	0	0	0.000	0.000	0.0
189.382	183.926	97.12	14.828	14.67	98.93	189.100	180.671	95.5
535.172	539.689	100.84	43.431	37.337	85.97	533.172	526.082	98.7
694.821	593.256	85.38	58.02	19.546	33.69	1002.099	858.346	85.7
1747.801	1673.26	95.74	148.192	156.683	105.73	1928.904	1824.586	94.6
919.724	875.365	95.18	83.477	80.985	97.01	1149.638	1123.206	97.7
263.212	231.019	87.77	18.601	12.971	69.73	437.510	524.532	119.9
1385.543	1188.533	85.78	129.618	99.002	76.38	1644.960	1533.469	93.2
94.644	86.266	91.15	7.887	14.273	180.97	117.060	62.772	53.6
130.116	131.08	100.74	10.843	10.087	93.03	155.734	133.618	85.8
75.42	67.788	89.88	6.285	14.33	228.00	62.652	57.541	91.8
94.284	103.716	110.00	7.857	10.138	129.03	94.284	104.674	111.0
1708.325	1699.087	99.46	143.586	151.128	105.25	1789.419	1680.200	93.9
0.776	0.067	8.63	0	0	0	0.000	0.000	0.0
36.37	28.704	78.92	0	0	0	38.616	20.313	52.6
41.28	41.66	100.92	3.44	3.635	105.67	41.310	39.795	96.3
3557.436	3683.048	103.53	296.453	257.739	86.94	3557.436	3533.867	99.3
249.96	250.192	100.09	22.83	19.917	87.24	274.482	228.308	83.2
2794.07	2424.705	86.78	226.747	200.078	88.24	2831.742	2804.197	99.0
171.96	143.676	83.55	14.13	14.306	101.25	180.408	186.320	103.3
1397.571	1164.399	83.32	115.773	114.136	98.59	1572.468	1457.087	92.7
23.124	12.556	54.30	1.927	1.27	65.91	23.424	12.900	55.1
3.411	3.096	90.77	0.282	0.252	89.36	3.852	3.414	88.6
7.617	7.56	99.25	0.687	0	0	9.084	2.282	25.1
1.819	0.369	20.29	0.191	0	0	2.820	0.850	30.1
4.608	3.703	80.36	0.384	0.581	151.30	4.620	6.385	138.2
35.459	17.414	49.11	3.036	2.056	67.72	46.854	41.522	88.6

Continued...

2011-12			2012-13			2013-14		
Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake
3696.524	3031.94	82.0	3779.352	3100.69	82.0	3539.352	2565.18	72.5
92.124	75.963	82.5	92.124	90.132	97.8	96.840	93.572	96.6
1440.962	1299.04	90.2	1492.776	1437.02	96.3	1362.492	1269.55	93.2
1885.318	1630.18	86.5	1885.392	1638.72	86.9	1974.021	1832.8	92.8
932.432	892.302	95.7	1036.356	1028.56	99.2	1099.986	1061.42	96.5
148.414	129.384	87.2	148.656	131.676	88.6	142.266	110.831	77.9
51.358	51.562	100.4	53.580	53.519	99.9	53.580	54.489	101.7
329.448	305.644	92.8	329.448	323.705	98.3	329.448	327.062	99.3
0.000	0	0.0	0.000	0	0.0	0.000	4.333	0.0
192.416	190.807	99.2	195.312	193.328	99.0	189.702	184.633	97.3
533.172	522.074	97.9	533.172	532.857	99.9	533.172	538.436	101.0
1172.262	1006.37	85.8	1182.072	976.959	82.6	1182.072	1022.31	86.5
2066.624	1925.85	93.2	2424.288	1992.98	82.2	2131.952	2178.76	102.2
1156.304	1155.66	99.9	1187.220	1189.91	100.2	1187.220	1194.11	100.6
317.712	404.878	127.4	317.712	453.801	142.8	338.145	313.247	92.6
1647.566	1432.04	86.9	1887.624	1580.97	83.8	2196.672	2020.4	92.0
130.664	124.444	95.2	137.868	140.848	102.2	137.868	129.234	93.7
156.146	155.719	99.7	161.352	161.686	100.2	161.352	161.569	100.1
62.652	58.378	93.2	62.652	59.422	94.8	62.652	58.598	93.5
94.284	106.512	113.0	94.284	101.123	107.3	110.580	101.996	92.2
1727.376	1685.71	97.6	1731.889	1706.01	98.5	1727.808	1717.72	99.4
0.000	0	0.0	0.000	0	0.0	0.000	0	0.0
0.000	0	0.0	0.000	0	0.0	0.000	0	0.0
41.320	42.236	102.2	41.328	42.095	101.9	41.328	42.887	103.8
3557.436	3532.54	99.3	3557.436	3542.31	99.6	3557.436	2867.01	80.6
274.830	256.99	93.5	276.600	261.965	94.7	275.004	281.514	102.4
2721.264	2824.56	103.8	2720.964	2706.65	99.5	2720.988	2779.86	102.2
183.640	190.977	104.0	285.856	271.116	94.8	182.856	185.334	101.4
1424.156	1222.34	85.8	1431.132	1435.26	100.3	1431.132	1362.2	95.2
23.424	10.873	46.4	23.424	10.426	44.5	23.474	0	0.0
3.852	3.353	87.0	3.852	3.363	87.3	3.680	3.23	87.8
9.432	9.219	97.7	9.588	9.638	100.5	9.588	10.48	109.3
2.612	3.041	116.4	2.676	2.574	96.2	2.676	0.675	25.2
4.620	4.053	87.7	6.620	5.706	86.2	4.620	3.09	66.9
47.012	41.209	87.7	47.712	42.135	88.3	47.712	27.862	58.4

Source: Computed from Agriculture statistics at a glance, various issues

Table 3.8. State wise allotment and offtake of Wheat from 2010-11 TO 2013-14 ('000 Tonnes)

Wheat	2010-11			2011-12		
	Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake
Andhra Pradesh	156.422	49.081	31.4	41.728	33.532	80.4
Arunanchal Pradesh	9.432	7.839	83.1	9.432	7.626	80.9
Assam	326.936	308.39	94.3	365.794	363.71	99.4
Bihar	1593.984	1246.931	78.2	1764.994	1127.174	63.9
Chhatisgarh	241.752	227.916	94.3	286.320	192.892	67.4
Delhi	447.258	461.465	103.2	449.444	415.911	92.5
Goa	14.286	11.688	81.8	8.958	8.859	98.9
Gujrat	1516.728	1200.781	79.2	1689.290	937.155	55.5
Haryana	685.242	613.097	89.5	732.422	586.431	80.1
HP	319.888	305.791	95.6	326.730	321.856	98.5
J & K	223.932	223.033	99.6	223.632	221.411	99.0
Jharkhand	317.313	174.401	55.0	166.770	15.669	9.4
Karnataka	331.572	307.454	92.7	320.022	308.763	96.5
Kerala	250.008	249.951	100.0	275.370	273.146	99.2
Madhya Pradesh	2172.944	2183.328	100.5	2363.024	2248.539	95.2
Maharashtra	2845.452	2153.7	75.7	2999.548	2107.204	70.3
Manipur	24.784	8.437	34.0	29.782	20.44	68.6
Meghalaya	27.194	22.987	84.5	25.550	26.971	105.6
Mizoram	7.488	6.961	93.0	7.488	7.855	104.9
Nagaland	32.592	33.452	102.6	32.592	33.582	103.0
Odisha	432.369	371.889	86.0	391.532	372.299	95.1
Punjab	786.348	680.707	86.6	814.100	686.355	84.3
Rajasthan	1998.512	1917.53	95.9	2115.140	2078.693	98.3
Sikkim	2.940	3.205	109.0	2.950	2.7	91.5
Tamilnadu	165.396	164.259	99.3	165.396	168.093	101.6
Tripura	28.140	20.712	73.6	33.204	18.391	55.4
Uttar Pradesh	4117.206	3751.756	91.1	4393.326	3820.778	87.0
Uttarakhand	293.714	269.518	91.8	318.062	265.899	83.6
West Bengal	2029.396	1868.531	92.1	2339.598	2058.861	88.0
A&N Islands	10.596	5.021	47.4	10.596	5.153	48.6
Chandigarh	27.528	22.561	82.0	31.128	30.863	99.1
D&N Haveli	0.840	0.175	20.8	0.852	1.028	120.7
Damen& DIU	2.160	0.312	14.4	2.818	1.628	57.8
Lakshadweep	0.000	0	0.0	0.000	0	0.0
Puducherry	9.258	6.913	74.7	11.900	6.607	55.5

2012-13			2013-14		
Allotment	Offtake	% of Offtake	Allotment	Offtake	% of Offtake
43.464	29.547	68.0	283.464	139.686	49.3
9.432	8.244	87.4	4.716	6.59	139.7
394.080	393.978	100.0	524.364	518.49	98.9
1818.480	1000.686	55.0	1830.770	1362.684	74.4
207.756	150.019	72.2	155.817	170.866	109.7
450.264	435.101	96.6	443.694	410.659	92.6
9.456	9.39	99.3	9.456	9.574	101.2
1755.660	941.799	53.6	1755.660	1178.259	67.1
756.012	465.415	61.6	632.504	481.769	76.2
332.628	331.599	99.7	328.266	318.272	97.0
223.632	227.787	101.9	223.632	218.199	97.6
176.580	0.792	0.4	176.580	0.087	0.0
382.640	311.422	81.4	324.430	288.673	89.0
285.468	283.274	99.2	285.468	272.605	95.5
2418.714	3097.977	128.1	2404.871	2206.1	91.7
2931.420	2143.224	73.1	2519.464	2286.973	90.8
33.084	31.813	96.2	33.084	31.201	94.3
27.228	27.914	102.5	27.228	26.998	99.2
7.488	7.116	95.0	7.488	7.795	104.1
32.592	34.83	106.9	16.296	23.052	141.5
462.377	414.496	89.6	464.064	355.464	76.6
827.976	613.964	74.2	781.044	587.37	75.2
2179.500	2149.291	98.6	2485.536	2399.933	96.6
2.952	2.951	100.0	2.952	3.045	103.2
165.396	92.186	55.7	165.396	143.24	86.6
28.236	27.326	96.8	28.236	29.895	105.9
4547.556	3861.364	84.9	4547.532	3975.644	87.4
332.136	325.441	98.0	329.136	325.94	99.0
2426.064	2181.488	89.9	2426.064	2198.248	90.6
10.596	4.482	42.3	10.546	0	0.0
32.928	30.066	91.3	32.172	21.495	66.8
0.876	0.861	98.3	0.876	2.712	309.6
2.976	1.956	65.7	2.976	0.05	1.7
0.000	0	0.0	0.000	0	0.0
12.600	11.178	88.7	12.600	5.565	44.2

Source: Computed from Agriculture statistics at a glance, various issues

The table 3.7 shows that state wise allotment and offtake of Rice from 2003-04 TO 2013-14 ('000 Tonnes) and Table 3.8 shows that state wise allotment and offtake of Wheat from 2010-11 TO 2013-14 ('000 Tonnes). Here allotment of rice and wheat to all the states in India through Food Corporation of India based on their requirement. Offtake means how much their distribute food grains to the households.

3.13. Retailing

There are three types of “Fair Price Shops” set up at the retail level, viz. “private”, “co-operative” and “government owned”. The increase of co-operative stores has not been rapid though endeavors have been made to promote co-operative “Fair Price Shops” since the third plan.

Keeping the stability of the applicants and the extent of the village in mind, the district level officials decide about the location of “Fair Price Shops” although in taking this decision, local political pressures play a vital role. For interior remote areas in some states, mobile “Fair Price Shops” have been arranged. The function of the “Fair Price Shops” is monitored and supervised by Food Inspectors.

In order to check the function of the PDS at the national level, an “Advisory Council” on the PDS has been established, and to monitor the problem of consumers, “Consumer Advisory Committees” have been established at the district and block level.

There are some disparities in the management of the PDS observed at the state level though most states obtain their supplies from the Central Government. The state “Civil Supplies Department” or “Food Corporation of India” controls the supply of grains

through the “Fair Price Shops”. However, in Andhra Pradesh, people earning below 6000 rupees per annum have been included under the PDS scheme, and the State Government has to organize its own procurement, storage, transportation etc. regarding the sizeable subsidy given to consumers on rice. Generally, the State Governments fix which commodities have to be included, but the Central government has listed rice, wheat, sugar, kerosene, gas, oil and cloth as essential commodities, which must be covered under the PDS, while state governments could add other commodities based on the local need. However, the concerned state governments have to make the arrangements for procurement of other commodities.

3.14. Coverage of PDS in India

The PDS is an apportioning component which gifts explicit measure of chosen things at sponsored costs to family units. Proportion card is given to qualified family units, and this qualifies them for buy settled apportions (contingent upon family unit size and age composition) of those products. At national dimension, the six basic wares given through the PDs are; rice wheat, sugar, consumable oils, lamp fuel, and coal. Advantageous things like heartbeats, salt, and tea are provided specifically. Through a system of "reasonable value shops", the products are made accessible. There were around 0.42 million "reasonable cost" or "proportion shops" in the nation in 1994 (0.32 million in country zones and 0.099 million in urban regions). These shops were worked by "private operators", "co-agents" and a couple was "state possessed". A huge normal for the PDS is that the state governments take the responsibility for execution, checking and implementation of legitimate arrangements as to open conveyance.

In a few expresses, the inclusion of the PDS was extended to provincial territories since the mid 1980's. In this way, it got the status of a welfare program. In 1985, there was an endeavor to broaden financed Food grains in all the ancestral squares including roughly 57 million people. The PDS was later extended to join 1,752 squares with a high level of neediness covering 164 million people. In country zones, the quantity of "Reasonable Price Shops (FPS)" was expanded to encourage offices to disperse sponsored Food grains in various work age projects, for example, "National Rural Employment Program", "Rustic Landless Employment Generating Programs". As a piece of wages, financed Food grains were likewise circulated.

3.15 Conclusion

Food security at the country level relies upon the physical accessibility of foodgrains. Government intercessions in foodgrain showcases in India began amid the mid-1960, to raise the foodgrain creation, empowering India to achieve food security at the national dimension and develop as a net exporter of cereals. Per capita food accessibility is considered as a decent marker of sufficiency. Aside from ampleness, guaranteeing access additionally necessitates that Food be accessible inside the acquiring intensity all things considered. To look in to the progressions and Food accessibility throughout the years we have utilized the per capita net accessibility and imports as markers to decide the food security at national dimension.

CHAPTER IV
Role of public distribution system in Andhra Pradesh
(United)

4.1. Introduction

This chapter reviewed the role of PDS in Andhra Pradesh. The chapter explained detailed scenario of PDS in Andhra Pradesh. In this chapter analyzed district wise spreading of ration cards, types of ration cards, fair-price shops, tendency in production, procurement and distribution of rice in AP. This chapter used secondary data collected from different secondary sources.

Food, employment and health are three essential methods of societal security. Among these, food is the most significant the food security that the poor require. But without access to sufficient purchasing power, food security cannot be guaranteed. Further, the government depends on a number of strategy instruments such as “food rationing”, “price subsidization”, and “occupation programmes” in order to improve food security for the deprived. Public distribution plays a vital role in safeguarding weaker sections of the society for stabilization of prices and against price rise. Andhra Pradesh provides an interesting “case study” in its n of the PDS in many ways. After Telugu Desam party wrested power from Congress in 1982-83, it introduced “two-rupees-a-Kilo” rice scheme as an election promise. The main intention of this scheme was to expand the depletion levels of the vulnerable fragments of the civilization which will help to increase their nutritional standards. Numerous studies have analyzed diverse features of the sponsored rice scheme under PDS in A.P. Venugopal (1992) analyses the effect of the benefit

structure on the reducing food shortage, whereas Sastry et al. (1990) make an effort to evaluate drips in the PDS. Radhakrishna and Indrakant (1988) and Indrakant (1996) examine the effect of alternative intervention policies. All these studies offer a fascinating background material to comprehend the operations of PDS in the present situation. Examination of the functions of PDS makes us to understand the distributional aspect of food security in the changing circumstances. Two major interventions took place in the distribution system during 1990's, namely the targeting of PDS and liberalization of the economy, which, in succession, were anticipated to influence the consumption at household level.

4.2. Ration Cards

Government Andhra Pradesh commenced the TPDS to provide targeted food grains for the needy households. Hence, it recognized the need of household identification and classification. Thus, government of AP classified into two i.e. Above Poverty Level (APL), and Below Poverty Level (BPL) and others under TPDS. Each state is responsible to identify the BPL households based as the Planning Commission estimated the state-wise population. This is a process of including the poor and needy who were excluded from having basic food security. In case of recognizing APL households, the individuals who are employees, businessmen, and people who earn more income prescribed by Ministry of Rural Development are requested to apply under APL. There are different types of ration cards are distributed that is White ration cards,(WAP), Above Poverty Line (APL), AAY, Annapurna, JAP, RAP, TAP. Here table 4.1, 4.2 shows district wise ration cards in Andhra Pradesh and Telangana.

Table 4.1. District wise Ration Cards, Fair Price Shops in Andhra Pradesh- June -2018

S.No	District Name	Ration Cards	F.P.Shops
1	<u>Ananthapur</u>	1204043	2990
2	<u>Chittoor</u>	1106395	2875
3	<u>East Godavari</u>	1513386	2323
4	<u>Guntur</u>	1451783	2701
5	<u>Krishna</u>	1251275	2233
6	<u>Kurnool</u>	1176286	2202
7	<u>Nellore</u>	885450	1790
8	<u>Prakasam</u>	951583	2108
9	<u>Srikakulam</u>	813511	1976
10	<u>Visakhapatnam</u>	1062118	1618
11	<u>Vizianagaram</u>	681993	1254
12	<u>West Godavari</u>	1208666	2028
13	<u>YSR Kadapa</u>	774530	1570
	Total	14081019	27668

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

Table 4.2. District wise Ration Cards in Telangana – January 2019

Sl.No	District Name	Ration Cards
1	<u>Adilabad</u>	185831
2	<u>Bhadrdrri Kothagudem</u>	279204
3	<u>Hyderabad</u>	572318
4	<u>Jagityal</u>	303534
5	<u>Janagaon</u>	165755
6	<u>Jayashankar Bhupalpalli</u>	212170
7	<u>Jogulamba Gadwal</u>	154844
8	<u>Kamareddy</u>	248363
9	<u>Karimnagar</u>	272884
10	<u>Khammam</u>	405234
11	<u>Kumarambheem Asifabad</u>	136752
12	<u>Mahabubabad</u>	233501
13	<u>Mahbubnagar</u>	373211
14	<u>Manchiryal</u>	214140
15	<u>Medak</u>	211348
16	<u>Medchal</u>	488578
17	<u>Nagarkarnool</u>	230908
18	<u>Nalgonda</u>	454614
19	<u>Nirmal</u>	200855
20	<u>Nizamabad</u>	382924
21	<u>Peddapalli</u>	215315
22	<u>Rajanna Siricilla</u>	171930
23	<u>Ranga Reddy</u>	519628
24	<u>Sangareddy</u>	369674
25	<u>Siddipet</u>	288184
26	<u>Suryapet</u>	313846
27	<u>Vikarabad</u>	233196
28	<u>Wanaparthi</u>	152800
29	<u>Warangal</u>	262086
30	<u>Warangal Rural</u>	218866
31	<u>Yadadri Bhuvanagiri</u>	204428
	Total	8676921

Source: <https://epds.telangana.gov.in>

4.3. Antyodaya Anna Yojana (AAY)

Government of Andhra Pradesh started AAY scheme in December 2000 for the poorest of the poor within the households possessing BPL cards. Under this, people who don't have land, daily wage labors, marginal farmers, craftsmen, livelihoods depended on the daily earning in informal sector, for widows, for sick persons, physically deprived persons, persons crossed the age of 60 with no assured means of earning are eligible under this scheme. In this scheme they distribute 30 kg's of rice per card to each ration card.

4.4. White Ration Cards:

White cards are issued towards people (households) falling below the poverty line, to provide subsidized rice. There are 215.5 lakh white ration cards are distributed and 37.9 (in lakh tons) quantity of rice distributed, per card distribution 14.65 (Kgs/month) of rice distributed during 2013-14, and recent data (2018, June) shows that 14081019 (AP), 8676921 (Telangana) ration cards are distributed. AP Government has introduced the coupon system for all eligible white cardholders and now there is no coupon system, the government of Andhra Pradesh introduced bio-metric system to get commodities from fair- price shops.

4.5. Aadhaar Enabled PDS (AePDS): (Biometric System)

In 2007, Chhattisgarh was launched a bio-metric system (AePDS) to reform the Public Distribution System. Later Odisha was among the first States to emulate Chhattisgarh's experience. After that, different States additionally started Chhattisgarh-style PDS

changes: wide scope, clear qualifications, de-privatization of PDS shops, partition of transport organizations from dispersion offices, computerization, settled appropriation plans, tight observing, dynamic grievance redressal etc., .In 2015 the Government of Andhra Pradesh was introduced AePDS system to reduce the errors in PDS.

Table.4.3. District wise success and failure percentage of AePDS in AP - June- 2018

S.No	District Name	Total Authentications	Total Success	Success %	Total Failure	Failure %
1	Ananthapur	1344422	1324920	98.549	19502	1.45
2	Chittoor	1257310	1239482	98.582	17828	1.417
3	East Godavari	1671269	1661528	99.417	9741	0.582
4	Guntur	1509006	1480742	98.126	28264	1.873
5	Krishna	1447340	1434004	99.078	13336	0.921
6	Kurnool	1221313	1199443	98.209	21870	1.79
7	Nellore	915324	900229	98.35	15095	1.649
8	Prakasam	989292	964751	97.519	24541	2.48
9	Srikakulam	913392	894088	97.886	19304	2.113
10	Visakhapatnam	1145161	1127453	98.453	17708	1.546
11	Vizianagaram	717762	704816	98.196	12946	1.803
12	West Godavari	1382837	1367560	98.895	15277	1.104
13	YSR Kadapa	841151	827373	98.361	13778	1.637
	Total	15355579	15126389	98.507	229190	1.492

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

The table 4.3 shows that district wise Aadhaar enabled success and failure percentage during June-2018. East Godavari and Krishna districts are 99% above ration cards are linked with Aadhaar, and West Godavari, Anantapur, Chittoor, Visakhapatnam, YSR

Kadapa, Nellore, Vijayanagaram, Guntur districts are above 98%, and Srikakulam and Prakasham districts are below 98%.

Table.4.4. District wise success and failure percentage of AePDS in Telangana - June- 2018

Sl.No	District Name	Aadaar seeding
1	<u>Adilabad</u>	96.4
2	<u>Bhadrri Kothagudem</u>	97.93
3	<u>Hyderabad</u>	97.07
4	<u>Jagityal</u>	93.42
5	<u>Janagaon</u>	97.96
6	<u>Jayashankar Bhupalpalli</u>	96.9
7	<u>Jogulamba Gadwal</u>	94.68
8	<u>Kamareddy</u>	96.74
9	<u>Karimnagar</u>	98.28
10	<u>Khammam</u>	97.54
11	<u>Kumarambheem Asifabad</u>	98.9
12	<u>Mahabubabad</u>	98.45
13	<u>Mahbubnagar</u>	96.88
14	<u>Manchiryal</u>	98.98
15	<u>Medak</u>	95.5
16	<u>Medchal</u>	97.51
17	<u>Nagarkarnool</u>	96.67
18	<u>Nalgonda</u>	96.63
19	<u>Nirmal</u>	98.42
20	<u>Nizamabad</u>	97.41
21	<u>Peddapalli</u>	97.25
22	<u>Rajanna Siricilla</u>	96.34
23	<u>Ranga Reddy</u>	99.18
24	<u>Sangareddy</u>	96.07
25	<u>Siddipet</u>	96.58
26	<u>Suryapet</u>	96.01
27	<u>Vikarabad</u>	98.57
28	<u>Wanaparthi</u>	96.31
29	<u>Warangal</u>	96.43
30	<u>Warangal Rural</u>	98.84
31	<u>Yadadri Bhuvanagiri</u>	98.37
	Total	97.18

Source: <https://epds.telangana.gov.in>

The table 4.4 shows that district wise Aadhaar enabled success percentage during January-2019. Ranga Reddy district only Aadhaar enabled above 99%, other districts are 98%, 97%, 96% respectively. In Medak district 95.5% cards are linked with Aadhaar.

4.6. Trends in Procurement and Distribution

For the first time in 1965-66, a compulsory levy on producers was introduced by the government of Andhra Pradesh. The government also conferred the FCI on the obligation of shouldering gaining straight from makers. The system was deserted next an experiment scarcely 4 months. Lack of advance measures for its execution was the main cause for the collapse of this scheme. Following this in 1968/69, a compulsory levy was imposed on all recent rice mills operating in the private and co-operative segments by Government of Andhra Pradesh. Exact percentage of the charge differed from time to time, based on targets fixed for crop situation and public procurement. The procurement policy was revised in 1985/86 every millers were compulsory distribute one unit per cent of levy to FCI.

Early eighties, the degree of procurement was considerably more than that of all India level. In Andhra Pradesh, the key criticism of the PDS is the movable targeting even though absences in PDS quantity so that current exposure of the deprived clusters is comparatively small. Radhakrishna and Indrakant (1987) discuss the favorable impact of the PDS on well –being of the poor, whereas clarifying, impact could had been greatly better if targeting had been restricted to the deepest 40 percent. This smooth of aiming would also guarantee cost-effectiveness more sustainability. The price of subsidy of rice in 1983-84 was calculated 10 percent of the total tax revenue of Rs 9650 million. In

1992-93, tax revenue was predictable at Rs 32,580 million, besides price of subsidy of rice was estimated to be 25 percent. But in the current economic situation, this level is likely to be unsustainable.

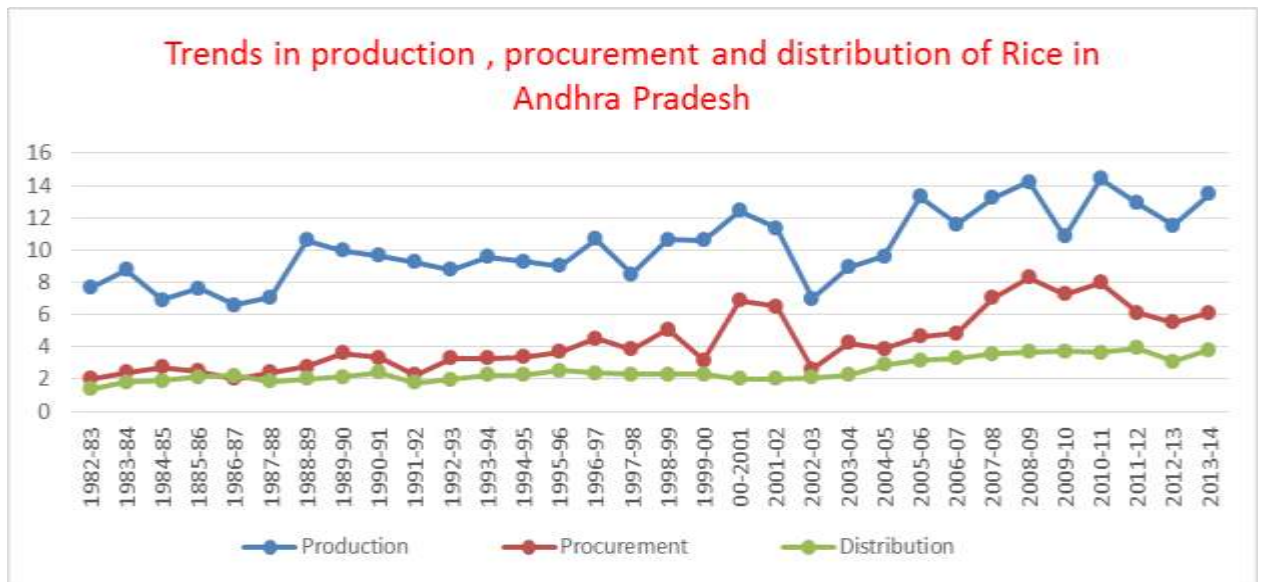
In Andhra Pradesh, the major criticism of the PDS is the loose targeting despite shortages in PDS supply so that current coverage of the poorest groups is comparatively small. Another issue is the fact that the scheme is socially regressive since rice is distributed twice a month while the poor maintain themselves from day to day. Radhakrishna and Indrakant (1987) discuss the favorable impact of the PDS on welfare levels of the poor, while clarifying that this impact could have been much better if targeting had been restricted to the lowest 40 percent. This level of targeting would also guarantee cost-effectiveness greater sustainability. The price of subsidy of rice in 1983-84 was calculated at 10 percent of the total tax revenue of Rs 9650 million. In 1992-93, tax revenue was estimated at Rs 32,580 million, and the price of subsidy of rice was estimated to be 25 percent of this, but in the current economic situation, this level is likely to be unsustainable. In the January 1992 announcement by the state government, this lack of sustainability was repeated to decrease the subsidy of rice and increase the cost of PDS rice from Rs 2 per kilogram to Rs 3.50 per kilogram, and to confine access to a maximum of 16 Kg (as compared with 20 Kg earlier) per “green card family” per month. The present per head 5 kg of rice distributed to white card holders in Andhra Pradesh.

Table.4.5. Trends in procurement and distribution of rice from 1980-81 to 2013-14

Years	Production	Procurement	Procurement as % of production	Distribution	Distribution as % of procurement
1980-81	7.01	0.7	9.98	-	-
1981-82	7.87	1.1	13.97	-	-
1982-83	7.67	2	26.07	1.37	68.5
1983-84	8.79	2.42	27.53	1.83	75.62
1984-85	6.91	2.74	39.65	1.89	68.98
1885-86	7.61	2.48	32.58	2.15	86.69
1986-87	6.59	2.03	34.9	2.21	96.08
1987-88	7.08	2.41	34.04	1.87	77.59
1988-89	10.62	2.78	26.18	2	71.94
1989-90	9.96	3.59	36.04	2.12	59.05
1990-91	9.65	3.32	34.04	2.42	72.89
1991-92	9.25	2.26	24.43	1.78	78.76
1992-93	8.79	3.3	37.54	1.99	60.3
1993-94	9.56	3.3	34.51	2.25	68.18
1994-95	9.27	3.35	37.75	2.26	64.57
1995-96	9.01	3.67	40.7	2.52	68.66
1996-97	10.68	4.5	42.13	2.36	52.44
1997-98	8.51	3.85	45.24	2.28	59.22
1998-99	10.66	5.07	47.56	2.28	49.97
1999-00	10.6	3.17	29.9	2.28	71.92
00-2001	12.45	6.88	55.26	2.02	29.36
2001-02	11.37	6.52	57.34	2.03	31.13
2002-03	6.99	2.61	37.34	2.09	80.08
2003-04	8.95	4.24	47.37	2.25	53.07
2004-05	9.6	3.89	40.52	2.87	73.78
2005-06	13.29	4.65	34.99	3.15	67.74
2006-07	11.58	4.85	41.88	3.3	68.04
2007-08	13.22	7.04	53.25	3.58	50.85
2008-09	14.21	8.29	52.43	3.68	44.39
2009-10	10.83	7.26	67.03	3.74	51.51
2010-11	14.42	7.96	55.28	3.63	45.6
2011-12	12.89	6.12	47.47	3.94	64.37
2012-13	11.51	5.5	47.78	3.09	56.18
2013-14	13.48	6.1	45.25	3.79	62.13

Source: Civil Supplies Department, Government of Andhra Pradesh

Graph.4.1. Trends in procurement and distribution of rice from 1980-81 to 2013-14



Here the graph 4.1 described that trends in production and procurement and distribution of rice in Andhra Pradesh. The production of rice are up and down, in the year of 2002-03 the production of rice fell down, because many reasons behind the low level of production of rice in 2002-03, i.e., climate conditions, rain fall, natural calamities, floods and finally its effected in fall of production. After 2013-14 trends shows increasing level of rice production.

4.7. Distribution of white cards in Andhra Pradesh

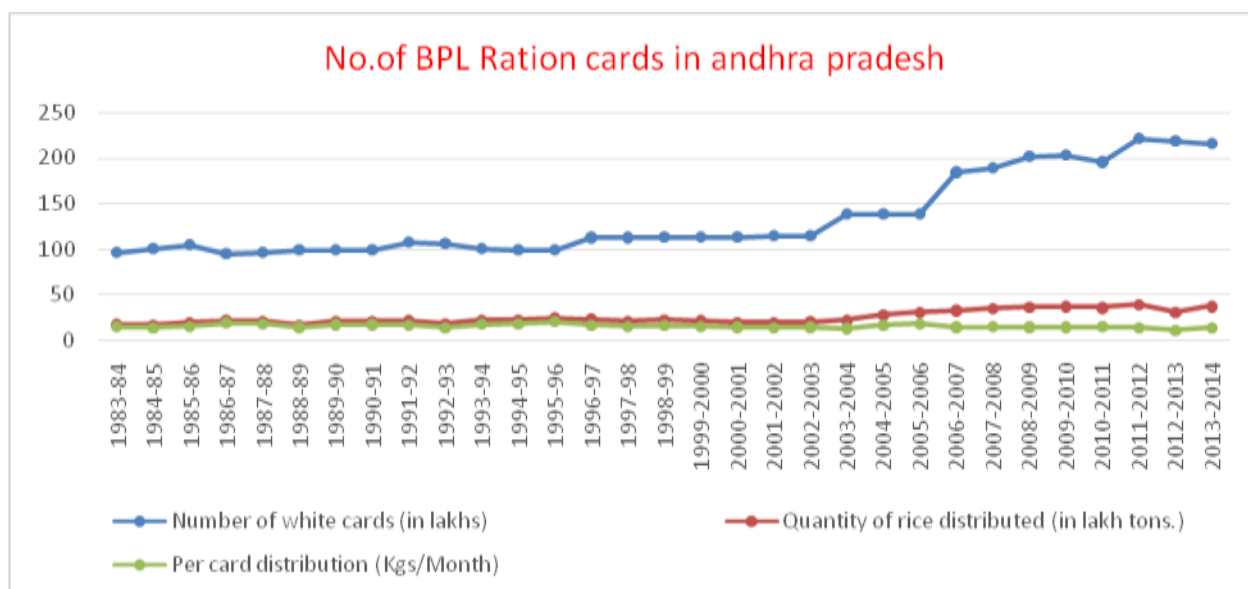
White cards are issued to the families (HHS) comes under BPL are provided the subsidized rice. There are 215.5 lakh white ration cards are distributed and 37.9 (in lakh tons) quantity of rice distributed, per card distribution 14.65 (Kgs/month) of rice distributed during 2013-14. Govt. of AP has introduced the coupon scheme for all eligible white card owners, and now there is no coupon scheme, the government of Andhra Pradesh introduced bio-metric system to get commodities from fair- price shops.

Table.4.6. No of Ration cards in the state of Andhra Pradesh from 1983-84 to 2013-14

Years	Number of white cards (in lakhs)	Quantity of rice distributed (in lakh tons.)	Per card distribution (Kgs/Month)
1983-84	96.47	18.14	15.66
1984-85	101.03	17.76	14.64
1985-86	104.33	20.34	16.24
1986-87	95.14	22.36	19.58
1987-88	96.25	21.98	19
1988-89	99.22	17.86	15
1989-90	99.22	21.4	17.9
1990-91	99.22	21.17	17.78
1991-92	107.16	22.42	17.43
1992-93	106.46	18.84	14.74
1993-94	100.71	22.5	18.61
1994-95	99.26	22.55	18.93
1995-96	99.26	25.2	21.15
1996-97	112.66	23.6	17.45
1997-98	112.66	21.6	15.97
1998-99	113.25	23	16.92
1999-2000	113.6	22.13	16.23
2000-2001	113.6	20.25	14.85
2001-2002	114.53	20.34	14.79
2002-2003	114.53	20.94	15.23
2003-2004	138.46	22.59	13.59
2004-2005	138.46	28.79	17.32
2005-2006	138.46	31.59	19
2006-2007	184.22	33.3	15
2007-2008	189.3	35.89	15.7
2008-2009	201.62	36.85	15.23
2009-2010	203.17	37.34	15.31
2010-2011	195.54	36.39	15.5
2011-2012	221.21	39.42	14.8
2012-2013	218.62	30.99	11.81
2013-2014	215.5	37.9	14.65

Source: Commissioner of Civil Supplies, Government of Andhra Pradesh, Hyderabad

Graph.4.2. No of Ration cards, Distribution of Rice in Andhra Pradesh from 1983-84 to 2013-14



The graph 4.2 described the distribution of white cards in Andhra Pradesh, here the graph shows after 1983-84 no.of white cards are increasing level and after 2002-03 the distribution of white cards are increased. The main reason for increase the white cards in Andhra Pradesh, many government schemes are linked with white cards and reduce the rice price from 5.25/- to 2/- Rs.

4.8. Subsidy

In mid 1980's the Government of Andhra Pradesh started subsidized rice scheme to improve the consumption level of the susceptible sections to improve the food security. The financed rice conspire includes the arrangement of appropriation by both the state and central Governments. The table 4.7 explained subsidy in Andhra Pradesh and table 4.8 showed present price list of commodities at Fair price shop.

Table. 4.7. The Subsidy incurred on Rice from 1982-83 to 2013-14 of In Andhra Pradesh

Financial Year	Distribution of rice (in Lakh Tonnes)	Subsidy (Rs .in Cores)
1982-83	2.55	4.00
1983-84	18.14	78.69
1984-85	17.76	116.54
1985-86	20.34	141.91
1986-87	22.36	176.90
1987-88	21.98	177.94
1988-89	17.36	191.76
1989-90	21.40	317.41
1990-1991	21.17	368.54
1991-92	22.42	351.57
1992-93	18.24	241.65
1993-94	21.47	408.12
1994-95	22.55	751.57
1995-96	25.55	1124.77
1996-97	25.20	790.84
1997-98	22.80	658.00
1998-99	22.80	756.78
1999-2000	22.13	1062.80
2000-01	20.25	849.91
2001-02	20.34	454.01
2002-03	20.94	239.19
2003-04	22.59	340.95
2004-05	28.79	499.99
2005-06	31.59	542.82
2006-07	33.30	716.87
2007-08	35.89	705.75
2008-09	36.85	2181.05
2009-10	37.34	2350.00
2010-2011	36.39	2250.0
2011-2012	39.42	2280.0
2012-2013	30.99	2500.0
2013-2014	37.90	3145.55

Source: Civil Supply Department of Andhra Pradesh, Hyderabad

Table. 4.8. Price list in Andhra Pradesh at Fair Price Shops

S.No	Commodity	Price In Rs/-
1	Rice	Rs.1/-
2	Ragi	Rs.1/-
3	SUGAR	Rs.20/-
4	Wheat	Rs.7/-
5	Whole Meal Atta	Rs.16.5/-
6	Jowar	Rs.1/-
7	Redgram Dal	Rs.40/-
8	Kerosene Oil	Rs.15/-
9	Salt	Rs.12/-
10	BlackGram Dal	Rs.80/-
11	BlackGram Dal-Vmal	Rs.50/-
12	Chana Dal	Rs.40/-
13	Fest Palm Oil	Rs.70/-

Source :www.aprationcard.com

4.9. Income Gain – PDS

Income gain to the consumers is the contrast between the estimation of the amount of products obtained in PDS when assessed at market costs and the real estimation of PDS buys. Income gain incorporates gains from all purchase of rice, wheat, sugar and lamp fuel made in reasonable value shops. Certain costs are utilized to determine Income gain.

$$IG = (P_m - P_i) Q_r$$

IG = Income Gain

P_m = Open market price

P_i = Price in the PDS shop

Q_r = Quantity Purchased from Fair price shops

4.10. Conclusion

In this chapter mainly focused on the distribution of ration cards, Production, procurement and distribution of rice in Andhra Pradesh. The number of white ration cards has increased drastically. Several initiations like rice for Rs. 2/- per Kg and subsidized welfare schemes to the white ration card holders caused for this radical change. In 1983-84, there were 96.47 lakh white cards holders, by following it there were 106.46 lakhs in 1992-93, 138.46 lakhs in 2003-04 and 215.5 lakhs in 2013-14. It can be observed that the increased number of white ration cards hugely during 2003-04 to 2013-14. This was triggered for the more inclusion errors in the Public Distribution System due to lack of strong regulatory framework.

Chapter: V

Performance of Public Distribution System in selected districts

5.1. Introduction

The present chapter discussed about the performance of public distribution system in selected districts, Khammam and Srikakulam districts of Andhra Pradesh (United). This chapter divided in to two sections, section I discussed about the profile of the selected district, Mandal and villages and section II focused on performance of public distribution system i.e., distribution of cards, distribution of commodities and fair-price shops, problems of the getting commodities from the fair price shops.

Section: I: District, Mandal, Village profile

5.2. Srikakulam District

5.2.1. Natural Back Ground

Srikakulam Districted located between 18-20' and 19- 10' northern latitudes and between 83-50' and 84-50' eastern longitude. It is located on the extreme northeast in Andhra Pradesh. There are few important rivers in the district namely Bahuda, Champavathi, Gomukhi, Kumbikota Gedda, Mahendranaya, Nagavali, Suvarnamukhi, Vamsadhara, and Vegavathi. The origin of river Vamsadhara situated in the Eastern Ghats of Orissa. From there this river flows through Bhamini Mandal in Srikakulam District and ultimately merges into Bay of Bengal. The place where this river merges into Bay of Bengal is called Kalingapatnam. Further, river Nagavali and river Suvarnamukhi are also originate in the Eastern Ghats. River Nagavali merges in Bay of Bengal at Kallepalli village in Vangara Mandal. River Vegavathi flows through Pachipenta hills from west to

east as a tributary to river Suvarnamukhi. Not only river Veghavati but also river Gomukhiserves as tributary to Suvarnamukhi at Sirlam village in Vizianagaram District. River Mahendratanya joins Vamsadharaas a tributary at at Komanapalli village of Hiramandalam Mandal. River Bahuda, also, originates in the Eastern Ghats and flows through Boddapadu village of Ichapuram Mandal to enter Srikakulam District and finally at Donkuru it merges into Bay of Bengal. The District of Srikakulam has approximately 193 kms of sea coast.

5.2.2. Boundaries and Topography

Kandivalasa gedda, Vamsadhara and Bahuda encircle the Srikakulam District to a distance of their stretches on the other side Eastern Ghats covers on the North Eastern part of the district. Further, on the East it is Bay of Bengal whereas on the North it is the state of Orissa and on the South it is district of Vizayanagaram limits the boundaries of the district of Srikakulam. The district was carved out in 1950 by bifurcating it from Visakhapatnam District, and it derived its name from its headquartered town Srikakulam. For quite some time, the district continued to be unaffected in its territorial jurisdiction. However, in 1969 in the month of November, 44 villages from Bobbili Taluk and 63 villages from Saluru Taluk were lost. Since then they combined with the then newly formed Gajapathinagaram Taluk of Visakhapatnam District. Again, the district had undergone major territorial changes in May 1979, due to the formation of new district called Vizianagaram. As a result Parvathipuram, Bobbili, Salur, and Cheepurupalli Taluks were transferred to district of Viziayanagaram.

5.2.3. Land Utilization

The district of Srikakulam has a total area of 583700 hectares, which is divided into 38 Mandals under three revenue divisions i.e., Srikakulam, Palakonda and Tekkali. During the financial year 2009-2010a total of 3, 56, 654 hectares were kept under cultivation in the district (i.e. net area sown, current fallows, and other fallow lands). To say it in percentages it is 61.1 percent of the total geographical area of the district. Besides, in the same year the total area kept under forest cover in the district was approximately 68,641 hectares which is 11.76 percent. In the same financial year the total land kept for other than agriculture area was 99,269 hectares which is 17.01 percent of the total geographical area of the district. Therefore, it shows that the district maintaining good ecological balance. The land kept for non-agricultural usages is utilized for construction of buildings both for living as well of commercial purposes, transportation which include roads and railways and water ways i.e., rivers, canals, etc. however, some part of this land is covered by mountains, and barren lands. The total land under mountains and barren uncultivable land was 49,687 hectares which is 8.51 percent. Further, pastures and other grazing lands occupying a total land of 942 hectares which is 0.16 percent. The total area under which tree crops and groves excluded from Net Area Sown is 7,451 hectares which is 1.27 percent. Total waste land is 659 hectares which is 0.11 percent. Besides, there are other fallow lands that cover the total area of 17,487 hectares or 2.99 percent. The current fallow lands are 54,523 hectares or 9.34 percent. The total net area sown is 2,84,644 hectares which is 48.76 percent.

5.2.4. Natural Resources

The district of Srikakulam falls in the agro-climatic are of north coastal plains. This area is well known for its tribal people. The district of Srikakulam geographical area can be divided broadly into two i.e., agency area, and the plain area. The agency area is filled with hills and hence natural resource rich area, and many tribal groups are living in here. The plain area is used for agriculture and hence can be compared with any other plain areas in the state of Andhra Pradesh. Rivers like Vamsadhara, Nagavaliflows in this district. The district of Srikakulam is known for agriculture so number of irrigation projects was constructed here. A total number of 10 irrigation projects including both major and medium are in operation. Names of these projects are as follows. B.R.R. Vamsadhara Project, NarayanapuramAnicut, Madduvalasa, Kalingadala Reservoir, Gajjilgedda Reservoir, Thotapalli, Dabarsingi Reservoir, PydigamProjec, Bondigedda Reservoir.

5.2.5. Developmental activities

A) Agriculture

The position of agricultural sector is very crucial in district economy. Out of 47.36 percent of main workers in the district population, 32.14 percent cultivators and agricultural labourers are still dependent on agriculture. In the agriculture production, monsoon and seasonal conditions play a major role because agriculture in Srikakulam district is mostly dependent on rainfall. During the South-West monsoon period in the year 2009-10, there was deficit rainfall in the district with negative deviation of -15.3 percent against normal. However, North-East monsoon rainfall was sparse deviated by –

37.2 percent. As against the district normal of 1162.5 mm, the overall rainfall for the year was 978.1 mm, with 15.8 percent rainfall shortage. So, when compared to 2009-10 with that of 2008-09 the total net area sown in the district reduced to 2,84,644 hectares from 3,21,892 hectares. This means that a total of 11.57 percent reduction was recorded.

B) Irrigation

During the year 2009-10, the gross area irrigated by all sources was 189729 hectares which accounted for 46.81 percent of the gross cropped area as against 48.93 percent during the year 2008-09.

C) Education

The poor condition of infrastructure shows the backwardness of the district. There are 2714 primary education schools in various management enrolled 1.41 lakhs students, under upper primary schools are 847 covered 1.08 lakhs students, high schools are 531 and accounted for 1.61 lakhs, junior colleges are 129 in various managements, 69 degree colleges and one university i.e. Dr. B.R. Ambedkar University and 12 B.Ed. colleges, and a medical collage

D) Industries

In the district, there are 25 large and medium scale industries that involve a total investment of Rs. 77,50799.80 crore and provide employment to around 7130 people. There are around 1101 tiny and small scale industries and businesses which can be counted a total investment of Rs. 29733.614 lakh. These small scale industries and businesses have created 35316 jobs in the district. The district has remarkable potential to

establish more industries, such as large, medium, and small-scale industries in view of GOI/GOAP incentives, cheap land and labour cost, and natural resource.

Table. 5.1 – Srikakulam District profile

1. Geographical Area	:5837 sq.km
2. Forest Area (In Hect)	: 68641 (11.7%)
3. No. of Parliamentary Constituencies	: 3 (1+2 Part)
3a. Reserved for S.Cs	: Nil
3b. Reserved for S.Ts	: 1 (Araku - Part)
4. No. of Assembly Constituencies	: 10
4a. Reserved for S.Cs	: 1 (Rajam)
4b. Reserved for S.Ts	: 1 (Palakonda)
5. Revenue Divisions	: 3
6. No. Of Mandals	: 38
7. Revenue Villages	: 1865
8. Gram Panchayats	: 1100
9. No. of Habitations	: 4225
9a. Habitations more than 40% SC/ST Pop.	: 1175 (SC-160, ST-1015)
10a. Municipalities	: 4
10b. Nagar Panchayats	: 2
11. No. of Schools	: 3019
12. House holds	: 675945
13. Population -2011 (Provisional)	: 2699471
a) Male	: 1340430
b) Female	: 1359041
c) Rural	: 2379848
c) Urban	: 319623 (12%)
14. SC Population	: 244631 (9.1%)
15. ST Population	: 158602 (5.9%)
General	
SC	ST
16. Literacy Rate	:
62.3%	59.6% 47.2%
Male	:
72.3%	68.7% 57.3%
Female	:
52.6%	50.6% 36.8%
17. Normal Annual Rainfall	: 1161 mm
18. Gross Area Sown (Acres)	: 1040000
19. Gross Area Irrigated (Acres)	: 612400 (59%)
All	SC ST
20a. No. of Cultivators	: 525870 27487 36050
20b. Area Operated (In Acres)	: 862746 26223 66284
21. Coastline	: 193 Km

Source: census 2011, government of India.

5.2.6. Srikakulam Population 2015

As far as the population is concerned 2011 census can only be taken as the standard population of Srikakulam District as there is no such accurate data is available in the year 2015. Therefore, as per 2011 Census, the district of Srikakulam holds the total population size of 2,703,114.

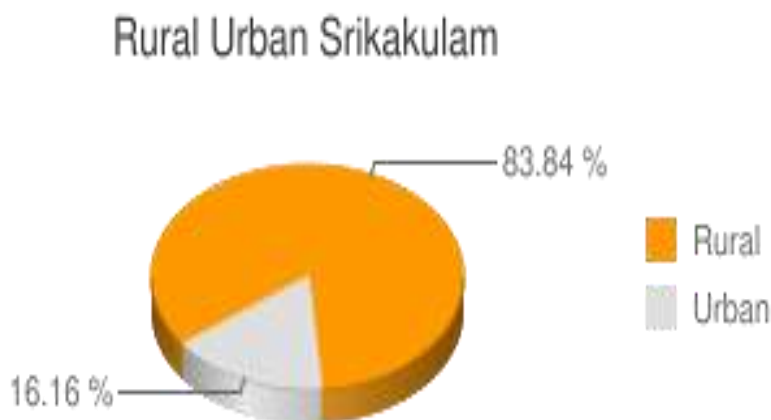
5.2.7. Srikakulam district urban and rural population 2011

According to 2011 census 16.16 percent population in Srikakulam is living in urban places which is 436,703. This number includes 214,850 male and 221,853 female persons. In the urban region of Srikakulam District, the sex ratio is 1033. The sex ratio among children was 932. The total number of children (0-6) among the population living in urban places was 42,706 this number includes 22,103 and 20,603 male and female respectively. Out of total urban population, the child population data in Srikakulam district is 10.29 percent. The average literacy rate in the district of Srikakulam was 78.36 percent. If we see sex wise literacy rate, 85.97 percent belong to male and 71.06 percent belong to female. If we see the above percentages in actual numbers they are 308,719 and 165,702 and 143,017 respectively.

According to 2011 census 83.84 percent Srikakulam population which is 2,266,411 are living in rural areas. These numbers include 1,126,888 and 1,139,523 of males and females respectively. When compared to urban areas, the sex ratio in rural areas shown better with 1011. The sex ratio among children is 958. Children aged between 0-6 are 238,331 which include 121,732 male and 116,599 female. The total children population percentage is 10.80. The literacy rate of rural population is 58.51 percent. The sex wise

literacy rate is 68.86 and 48.35 percentages respectively. The total literate persons are 1,186,662 of which males 692122 and females 494540.

Graph.5.1 Rural, Urban Population in Srikakulam district



Source: census 2011, government of India.

5.2.8 Population Density in the District of Srikakulam

According to 2011 the population density in the district of Srikakulam was 463 persons per sq. km. The density of the district has been increased from 435 in 2001. The total land that comes under the jurisdiction of Srikakulam is 5,837 square kilometers.

5.2.9 Srikakulam Literacy Rate 2011

According to 2011 census the average literacy rate in Srikakulam is at 61.74 percent. This percentage is much better when compared to the literacy percent in 2001 which is 55.31 percent. The sex wise literacy rate is 71.61 and 52.08 male and female respectively. The sex wise literacy rate can be compared with the rates in 2001 i.e. 67.19 43.68 percent male and female respectively. There were a total number of 1,495,381 literate people in

Srikakulam District out of which the males constituted 857,824 and the females constituted 637,557. Srikakulam District had 1,217,659 in 2001 in its district.

5.2.10 Srikakulam Sex Ratio 2011

The sex ratio in the district of Srikakulam, according to 2011, is 1015. In 2001 it was 1014. The sex ratio in the district of Srikakulam is getting better and better, even when compared it to the national figure which is 954 the district stood far better.

5.3. Kaviti

The village of Kaviti situated between Sompeta and Ichapuram which is 130 km away from the district headquarters. This area is well known as Uddanam (Udyanavanam) which means garden. As indicated in the name, this area is filled with trees such as coconut, cashew, jackfruit and many other trees. So, this area creates an excellent natural scenes. Some Hindu temples such as Chintamani Ammavaru, Sri Sitharamaswamy, to name a few, are also located in this area.

5.3.1 Belagamu village Population in Srikakulam, Andhra Pradesh

Belagamu is a large village with 1319 families situated in Kaviti Mandal of Srikakulam district, in Andhra Pradesh. The population of the village is 5543

5.3.2 Belagamu village work profile:

Out of the total population in Belagamu village, 2070 were engaged in work. 53.53 percent of labours define their effort as chief effort (service or making more than six

Months) while 46.47 percent were engaged in marginal activity giving livelihood for less than 6 months.

5.4 Khammam

The area of Khammam consists of 15, 81,000 ha out of which nearly 48 percent of the area comes under forests, highest among the 8 NAIP districts. In the total geographical area, the percent of net sown area is 28.5 whereas the gross cropped area is 4, 79,000 hectare. The cropping intensity is 109 percent and about 8 percent of the area is under non-agricultural uses whereas permanent pastures constitute 2.5 percent. The population in the district of Srikakulam is 25, 78,927 this include 4, 26,692 (16.6 percent) of SC population and 6, 82,617 (26.5 percent) of ST population. Khammam houses the highest number of tribal among the NAIP districts. Rural literacy is just over 51 percent and work participation rate is 52.5 percent. Cultivators represent 22.9 percent, while 72 percent of the workers do agricultural work. The district has the highest “grazing pressure” (17.7 grazing area) among the NAIP districts. There are 1,23,374 small ruminants, whereas cattle and buffaloes are approximately the same in number. The district receives 1096 mm rainfall annually and is comparatively less drought-prone. In the district, the irrigated land accounts for 39 percent. Rice has maintained its share in the cropping and accounts for over 37 percent. Crops like green gram and sorghum have lost the area, whereas cotton has gained since 1995. The productivity of cotton (359 kg/ha) during 2005 was more than the state average. However, the rice productivity (2523 kg/ha) was less than the state average. After Nalgonda and Anantapur (2005-06), Khammam has the largest area under horticulture crops. There was a growth of over 10,000 ha under horticulture crops in the district since 2000-01. During this period, the

area increased marginally under vegetables and spices. Among the NAIP districts, this district had the highest per capita income (Rs. 26360), which was much above the state average. The yearly increase of agricultural lending between 1995 and 2005 showed an increase of an impressive 43 percent which is highest after Adilabad.

Table.5.2. Khammam district profile

<u>Item</u>	<u>Units</u>	<u>Figure</u>
Area	In '000 Sq. Km	16
Population	In Persons	27,97,370
Male	In Persons	13,90,988
Female	In Persons	14,06,382
Urban	In Persons	6,55,911
Rural	In Persons	21,41,459
Population Growth (decadal)	%	8.47
Population Density (Person/Sq.Km)	Ratio	175
Literacy	%	64.81
Male	%	72.3
Female	%	57.44
Urbanisation	%	23.447417
Workers as % of total population	%	51.6
Workers % of main Workers	%	44.54
Household industries	%	0.58
Area under Food & Non-Food crops	Area in Hectares	5,09,923
Mining & Quarrying (Coal - Top)	Qty in tonnes	1,96,31,668
Forest Area under the control of Forest Department	Area in SQ. Kms	8436.94
Gross irrigated area as % of gross cropped area	%	41.92
Road Length per 100 sq.km.	In Sq.km	97.10389
Post offices per 100,000 persons	Ratio	21.627457
Bank branches per 100,000 persons	Ratio	8.7224786
Population per bank	In Thousands	11.65
Per capita bank deposits	Rs. In Crores	21261.757
Per capita bank credit	In Rs.	19937.656
Per capita bank credit to agriculture	In Rs.	38.754655

<u>Item</u>	<u>Units</u>	<u>Figure</u>
Per ha. bank credit to agriculture	In Rs.	21.26029
Per capita bank credit to Industries	In Rs.	11.159714

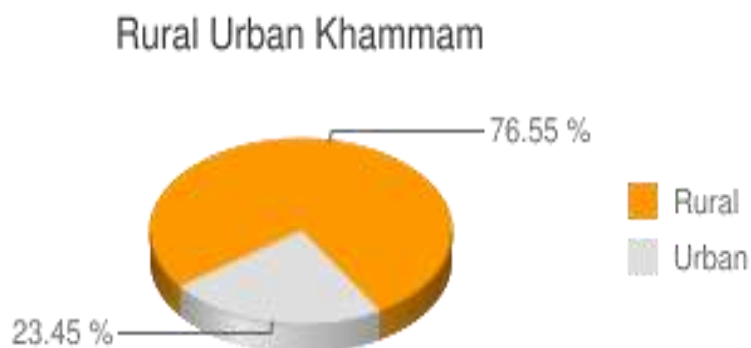
Source: census 2011, government of India.

Table.5.3 Khammam District: Census 2011

Actual Population	2797370	2578927
Male	1390988	1305543
Female	1406382	1273384
Population Growth	8.47%	16.39%
Area Sq. Km	16,029	16,029
Density/km2	175	161
Proportion to Andhra Pradesh Population	3.31%	3.38%
Sex Ratio (Per 1000)	1011	975
Child Sex Ratio (0-6 Age)	958	971
Average Literacy	64.81	56.89
Male Literacy	72.3	66.11
Female Literacy	57.44	47.44
Total Child Population (0-6 Age)	281,922	350,150
Male Population (0-6 Age)	143,956	177,680
Female Population (0-6 Age)	137,966	172,470
Literates	1,630,234	1,267,944
Male Literates	901,640	745,679
Female Literates	728,594	522,265
Child Proportion (0-6 Age)	10.08%	13.58%
Boys Proportion (0-6 Age)	10.35%	13.61%
Girls Proportion (0-6 Age)	9.81%	13.54%

Source: census -2011, Government of India.

Graph.5.2 Rural, Urban Population in Khammam district



Source: census 2011, government of India.

5.4.1 Population Density of Khammam District, 2011

The density of Khammam district was at 161 people per sq. km. in 2001. The initial provisional data released by Census India 2011 indicates that the density of Khammam district for 2011 was 175 people per sq. km. The district administers 16,029 square kilometers of areas.

5.4.2 Khammam Literacy Rate 2011

The average literacy rate in the district of Khammam in 2011 was 64.81 in comparison with 56.89 in 2001. When we observe this gender wise, we find that the male literacy was 72.30 percent and female literacy 57.44 percent.

5.4.3 Sex Ratio in Khammam 2011

The sex ratio in Khammam stood at 1011 female per 1000 male in comparison with the figure of 975 in 2001 census.

5.4.4 Kothagudem Mandal (Bhadrachalam District)

Kothagudem is a municipality town in Khammam District of Andhra Pradesh. Divided into 17 wards, the town witnesses elections every 5 years. Kothagudem is a Mandal in Khammam District of Andhra Pradesh (Telangana) State, with the town being the headquarters of the Mandal. It is 69 km far from the District headquarters of Khammam. Kothagudem Mandal is skirted by Tekulapally Mandal in the West, Palwancha Mandal in the North, Julurupadu Mandal in the South, Chandrugonda Mandal in the South. Kothagudem town, Palwancha town, Yellandu town, Bhadrachalam town are the nearby towns of Kothagudem. Kothagudem consists of 117 villages and 30 panchayats, among which Penagadapa is the biggest village and Kunaram is the smallest village. Amaravathi, Bhadrachalam, Khammam, Medaram, and Papi Kondalu (Papi Hills) are the important tourist destinations nearby.

5.4.5 Demographics of Kothagudem Mandal

The local language here is Telugu, some people speak Urdu also. Total population of Kothagudem Mandal is 184,415 who live in 40,314 houses, spread across total 117 villages and 30 panchayats. The males are 92,611 and females are 91,804. Total 107,967 people live in the town and 76,448 live in rural area.

5.4.6 Chunchupally Population Census 2011

Chunchupally is a small town in the district of Khammam, Andhra Pradesh. This town has a population of 19,944 of which 9,877 are males while 10,067 are females.

5.4.7 Chunchupally Work Profile

There are 6,945 people out of total population and they were engaged in work or business activity. Of this 5,005 were males while 1,940 were females. According to the census survey, a worker is defined as a person who does business, job, service, and cultivator and labour activity. Of total 6945 working population, 79.94 percent were engaged in main work while 20.06 percent of total working populations were engaged in marginal work.

Section: II: Public Distribution System in selected districts and villages

5.5. Kothagudem: (Khammam district)

Kothagudem is a municipality town in Khammam District of Andhra Pradesh. Divided into 17 wards, the town witnesses elections every 5 years. Kothagudem is a Mandal in Khammam District of Andhra Pradesh (Telangana) State, with the town being the headquarters of the Mandal. It is 69 km far from the District headquarters of Khammam.

Table 5.4. Ration cards in Kothagudem

Kottagudem (Jan.2019)	
Total Ration Cards	280032
Total Ration Shop	442
Aadhaar seeding	97.82%

<https://epds.telangana.gov.in>

The table 5.4 showed in Kothagudem there are 280032 ration cards were distributed and 442 ration shops are located throughout the Mandal, 97.82% of the cards are linked with Aadhaar.

5.5.1. Chunchupally

Chunchupally is a small town in the district of Khammam, Andhra Pradesh. This town has a population of 19,944 of which 9,877 are males while 10,067 are females.

Table 5.5.Household particulars in Chunchupally sample village

Si. No	Name of village or hamlet	Category	No.of HH
1	Chunchupally village	OC	34
		BC	155
		SC	47
		ST	59
		Minority	8
2	Chunchupally Tanda	OC	0
		BC	0
		SC	0
		ST	250
		Minority	0
3	Chunchupally -2	OC	3
		BC	10
		SC	0
		ST	251
		Minority	0
4	Chunchupally (Ambedkar colony)	OC	11
		BC	62
		SC	6
		ST	96
		Minority	0
		Total	992

Source: Field Work

Table 5.6. Ration cards in Chunchupally

Chunchupally (Jan.2019)	
Total Ration Cards	9771
Total Ration Shop	11
Aadhaar seeding	96.87%

<https://epds.telangana.gov.in>

The table 5.6 showed in Chunchupally village there are 9771 ration cards were distributed and 11 ration shops are located throughout the village, 96.87% of the cards are linked with Aadhaar.

5.6. Srikakulam

According to 2011 census 16.16 percent population in Srikakulam is living in urban places which are 436,703. This number includes 214,850 male and 221,853 female persons. In the urban region of Srikakulam District, the sex ratio is 1033. The sex ratio among children was 932. In this district there are 38 Mandals are located in different geographical area.

Table 5.7. Ration cards in Srikakulam district

Srikakulam District (Jan.2019)	
Total Ration Cards	820605
Total Ration Shop	1976
Cashless	16908 (2.30%)
Portability	44828

<https://aeapos.ap.gov.in>

The table 5.7 showed in ration cards in Srikakulam district there are 820605 ration cards were distributed and 1976 ration shops are located throughout the district, 2.30 percent of cards are cashless and 44828 cards are getting ration thorough portability.

5.6.1. Kaviti Mandal

For the study we selected Kaviti Mandal from Srikakulam district, and Belagam village selected from this Mandal for my study. In this Mandal there are 21 revenue villages, 100 village hamlets and 21 gram panchayats are located.

Table 5.8. Ration cards in Kaviti Mandal

Kaviti Mandal (Jan.2019)	
Total Ration Cards	21696
Total Ration Shop	43
Cashless cards	583
Portability	843(3.88%)

<https://aeapos.ap.gov.in>

The table 5.8 showed in ration cards in Kaviti Mandal there are 21696 ration cards were distributed and 43 ration shops are located throughout the Mandal, 583 ration cards are under cashless transaction and 843 (3.88%) cards are getting ration thorough portability.

5.6.2 Belagam

For the study selected Belagam village from Kaviti Mandal. In this village mainly Backward Community (BC) population is more than other communities. Here there are 5 village hamlets are located in this village. The main occupation of the village is agriculture and agricultural labourer.

Table.5.9. Household's particulars in Belagamu sample village

Si.No	Name of village or Hamlet	Category	No.of HH
1	Belagamu	OC	46
		BC	390
		SC	9
		ST	4
2	Rapakuttuga	OC	1
		BC	174
		SC	0
		ST	0
3	Savasanaputtuga	OC	0
		BC	42
		SC	0
		ST	0
4	GollaBelagamu	OC	0
		BC	136
		SC	0
		ST	0
5	Basavakotturu	OC	1
		BC	169
		SC	0
		ST	0
		Total	972

Source: Field Work

Table 5.10. Ration card particulars in Belagamu village

VILLAGE			RATION CARD		Total
			YES	NO	
BELAGAMU	CATEGORY	SC	8	1	9
		ST	4	0	4
		OBC	96	26	122
		OC	13	2	15
	Total		121	29	150

Source: Field Work

The above table shows that ration card particulars in Belagamu village. In Belagamu village selected 150 households from out of 972 households for my study, a categorized different social group depends upon their size of population. Here OBC households are higher than other social groups. SC-1, OBC-26, OC-2 households, they don't have ration cards.

5.7. Conclusion

This chapter described the profile of the districts, Mandals and villages selected for the study. Also, discussed the distribution of ration cards and functioning of the PDS in the selected village for this study.

Chapter VI

Targeting errors and its implications on household food security in selected villages

6.1. Introduction

The present chapter discussed about the targeting errors in public distribution system at household level in selected villages. This chapter deals with the field data collected from the households in the selected villages for the study. It drew a special attention on the analysis of the “*targeting errors*” in PDS and also how it impacted on the household food security. It also keenly focused on explaining the “Inclusion errors” and “Exclusion errors” in distribution of ration cards along with the how the needy households are excluding from benefiting the PDS in the above mentioned villages. The present study selected two villages, one village Chunchupally from Khammam district and another village Belagamu from Srikakulam district. Here mainly focused on exclusive and inclusive errors in public distribution system at household level. In this chapter I used only primary data collected from field in selected villages

6.2. Targeting Errors

When attempts were made to introduce welfare schemes to targeted people, several miscalculations were aroused. Cornia and Stewart (1993) examined that there are “targeting errors in two ways in *food and nutrition intervention*”. They refers to the type1 error is the poor and needy households are excluding from a programme termed as errors of ‘wrong exclusion’; these errors are ‘F’ mistake by Cornia and Stewart. Type 2 errors, refers to inclusion non poor or non-eligible of households in the programme, it’s called

errors of wrong inclusion these are ‘E’ mistakes that represent excessive under serving coverage.

Exclusion errors:--type1error:--‘F’ mistake, it means they are poor for and really eligible for getting white ration card but they excluded from public distribution system.

Inclusive errors: -- type2 error: -- ‘E’ mistake, here they are non-poor but they availed white cards and getting food commodities from fair-price shops.

6.3. Ration card - Eligibility criteria

Before going to analysis part here explain who are the real beneficiaries are to get white cards, White ration card (BPL) were issued to every household who are having “*less than 1.5 acres with water resources; 2.5 acres of wetland under other irrigation sources; 3 acres of dry land for commercial crops; and 5 acres of dry land under other crops*”.

Under the guidelines of the Andhra Pradesh state government there appear four important criteria used locally for exclusion from the BPL categories. (Dr.Gummadi –2005)

1. Household having a family member employed in a regular job-with assured monthly income
2. Households having more than three acres of land
3. Households owning pucca house
4. Households owning a television/refrigerator/fan/motorbike
5. New Norms introduced by Andhra Pradesh.

Revised 7 Steps to get white ration card (2015)

1. Who don't have Four wheeler
2. Who don't have passport
3. Who paid current bill 1000 Rs/- or more
4. Below 5 acres of wet land (In Anantapuram district 10 acres of land)
5. Below 2.5 acres of dry land
6. House constructed below 750 square feet.
7. Income levels below 60,000 in urban areas and below 50,000 rural areas.

The “Targeted Public Distribution System” (TPDS) was created in relation to the breakdown of the previous scheme to profit the actual poor (especially in rural regions) and to bring the budgetary food subsidy under restraint. Theoretically, the transformation from general PDS to TPDS was a step on the correct track as it was intended to incorporate all the deprived households and increase the ration quota and unit subsidy significantly for them. It was proposed that the objective of putting the budgetary consumer subsidy in check to be carried out by means of food grains sale to APL households at economic cost and restricting the budgetary food subsidy to around 65 million recognized BPL families. Though the supply of the required amount of food grains to distribute at BPL prices had to be brought down by the Central Pool, the victory of TPDS with regard to fulfilling its acknowledged objectives relied mainly on the capacity of state governments in finding out the actual poor families, limiting the figure of poor families to that projected by Planning Commission, which confirmed an efficient and effective delivery system. In the preceding chapters, we have analyzed the different features of TPDS in the states under study. Large scale errors in identifying BPL families,

low utilization and off-take of food grains by the deprived and drawbacks in the delivery system were seen in different measures in various states.

How these drawbacks in the implementation of TPDS have an effect on the wellbeing of the weaker section of the society and the budgetary consumer subsidy on food grains? An effort is made in this chapter to:

- quantify the targeting errors in identifying the BPL families, as also other kinds of errors in implementation
- evaluate the seepage of food grains from the PDS because of drawbacks in the delivery system and identification errors

6.4. Errors in Implementation of TPDS

Cornia and Stewart (1993) examine in a cross-country study that includes nine countries that transformation from universal to targeted food and nutrition programs usually paved the way to a rise in the “Errors of Exclusion” (of the poor) and a decrease in the “Errors of Inclusion” (of non-poor). Targeting errors can occur in any intended development program due to flawed information and estimation of household features, cost of participation and incompetency and dishonesty in the delivery system. Since the early 1940s in India, the public distribution system has been operating and broadly analyzed by researchers. Even the literature regarding the study of different features of TPDS (instituted in 1997) is fairly prosperous. The reference of targeting errors could be observed in multiple studies (Swaminathan et al, 2001; Jain, 2004; Mooij, 2001; Datta et al, 2001). Evaluation of targeting errors was also endeavored by a number of researchers. Swaminathan and Misra (2001), in a study of a certain village of Maharashtra, determine

the targeting errors and find evidence that supports the hypothesis propounded by Cornia and Stewart (1993). Despite that, in Indian context, one never comes across evidence of state-wise and all-India level assessment of targeting errors. The dimension of targeting errors is significant to comprehend whether and up to what degree the advantage of TPDS is utilized by the target group. Nevertheless, classification and assessment of targeting errors need a formal analytical framework since; various aspects in connection with data base on household features, methodology pertaining to BPL identification, the expenses of participation and a range of administrative misconducts are also responsible for the kinds and dimensions of errors in implementing TPDS.

6.5. Identification of Errors: A Framework

While scrutinizing the state level secondary data in terms of the number of ration cards (RC) distributed and the calculated number of households (HH) demonstrates that there are many states where $RC > HH$, but in some other states, such as Assam, Bihar, Punjab and West Bengal $RC < HH$. When the APL and BPL break-up of the ration cards which were distribute is compared with regard to Planning Commission's poverty assessment, there arise broad inter-state disparity in the BPL card-holding pattern. The share of BPL cards is much less (and in several cases, nearer to the poverty ratios of Planning Commission) when we compare this with the share of BPL cards out of the entire ration cards in circulation in most of the states, indicating the possibility of ghost BPL cards.

“RCT : Total ration cards issued.

RCA : APL ration cards (total number) issued.

RCB : BPL ration cards (total number) issued.

HHA : APL households

HHB : BPL households

HHF : Fictitious households

HHU : Unidentified households i.e. those households that have not been identified for issuance of any ration cards.

HHI : Those identified BPL households whose ration cards are not in their possession.”

To begin with, we have to split the households of a state into two groups, such as “households with ration cards” (HHRC) and “households with no ration cards” (HHNC). The usual RC-HH mapping of a state is demonstrated. This obviously indicates the characteristics of various kinds of errors in implementing TPDS. Out of the different errors mentioned, two are widely acknowledged in the literature (Cornia and Stewart, 1993) as the Exclusion Error (EE) and “Inclusion Error (IE)”.

*“(1) **EE** = (BA+IBNC+UBNC)/HH i.e. the proportion of BPL households deprived of their entitlement to subsidized grains from PDS.”*

*“(2) **IE** = (AB+FB)/HH i.e. the proportion of APL households that have been wrongly given entitlement to subsidized grains in PDS. The other types of errors noted in the implementation of PDS are:”*

*“(3) **Double Counting Error (DE)** = TFH/HH i.e. the proportion excess of ration cards over the number of households. The overall APL-BPL ratio has been used to obtain the break-up of FA and FB in TFH.”*

*“(4) **Missing Households Error (ME)** = TUHNC/HH or 1-(RCT/HH) i.e. the proportion of households who have been left out of the TPDS; only aggregate level estimate will be attempted as the break-up of APL & BPL is not known.”*

*“(5) **Shadow Ownership Error (SE)** = IBNC/HH i.e. the proportion of BPL cards being held by persons/agencies other than the original owners. In the case of Tamil Nadu, SE =DE.”*

6.6. Implementation Errors & Their Implications

This may be considered that though these five errors have diverse consequences in regards to systemic efficiency, delivery cost, and welfare loss, there is interdependency among some of them, that has to be taken into consideration while elucidating their implications and numerical magnitudes. The whole errors have been demonstrated as ratios of the entire households so that their dimensions are similar and can be ranked. This is also noted that for the undisclosed households which have not been allocated with ration cards, it is impossible to make separate assessment for APL and BPL cards. So, we must analyze the aggregate level figures as concluded by Cornia and Stewart (1993), the “exclusion errors (EE)” are really very high for the majority of states in the TPDS system. Nevertheless, in Andhra Pradesh and Tamil Nadu, the EE is low and IE is high. The EE in Karnataka might also have been low, if there had not been a large scale shadow ownership of BPL cards (because of serious drawbacks in implementation). The three states in the south show a pattern which is different from the remaining other states as these have historically observed a policy of expanding the advantage of subsidized food grains to a larger segment of the society. Indeed, “the exclusion errors”, in Karnataka too, emerging out of APL-BPL identification errors are as low as in Andhra Pradesh. Nevertheless, when the omission of BPL households due to “shadow ownership error” is taken into account, the EE for Karnataka infers a quite high value— indicating a major drawback in the state’s TPDS implementation.

The low value of EE, “*ceteris paribus*”, is an indicative of healthy running of TPDS, while high values are symbolic of severe flaws in implementation as well as welfare loss. If high values are disaggregated into “identification error” (which may be because of faulty information on the characteristics of household, defective identification methodology and purposeful policy of some vested interest groups to eliminate some groups) and error in regards to administrative misconducts (such as, falsification of information and incentives to increase cost of participation for some BPL households or just denying BPL cards to legitimate BPL families), we obtain certain understanding on the nature of implementation of TPDS in these states.

Among the states with high rates of omission of BPL households from the TPDS, most of these states have high “identification error” except Karnataka. This shows the nature of the “BPL identification survey” (1997) and the application of the methodology proposed by the “Ministry of Rural Development”. Jain (2004) and Mooij (2001), for example, remark on gross misconducts in the BPL Census (1997, 2002). A bigger portion of the EE is elucidated by the nature of execution of the BPL Census (1997) methodology and this indicates that, during identification, a more suitable methodology is necessary to implement TPDS successfully. The EE because of administrative misconducts (SE), especially in Assam, Bihar, Gujarat, Haryana, Karnataka, Orissa, and Uttar Pradesh, is also quite high. This error indicates that while certain BPL cards have been distributed in official record, those are not with the BPL households which have been identified and such BPL cards have “shadow ownership (SE)”.

Because of administrative irregularities, the “identification error” and “exclusion error” have various consequences. While the former indicates that certain legitimate BPL

families are deprived of subsidized grains from PDS, the latter indicates that the BPL families are not only deprived of subsidized grains, but these are also siphoned off the TPDS, causing higher delivery cost and uselessness of TPDS. The former shows loss of welfare, on the other hand, the latter shows both loss of welfare and unnecessary rise in the cost of delivery. In short, the consequences of other errors are given below:

- **“Inclusion Error (IE)”**– Three states, such as Andhra Pradesh, Karnataka, and Tamil Nadu have demonstrated very high “inclusion error”, and the situation is also the same in a few other states, such as Assam, Bihar, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Orissa. Punjab and Uttar Pradesh. “High inclusion error” indicates diverting PDS benefits to undesired beneficiaries and so, this increases the delivery cost and burden of budgetary food subsidies.
- **“Double Counting Error (DE)”**– Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Rajasthan, Tamil Nadu, and Uttar Pradesh have allocated innumerable ration cards against the households numbers. It is likely to reach at estimates of BPL quota leakages of grains by means of this mode of corruption if the overall APL-BPL break-up of the ration cards in circulation is assumed.
- **“Missing Households Error (ME)”**– Assam, Bihar, Himachal Pradesh, Punjab, and West Bengal indicate high ME. As no cards have been allocated to the households in these states, ME showed welfare loss to the degree that the BPL families are outside the purview of TPDS. We cannot assess the volume of welfare loss with a fair degree of certainty as APL-BPL break-up of these lost families is not accessible. Nevertheless, somebody can make an effort to evaluate the welfare loss by presuming that, if these left out families had been identified

through BPL Census, they would have been allocated with ration cards in similar proportion as the present composition of ration cards in circulation. No such effort has been taken for the study.

- **“Shadow Ownership Error (SE)”**– This error is a portion of the EE, the functioning of which have already been shown in the illustration and study of EE. High values of SE found in the states of Assam, Bihar, Gujarat, Himachal Pradesh, Karnataka, Orissa, Tamil Nadu, and Uttar Pradesh demonstrate large scale seepage of TPDS advantages through administrative misconducts in these states.

6.7. Implementation Errors and Diversion of PDS Food Grains

Conceptualizing and evaluating various errors in implementing TPDS can also be made to assess the several types of diversion and seepage of food grains from TPDS. Some assessments of the volume of seepage from PDS are present. For example, Asthana (2000) quotes from an analysis by “Tata Economic Consultancy Services”, which finds 31% and 36% seepage of PDS rice and wheat at all-India level. The same analysis finds for Bihar that seepages were 64% and 44% respectively for rice and wheat. Deepak Ahluwalia (1993), in another study, notes that leakages of PDS grains at the all-India level were 36.97% for rice and 37.8% for wheat during the period 1986-87. These assessments relate to pre-TPDS i.e. to the universal PDS regime. Diversions and leakages in TPDS occur in three different ways:

- **At FPS level**– The amount of grains not distributed to consumers is redirected by the FPS to earn extra money when the real off-take of subsidized food grains by

active BPL card holders is less than their entitlement. We found during the field survey that numerous BPL households do not receive their quota of ration fully/regularly for various reasons. Also, Some APL households which have been incorporated in the target group do not receive ration grains regularly in some states. So, the average off-take by a BPL cardholder in many states is less than entitlement. However, in the case of Kerala and West Bengal, it is not feasible to carry out assessment of FPS diversion in this manner, as these two states have not restricted the upper limit quota of ration at 20 kg/month per household. The retail FPS owners are mainly the beneficiaries of this leakage. This has to be observed that this is only one technique followed by the FPS dealers in diverting grains to the open market. The other techniques followed by them comprise informal arrangements and underweighment with the BPL cardholders, which have been illustrated later.

- **More Leakages at FPS Level**– Knowledgeable people and discussion with families disclosed that underweighment is widespread at FPS. It was also observed that numerous poor household, especially the daily labourers, do not collect their whole quota of ration as their wages are paid in kind in specific seasons and also because of seasonal relocation to work places. Here, the beneficiaries of both low off-take by some BPL cardholders and underweighment of food grains (at the ultimate distribution points to consumers) are the FPS dealers. However, in the occurrence of the first kind of seepage, a portion of the profit is, on many occasions, transferred on to the BPL cardholders. It is hard to evaluate the share of leakage obtained by these methods. Nevertheless, whatever

is the volume, the FPS dealers tend to be the main beneficiaries of such leakages. The several kinds of leakages occurring at the FPS level indicate about their viability. However, we have not been able to obtain an assessment of such leakages by means of these modes though the fact that these leakages exist through FPSs has been extensively acknowledged (Ministry of Civil Supplies, 2004). Therefore, the assessment of leakages obtained in the analysis at FPS level and that of the entire seepage are miscalculations of their real nature.

• **Leakage through Ghost BPL Cards**– In most of the states taken for study, as already mentioned, the actuality of “ghost ration cards” is widespread. Two types of ghost cards have been mentioned here, such as excess ration cards over the number of households (DE) and the BPL cards which are not with their owners (SE). We have referred to these two types of errors as “Double Counting Error (DE)” and “Shadow Ownership Error (SE)”. Any or all of the agencies/ persons concerned in the supply chain are the beneficiaries of this leakage, such as the FCI, officials of the Civil Supplies Department, the FPS outlets, and the wholesale dealers.

6.8. Socio Economic conditions of the sample villages

Table 6.1. Belagam village population particulars

Village name	Gram Panchayat	Male	Female	Total
Belagam	Belagam	914	1036	1950
Rapakaputtuga	Belagam	323	364	687
Savasanaputtuga	Belagam	104	94	198
Golla Belagam	Belagam	201	233	434
Basavakotturu	Belagam	334	326	660
	Total	1876	2053	3929

Source: Field Work

Table 6.2. List of Households in Belagamu sample village

Si.No	Name of village or Hamlet	Category	No.of HH
1	Belagamu	OC	46
		BC	390
		SC	9
		ST	4
2	Rapakaputtuga	OC	1
		BC	174
		SC	0
		ST	0
3	Savasanaputtuga	OC	0
		BC	42
		SC	0
		ST	0
4	GollaBelagamu	OC	0
		BC	136
		SC	0
		ST	0
5	Basavakotturu	OC	1
		BC	169
		SC	0
		ST	0
		Total	972

Source: Field Work

The 6.2 table shows that household particulars in Belagamu village. There are four categories, SC, ST, OBC, and OC. Here obc category household population higher than the other categories.

Table 6.3 Chunchupally village population

Village Name	Gram Panchayat	Male	Female	Total
Chunchupally village	Chunchupally	504	502	1006
Chunchupally Tanda	Chunchupally	490	480	970
Chunchupally -2	Chunchupally	538	530	1068
Chunchupally (Ambedker colony)	Chunchupally	391	399	790
	Total	1923	1911	3834

Source: Field Work

Table 6.4.Household particulars in Chunchupally sample village

SI. NO	Name of village or hamlet	Category	No.of HH
1	Chunchupally village	OC	34
		BC	155
		SC	47
		ST	59
		Minority	8
2	Chunchupally Tanda	OC	0
		BC	0
		SC	0
		ST	250
		Minority	0
3	Chunchupally -2	OC	3
		BC	10
		SC	0
		ST	251
		Minority	0
4	Chunchupally (Ambedker colony)	OC	11
		BC	62
		SC	6
		ST	96
		Minority	0
		Total	992

Source: Field Work

The 6.4 table shows that household particulars in Chunchupally village. There are four categories, SC, ST, OBC, and OC. Here ST category household population higher than the other categories in the Chunchupally village.

6.8.1. Education

Table 6.5. Village wise Education Particulars

Village wise Education Particulars							
			EDUCATION				Total
			ILLETERATE	PRIMARY	HIGH SCHOOL	HIGHER EDUCATION	
VILLAGE	BELAGAMU	Count	92	31	20	7	150
		% of Total	30.7%	10.3%	6.7%	2.3%	50.0%
	CHUNCHUPALLY	Count	117	25	4	4	150
		% of Total	39.0%	8.3%	1.3%	1.3%	50.0%
Total		Count	209	56	24	11	300
		% of Total	69.7%	18.7%	8.0%	3.7%	100.0%

Source: Field Work

The table 6.5 showed the educational levels of the respondents in the selected villages. For about 70% (Belagamu 30.7% &Chunchupally 39%) respondents have never gone to school, and 18.7% have (Belagamu 10.3% &Chunchupally 8.3%) completed primary schooling and 8% (Belagamu 6.7% &Chunchupally 1.3%) finished higher school education. Very less percentage (3.7) of the respondents have the graduation and post-graduation degrees in the selected villages.

6.8.2. Occupation

Table 6.6. Village wise Education Particulars

Village wise Occupation particulars								
			OCCUPATION					Total
			Agriculture	Business	Employes	AgriLabt tourer	Others	
Village	BELAGAM	Count	2	3	2	106	37	150
		% of Total	.7%	1.0%	.7%	35.3%	12.3%	50.0 %
	CHUNCHUPALLY	Count	3	2	0	124	21	150
		% of Total	1.0%	.7%	0.0%	41.3%	7.0%	50.0 %
Total		Count	5	5	2	230	58	300
		% of Total	1.7%	1.7%	.7%	76.7%	19.3%	100.0 %

Source: Field Work

The table 6.6 displays the *occupation* of the respondents in the selected villages for the study. For about 76.7% (Belagamu 35.3% &Chunchupally 41.3%) respondents are working as agricultural wage labors, and 19.3% (Belagamu 12.3% &Chunchupally 7%) are engaged different works like caste professions, construction workers, carpentry, etc. About 7% are working in private sector and 1.7% of the respondents are involved in farming and business. The most of the respondents in the study are agricultural labourers.

6.8.3. Religion

Table 6.7 Village wise Religion Particulars

Village wise Religion particulars						
			RELIGION			Total
			HINDU	MUSILIM	CHRISTIAN	
VILLAGE	BELAGAMU	Count	150	0	0	150
		% of Total	50.0%	0.0%	0.0%	50.0%
	CHUNCHUPALLY	Count	145	4	1	150
		% of Total	48.3%	1.3%	.3%	50.0%
Total		Count	295	4	1	300
		% of Total	98.3%	1.3%	.3%	100.0%

Source: Field Work

The table6.7 exhibited the religious belief of the respondents in the chosen villages. 98.3% (Belagamu 50% &Chunchupally 48.3%) of the respondents are Hindus, 1.3 % are Muslims and 0.3% are in Christianity.

6.8.4. Category

Table 6.8 Village wise category wise Particulars

VILLAGE			Village wise Category					Total
			SC	ST	OBC	OC	OTHERS	
	BELAGAMU	Count	9	4	122	15	0	150
		% of Total	3.0%	1.3%	40.7%	5.0%	0.0%	50.0%
	CHUNCHUPALLY	Count	22	80	37	9	2	150
		% of Total	7.3%	26.7%	12.3%	3.0%	.7%	50.0%
Total		Count	31	84	159	24	2	300
		% of Total	10.3%	28.0%	53.0%	8.0%	.7%	100.0%

Source: Field Work

The table 6.8 reveals the *category* of the respondents in the selected villages for the study. For about 53% (Belagamu 40.7% &Chunchupally 12.3%) of the respondents are belongs Other Backward Community (OBC), 28 % (Belagamu 1.3% &Chunchupally26.7%) are belongs to Scheduled Tribe (ST), 10.3% are (Belagamu 3%

&Chunchupally 7.3%) are from Scheduled Caste, 8% (Belagamu 5% &Chunchupally 3%) are belongs to Forward Community (OC) and 0.7% are from others Christian and Muslim minorities.

6.8.5. Type of House

Table 6.9 Village wise Type of house							
			Type of Dwelling				Total
			KACHHHA	SEMI PUCCA	PUKKA	OHTERS	
VILLAGE	BELAGAMU	Count	127	19	1	2	149
		% of Total	42.5%	6.4%	.3%	.7%	49.8%
	CHUNCHUPALLY	Count	128	19	0	3	150
		% of Total	42.8%	6.4%	0.0%	1.0%	50.2%
Total		Count	255	38	1	5	299
		% of Total	85.3%	12.7%	.3%	1.7%	100.0%

Source: Field Work

The table 6.9 reveals the *type* of households the respondents in the selected villages for the study. In Belagam village 42.5 percent lived in Kachha, 6.4 percent households are lived in Semi pucca and only 3 percent households are lived in pucca houses. In Chunchupally village 42.8 percent lived in Kachha and rest of the households are lived in semi pucca and pucca house.

6.8.6. Income

Table 6.10 Village wise Type of house

VILLAGE			HH Ttotal Income		Total
			Below 60.000	Above 60,000	
	BELAGAMU	Count	146	4	150
		% of Total	48.7%	1.3%	50.0%
	CHUNCHUPALLY	Count	118	32	150
		% of Total	39.33%	10.6%	50.0%
Total		Count	264	36	300
		% of Total	88.0%	12%	100.0%

Source: Field Work

The table 6.10 reveals the households income of the respondents in the selected villages for the study. In Belagam village 48.7 percent households are have below 60,000 income and only 1.3 percent households are lived in above 60,000 income group. In Chunchupally village there are 39.33 percent households are below 60,000 income group and 10.66 percent households are having above 60,000 income group. Here Chunchupally village households are having more income when compared to Belagam village.

6.8.7. Households facilities

Table 6.11 Village wise Electricity					
			ELECTRICITY		Total
			YES	NO	
VILLAGE	BELAGAMU	Count	145	5	150
		% of Total	48.3%	1.7%	50.0%
	CHUNCHUPALLY	Count	150	0	150
		% of Total	50.0%	0.0%	50.0%
Total		Count	295	5	300
		% of Total	98.3%	1.7%	100.0%

Source: Field Work

Table 6.12 Village wise FAN					
			FAN		Total
			YES	NO	
VILLAGE	BELAGAMU	Count	126	24	150
		% of Total	42.0%	8.0%	50.0%
	CHUNCHUPALLY	Count	146	4	150
		% of Total	48.7%	1.3%	50.0%
Total		Count	272	28	300
		% of Total	90.7%	9.3%	100.0%

Source: Field Work

Table 6.13 Village wise Television

					Total
			YES	NO	
VILLAGE	BELAGAMU	Count	100	50	150
		% of Total	33.3%	16.6%	50.0%
	CHUNCHUPALLY	Count	137	13	150
		% of Total	45.7%	4.3%	50.0%
Total		Count	238	62	300
		% of Total	79.3%	20.7%	100.0%

*Source: Field Work***Table 6.14** Village wise Motor cycle

Village			YES	NO	
	BELAGAMU	Count	1	149	150
		% of Total	.3%	49.7%	50.0%
	CHUNCHUPALLY	Count	3	147	150
		% of Total	1.0%	49.0%	50.0%
Total		Count	4	296	300
		% of Total	1.3%	98.7%	100.0%

*Source: Field Work***Table 6.15** Village wise Mobile Phone

Table 6.15 Village wise Mobile Phone					
VILLAGE			mobile phone		Total
			YES	NO	
	BELAGAMU	Count	133	17	150
		% of Total	44.3%	5.7%	50.0%
	CHUNCHUPALLY	Count	144	6	150
		% of Total	48.0%	2.0%	50.0%
Total		Count	277	23	300
		% of Total	92.3%	7.7%	100.0%

*Source: Field Work***Table 6.16** Village wise Bath room

Table 6.16 Village wise Bath room					
VILLAGE			bath room		Total
			YES	NO	
	BELAGAMU	Count	8	142	150
		% of Total	2.6%	47.3%	50.0%
	CHUNCHUPALLY	Count	73	77	150
		% of Total	24.3%	25.7%	50.0%
	Total	Count	81	219	300
		% of Total	27%	73.0%	100.0%

Source: Field Work

Table 6.17 Village wise Piped Water					
			piped water		Total
			Yes	NO	
VILLAGE	BELAGAMU	Count	1	149	150
		% of Total	.3%	49.7%	50.0%
	CHUNCHUPALLY	Count	0	150	150
		% of Total	0.0%	50.0%	50.0%
Total		Count	1	299	300
		% of Total	.3%	99.7%	100.0%

Source: Field Work

The table 6.11 to 6.17 revealed household facilities, that is electricity, fan, television, motor cycle, mobile phone, bath room and piped water. Here Chunchupally village households are having all facilities when compared to the Belagam village. These indicators are clearly showed that Chunchupally village very forward village compared to the Belagam village.

6.9. Ration cards

Table 6.18. Do you have ration card				
VILLAGE		Do you have ration card		Total
		YES	NO	
	BELAGAMU	113	37	150
		37.66%	12.33%	50.0%
	CHUNCHUPALLY	141	9	150
		47%	3%	50.0%
Total		254	46	300
		84.66%	15.33%	100.0%

Source: Field Work

The table 6.18 described that the ration card particulars in Belagam and Chunchupally village. In Belagam village 113 households are have ration cards and rest of the households that is 37 households are don't have ration cards. In Chunchupally village there are nearly 141 households are having ration cards only 9 households are don't have ration cards. It is clearly shown in Belagam village households are excluded from the PDS.

6.10. Exclusion Errors

Table 6.19. Errors in Belagam village

Category	No.of BPL cards	Exclusion errors	Inclusion Errors	Grand Total
SC	8 (2.66%)	4(1.33%)	0	
ST	4(1.33%)	0	0	
OBC	88 (29.33%)	29 (9.66%)	3	
OC	13(4.33%)	4(1.3%)	4	
TOTAL	113 (37.66%)	37 (12.33%)		150

Source: Field Work

The table 6.19 explained the Exclusion errors in Belagam village in Kaviti Mandal, Srikakulam district. Here exclusion errors in SC category are 1.33 percent, OBC category 9.66 percent and OC category only 1.3 percent. In this village exclusion error is more than Chunchupally village. In this village only 7 households are include to PDS.

The study found most of the eligible households did not get the ration cards in Belagam village of Srikakulam District and the exclusion errors found less in Chunchupally village in Khammam district. The major *exclusion errors* are as follows; a) several households migrated temporarily for livelihood of the family which excluded them to avail ration cards; b) the excluded households don't know the procedure to obtain the ration cards and few were not aware of the issuing the ration cards as the distributors (issuing authorities) failed to reach the households about it; c) the newly married households could not get the ration cards as their names are included in their parents cards; and also the children who didn't have Aadhaar card are excluded since the Aadhaar Card linked with the ration cards. Whereas, the study found that the more number of households belonged to the Scheduled Caste (SC) and Other Backward Castes (OBC) are excluded from getting the

benefits of the Public Distribution System in the Belagam Village and it was less in the other village.

6.11. Inclusion Errors

Table 6.20. Errors in Chunchupally village

Category	No.of BPL cards	Exclusion errors	Inclusion Errors	Grand Total
SC	9(3%)	4	0	
ST	105(35%)	0	7 (2.33%)	
OBC	20 (6.66%)	1	0	
OC	7 (2.33%)	1	2 (0.66%)	
TOTAL	141 (47%)		9 (3%)	150

Source: Field Work

The table 6.120 explained the Inclusion errors in Chunchupally village in Kothagudem Mandal, Khammam district. Here inclusion errors are exclusion errors in ST category are 2.33 percent, OC category 0.66 percent and total 3 percent of the households are wrongly included into the Public Distribution system. In this village there are 6 households are excluded from the PDS.

The households which *are not eligible to avail the White* ration-card, still they could enjoy the benefits of the white ration-cards. Based on the criteria Seven Point formula of the Government of Andhra Pradesh, in actual sense they are excluded to hold the white ration-card, but, in reality these households could managed to get the white ration card through several of *means*. This scenario was very much visible in both the selected villages for the study, but it was found more in the Chunchupally village in Khammam District. In this regard, the more number of the household's belonged to forward communities (OC) and Scheduled Tribes (ST) are included in PDS though they did not

come under the *Seven Pint scale* formulated by the state government. Reason for inclusion errors as follows,

- Strong political and economic support to these households
- Lack of strict regulatory framework such as week verification process while issuing the ration cards
- Absence of the proper income measurement tools to identify the income levels of the households

6.12. Conclusion

The study found most of the eligible households did not get the ration cards in Belagam village of Srikakulam District and the exclusion errors found less in Chunchupally village in Khammam district. The major *exclusion errors* are as follows; a) several households migrated temporarily for livelihood of the family which excluded them to avail ration cards; b) the excluded households don't know the procedure to obtain the ration cards and few were not aware of the issuing the ration cards as the distributors (issuing authorities) failed to reach the households about it; c) the newly married households could not get the ration cards as their names are included in their parents cards; and also the children who didn't have Aadhaar card are excluded since the Aadhaar Card linked with the ration cards. Whereas, the study found that the more number of households belonged to the Scheduled Caste (SC) and Other Backward Castes (OBC) are excluded from getting the benefits of the Public Distribution System in the Belagam Village and it was less in the other village.

The households which *are not eligible to avail the White* ration-card, still they could enjoy the benefits of the white ration-cards. Based on the criteria Seven Point formula of the Government of Andhra Pradesh, in actual sense they are excluded to hold the white ration-card, but, in reality these households could managed to get the white ration card through several of *means*. This scenario was very much visible in both the selected villages for the study, but it was found more in the Chunchupally village in Khammam District. In this regard, the more number of the household's belonged to forward communities (OC) and Scheduled Tribes (ST) are included in PDS though they did not come under the *Seven Pint scale* formulated by the state government.

In case of excluded households from PDS are spending more income on purchasing the day to day needs in open-market with high price to meet the needs of family. In fact, in such cases the *income gain remain very less* as they are spending more of their earnings on the food grains. Thus, this scenario made the poor households pushed into poverty and malnutrition. But, in case of included (ineligible to avail the white ration-card) households are able to gain more income as they are spending less on food grains from open-market. This caused the rich to become rich. Thus, the inclusion & exclusion errors play a vital role to enhance the gap between the rich and poor. So finally exclusion errors are negatively impact on their household food security

Chapter VII

Summary and Conclusion

The present study is divided into seven chapters including Introduction and conclusion. It attempted to examine the “*Public Distribution System and Its Impact on Food Security: A Case Study of Khammam and Srikakulam Districts of Andhra Pradesh (United)*”. In *Chapter one* made an attempt to discuss the Public Distribution System briefly and the practice of PDS in India besides explaining the concept of food security with definitions. It also drew the *objectives* of the study by looking into the issues of implementing the Public Distribution System in India. Several errors occurred in the implementation of PDS these were brought-out through the study and analyzed how these impacted on the household level food security through a method in the selected villages. For the study, the researcher has selected the *Two Villages* in the two districts of Andhra Pradesh (United) by using the *purposeful sampling method*. One Village name Chunchupally (Kothagudem Mandal) in Khammam District where the percentage of the *poorest of the poor households are high*. The Second village is Belagam (Kaviti Mandal) in Srikakulam District where the *poorest of the poor households are very low*. The *planned and actual sample* of the study was *300 households, and 150 households* were taken in each village in the selected area. The researcher used a tool of *structured questionnaire* and used SPSS for the tabulation. The objectives of the study mainly covered the trends and changes occurred in PDS since it introduced in India and also reviewed the role of PDS in the state of Andhra Pradesh (United) in the view of policy. Also, the study examined the performance and implementation of PDS by selecting two villages to find-out targeting errors and its implications on household food security.

Chapter two reviewed the relevant literature available in the study area such as books, articles published in the several national and international journals, magazines, reports and documents published by the Central and several State Governments, etc. *Chapter three* discussed the PDS and how its nature has been changing in the context of development process from 1939 to till 2015. It described the nature, scope, features and structure of the Public Distribution System in India. And, also assessed three decades of the production, procurement and distribution of the food grains in 16 major states in the country where it mainly focused on the *rice and wheat*.

Chapter four discussed the scenario of PDS in Andhra Pradesh (United) in detailed. It explained how ration cards distributed among households, types of ration cards and fair price shops, etc. Also, explained the trends occurred in the last three decades in the production, procurement and distribution of *rice* in this particular state. *Chapter five* deals with the profile of the districts, mandals and villages selected for the study. Also, discussed the distribution of ration cards and functioning of the PDS in the selected villages for this study.

Chapter Six deals with the field data collected from the households in the selected villages for the study. It drew a special attention on the analysis of the “*targeting errors*” in PDS and also how it impacted on the household food security. It also keenly focused on explaining the “Inclusion errors” and “Exclusion errors” in distribution of ration cards along with the how the needy households are excluding from benefiting the PDS in the above mentioned villages. And, the *last Chapter* summarized the study.

Concluding a Doctoral thesis is a challenging task to any researcher. It is very hard and complicated to combine all the aspects to draw conclusions. It has to reflect numerous dimensions of the study i.e., objectives, significance, summing up of views of the scholars from across the world, methodological issues, theoretical inputs, balance presentations, e-errors, references, literature, collecting data, tools utilization for churning the collected data, critical analysis, observations, and findings, and the variations from the above should be drawn in the conclusion. However, the researcher tried to conclude from the mentioned elements. It is a challenging and thought-provoking assignment to the researcher to conclude the present study on the diverse villages, and households. The present study “*Public Distribution System and Its Impact on Food Security: A Case Study of Khammam and Srikakulam Districts of Andhra Pradesh (United)*” attempted to know the targeting errors of Public Distribution System and its impact on the food security of the needy, poor, deprived and marginalized sections of the society. What as follows is an attempt at a brief summary of the work on several aspects culled from the study.

7.1. Exclusion Errors

The study found most of the eligible households did not get the ration cards in Belagam village of Srikakulam District and the exclusion errors found less in Chunchupally village in Khammam district. The major *exclusion errors* are as follows; a) several households migrated temporarily for livelihood of the family which excluded them to avail ration cards; b) the excluded households don't know the procedure to obtain the ration cards and few were not aware of the issuing the ration cards as the distributors (issuing authorities) failed to reach the households about it; c) the newly married households could not get the ration cards as their names are included in their parents cards; and also the children who

didn't have Aadhaar card are excluded since the Aadhaar Card linked with the ration cards. Whereas, the study found that the more number of households belonged to the Scheduled Caste (SC) and Other Backward Castes (OBC) are excluded from getting the benefits of the Public Distribution System in the Belagam Village and it was less in the other village.

7.2. Inclusion Errors

The households which *are not eligible to avail the White* ration-card, still they could enjoy the benefits of the white ration-cards. Based on the criteria Seven Point formula of the Government of Andhra Pradesh, in actual sense they are excluded to hold the white ration-card, but, in reality these households could managed to get the white ration card through several of *means*. This scenario was very much visible in both the selected villages for the study, but it was found more in the Chunchupally village in Khammam District. In this regard, the more number of the household's belonged to forward communities (OC) and Scheduled Tribes (ST) are included in PDS though they did not come under the *Seven Pint scale* formulated by the state government. Reason for inclusion errors as follows,

- Strong political and economic support to these households
- Lack of strict regulatory framework such as week verification process while issuing the ration cards
- Absence of the proper income measurement tools to identify the income levels of the households

7.3. Income Gain

In case of excluded households from PDS are spending more income on purchasing the day to day needs in open-market with high price to meet the needs of family. In fact, in such cases the *income gain remain very less* as they are spending more of their earnings on the food grains. Thus, this scenario made the poor households pushed into poverty and malnutrition. But, in case of included (ineligible to avail the white ration-card) households are able to gain more income as they are spending less on food grains from open-market. This caused the rich to become rich. Thus, the inclusion & exclusion errors play a vital role to enhance the gap between the rich and poor.

7.4. Welfare Schemes

The inclusion errors are seen more in the state of Andhra Pradesh since the government subsidized the welfare schemes to the white ration card holders. The schemes like Arogyasri (health insurance), fee reimbursement, distribution of land, small scale farmers, loan waiving and loan granting to the farmers with lowest interest rate, etc. Therefore, ineligible households are getting the white ration cards by using their political and economic background to enjoy these benefits which are supposed to be enjoyed by the poor and needy people.

7.5. Growth of White Ration Cards

The number of white ration cards has increased drastically. Several initiatives like rice for Rs. 2/- per Kg and subsidized welfare schemes to the white ration card holders caused for this radical change. In 1983-84, there were 96.47 lakh white cards holders, by

following it there were 106.46 lakhs in 1992-93, 138.46 lakhs in 2003-04 and 215.5 lakhs in 2013-14. It can be observed that the increased number of white ration cards hugely during 2003-04 to 2013-14. This was triggered for the more inclusion errors in the Public Distribution System due to lack of strong regulatory framework.

7.6. Leakages

The study found several leakages while supplying the food-grains to the card holders in the selected field villages, such as...

- Leakages at Stock Point Level (FCI Gowdown) – Fair Price Shop Dealers are getting the less quantity food grain bags from the FCI Stock Point.
- Leakages from FPS – due to the less supplied food grains, the FPS dealers are distributing the less quantity of the food grains to the card holders. Thus, the beneficiary is not getting what they are supposed to get in respect to the quantity of the food-grains.

7.7. Distance

Respondents of the households in the selected villages opined that the FP Shops are located far from their households. In the selected villages, five or more hamlets are covered under one FP shop which is far from the other hamlets. The hamlets are not connected to the main road; therefore, there is no proper road facility. The card-holders have to walk nearly 3 to 4 km. to get their ration and also there is no adequate transport facility. For the aged, differently-abled people, single women, etc. are facing serious problem to get their ration from the FP shop.

7.8. Issues Related to Dealers

The dealers of the FP Shops said that they are not getting the fair commission for their work. This lead to several manipulations while delivering services to the households and lacking the transparency and accountability in supply of ration commodities.

7.9. Technical Issues

According the household respondents there are several Technical issues like spelling mistakes in the ration cards, not having Aadhaar Cards, miss-matching the names, age and the address of the householders, etc. are curbing the beneficiaries to avail the ration commodities from FP Shops. Thus, the needy and poor are excluding from getting the benefits of the PDS.

7.10. Policy Recommendations

Based on the above drawbacks and the findings, the researcher would like to recommend few suggestions to improve the policy related to Public Distribution System to deliver the fair and transparent services to the needy, poor, marginalized people. They are...

- Introduction of Universal Distribution System may reduce the targeting errors in PDS
- Linking of Aadhaar to ration card, the government of Andhra Pradesh succeeded in reducing the bogus (fake) cards, but this could not curb the hiding the personnel assets of the household which has caused for the inclusive errors. If the government focused on including the personnel assets, it can reduce the malpractices while issuing the ration cards

- Also recommended not to link the subsidy schemes to the ration card, and then the actual and needy will get the benefits from the PDS
- It is recommended to organize awareness programmes in the villages to relieve from availing the white ration card once the beneficiary crossed the 7 point scale framed by the government
- It is suggested to provide adequate income generate sources to the FP Shop dealers through increasing the ration commodities or by introducing monthly salary. Therefore, the FP Shop Dealers may provide transparent services to the public

Despite all these drawbacks, the performance of the Public Distribution system in the state of Andhra Pradesh is well and satisfied. The ration commodities and services providing by the PDS is reaching the needy. In one way, it succeeded to provide food security to the *poorest of the poor* in the state. As above mentioned, there are several gaps and errors in the implementation such as inclusion & exclusion errors, income gain, distance of the FP Shops, lack of strong regulatory framework, leakages in the quantity of the food grains, etc. contributed to weaken the public distribution system in the state. To deliver the good governance, transparent and accountable services to ration card holders and the needy, it needs a strong and effective policy to overcome all the problems and also reform the present policy to deliver the services which could reach the actual needy people.

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Appendix: I

Table: 1 Production of rice in Andhra Pradesh in 1985-86 to 2015-16

Years	Andhra Pradesh
1985-86	7614
1986-87	6591
1987-88	7069
1988-89	10621
1989-90	9959
1990-91	9654
1991-92	9249
1992-93	8792
1993-94	9562
1994-95	9277
1995-96	9014
1996-97	10686
1997-98	8510
1998-99	11878
1999-00	10638
2000-01	12458
2001-02	11390
2002-03	7327
2003-04	8953
2004-05	9601
2005-06	11704
2006-07	11872
2007-08	13324
2008-09	14241
2009-10	10538
2010-11	14417
2011-12	12894
2012-13	11509
2013-14	12724
2014-15	11673
2015-16	10536

Computed from Agriculture statistics at a glance, various issues

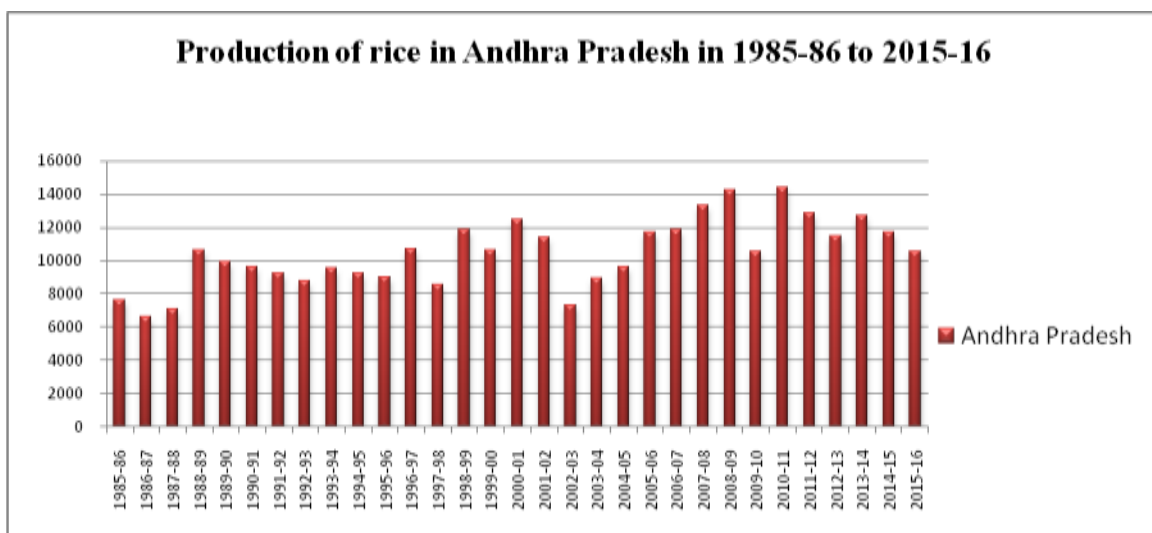


Table. 2 Procurement of Rice in Andhra Pradesh from 1985-86 to 2010-11

Years	Andhra Pradesh
1985-86	1574
1986-87	1471
1987-88	1522
1988-89	1483
1989-90	2490
1990-91	3335
1991-92	2262
1992-93	3296
1993-94	3987
1994-95	4023
1995-96	3682
1996-97	4525
1997-98	3855
1998-99	5119
1999-00	5498
2000-01	7174
2001-02	6426
2002-03	2623
2003-04	4237
2004-05	3906
2005-06	4971
2006-07	5327
2007-08	7597
2008-09	9058
2009-10	7555
2010-11	4889

Computed from Agriculture statistics at a glance, various issues

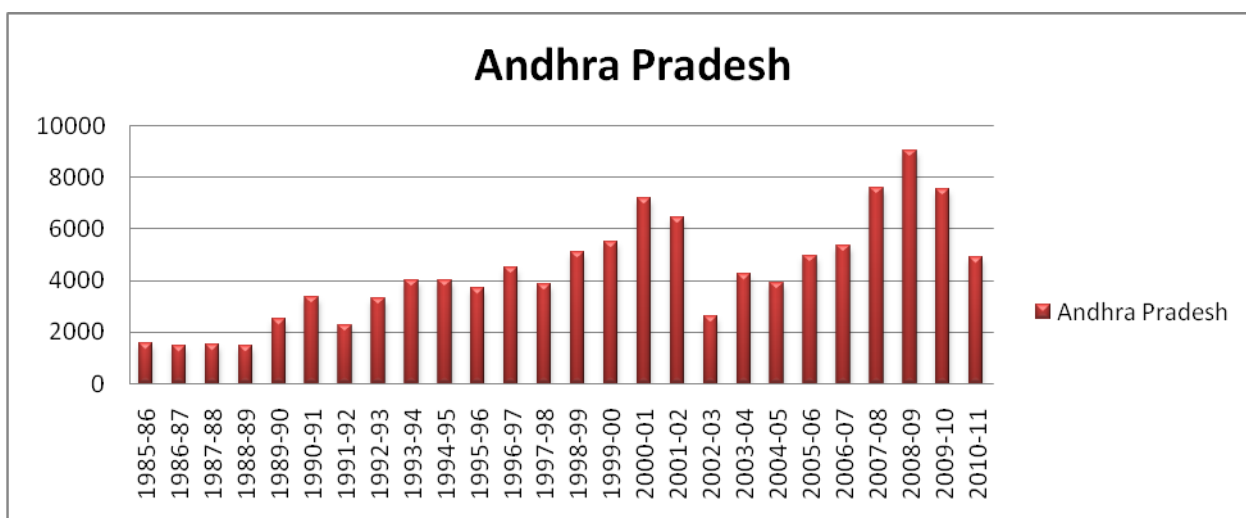


Table. 3 District wise poorest of the poor (pop) of SC/STHouseholds (UNITED ANDHRA PRADESH)

Districts	POP Data of SC/ST Total Households
Anantapur	143918
Chittoor	185314
East godavari	251289
Guntur	232255
Kadapa	94359
Krishna	196099
Kurnool	138193
Nellore	194721
Prakasham	168192
Srikakulam	86776
Vishakapatnam	187133
Vizianagaram	97425
West godavari	204968
Adilabab	192685
Karimnagar	177180
Khammam	269093
Mahabubnagar	196942
Medak	127726
Nalgonda	218066
Nijamabad	115743
Rangareddy	104693
Warangal	225213

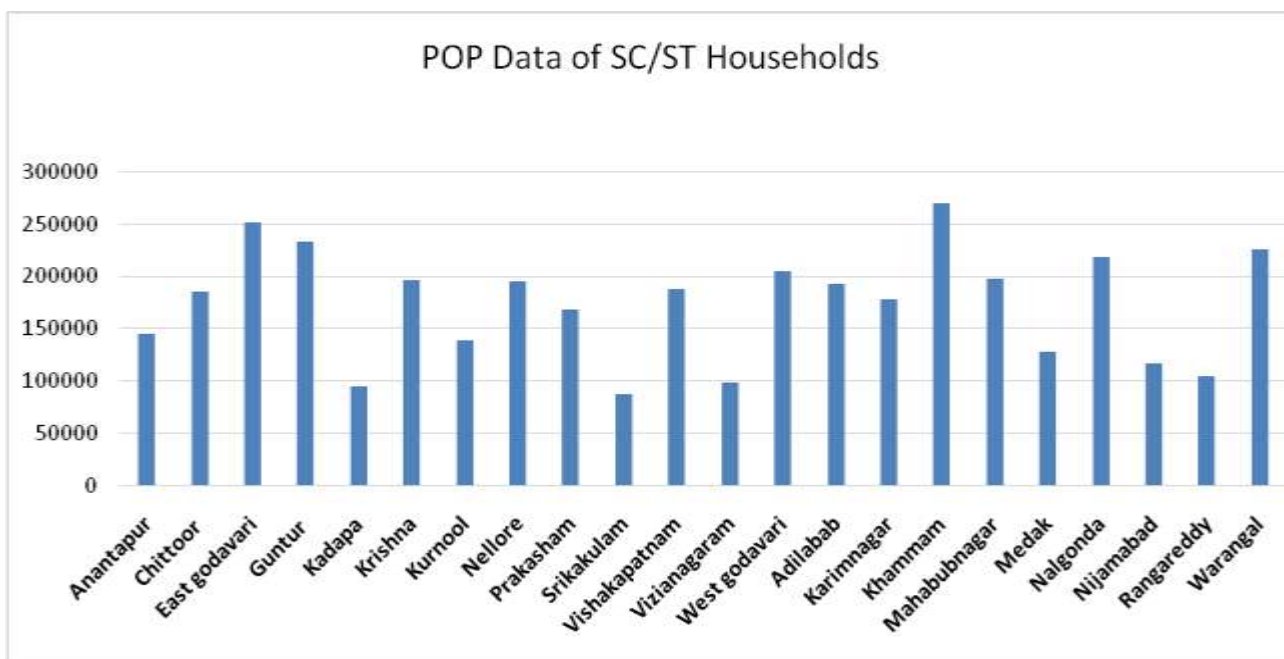
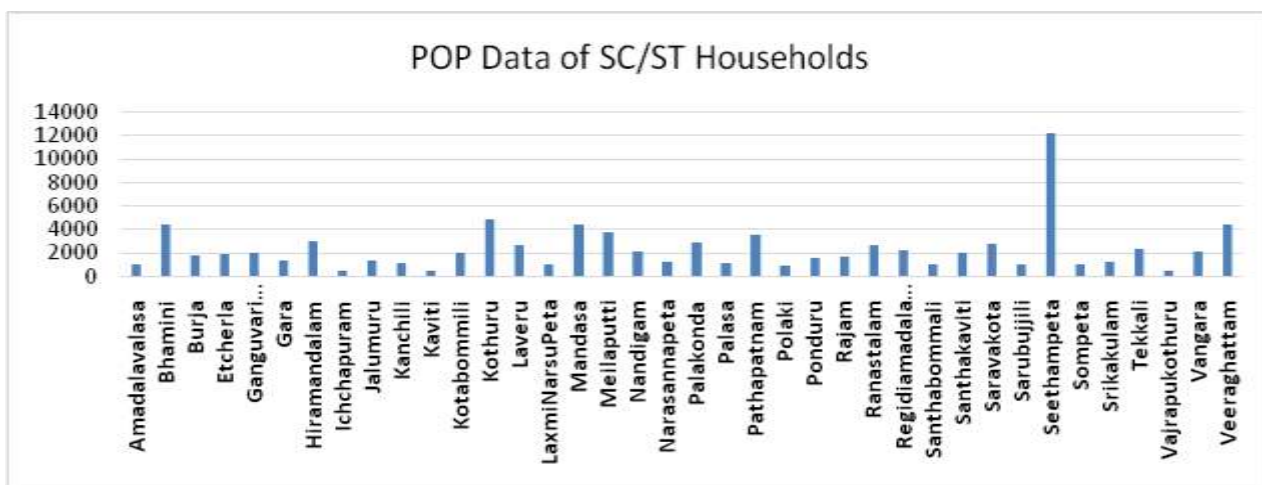


Table. 4 SRIKAKULAM(Lowest level of SC/ST households)

Mandal Name	SC HH	ST HH	POP Data of SC/ST Total Households
Amadalavalasa	988	29	1017
Bhamini	2606	1743	4349
Burja	1432	307	1739
Etcherla	1848	60	1908
GanguvariSingadam	1831	89	1920
Gara	1229	59	1288
Hiramandalam	1688	1249	2937
Ichchapuram	389	41	430
Jalumuru	1205	134	1339
Kanchili	697	403	1100
Kaviti	353	67	420
Kotabommili	1691	259	1950
Kothuru	2646	2122	4768
Laveru	2482	181	2663
LaxmiNarsuPeta	762	268	1030
Mandasa	1680	2735	4415
Meilaputti	867	2905	3772
Nandigam	1490	579	2069
Narasannapeta	1179	53	1232
Palakonda	2138	660	2798

Palasa	556	503	1059
Pathapatnam	1600	1930	3530
Polaki	781	76	857
Ponduru	1433	96	1529
Rajam	1482	113	1595
Ranastalam	2596	25	2621
Regidiamadalavalasa	2023	136	2159
Santhabommali	1003	5	1008
Santhakaviti	1949	47	1996
Saravakota	1393	1356	2749
Sarubujili	896	63	959
Seethampeta	402	11750	12152
Sompeta	814	170	984
Srikakulam	1130	36	1166
Tekkali	1744	568	2312
Vajrapukothuru	382	53	435
Vangara	1786	323	2109
Veeraghattam	3325	1087	4412

Srikakulam



SRIKAKULAM DISTRICT

Table. 5 KAVITI MANDAL

Panchayat Name	SC HH	ST HH	POP TOTOAL HOUSEHOLDS SC/ST
Balliputtuga	0	6	6
Bejjiputtuga	14	0	14
Belagam	0	5	5
Bhyripuram	10	0	10
Borivanka	24	1	25
D.g.puttuga	63	0	63
Gorrelapadu	23	0	23
Jagathi	35	0	35
Karapadu	33	0	33
Kaviti	23	20	43
Kojjiria	29	3	32
Kusumpuram	0	7	7
Manikyapuram	0	8	8
Nelavanka	53	0	53
Rajapuram	24	11	35
Silagam	22	0	22
Varakha	0	6	6

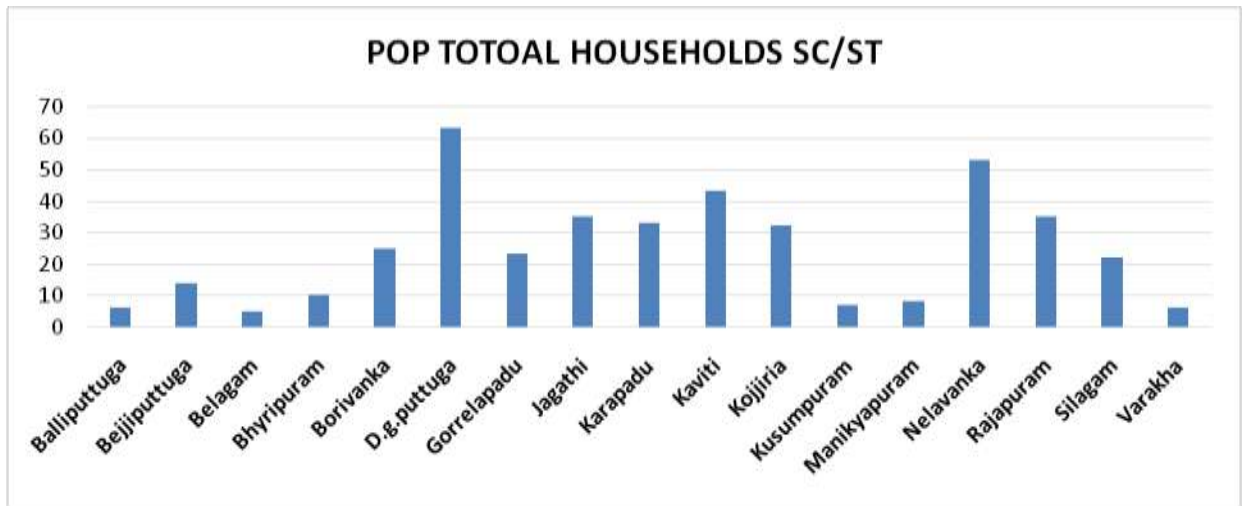


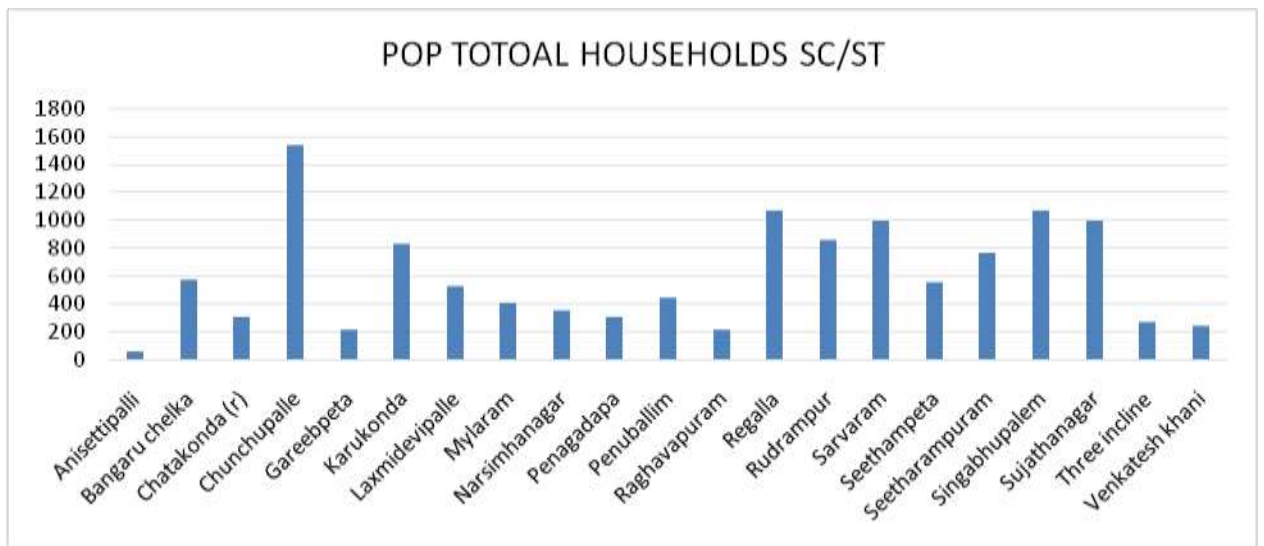
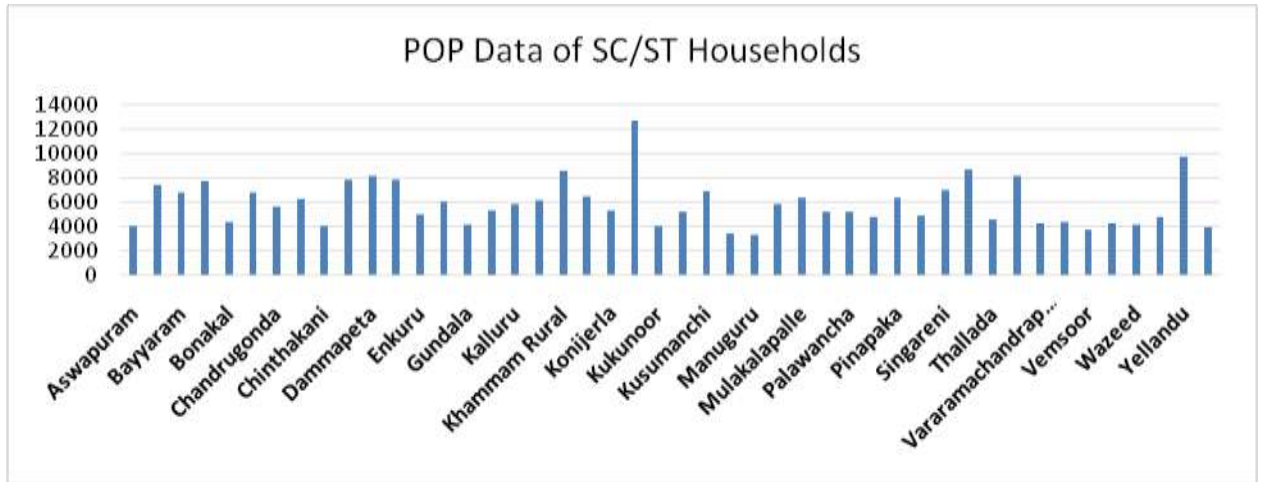
Table. 6 KHAMMAM

Mandal Name	SC HH	ST HH	POP Data of SC/ST Households
Aswapuram	1206	2768	3974
Aswaraopeta	1580	5808	7388
Bayyaram	1013	5707	6720
Bhadrachalam	3282	4359	7641
Bonakal	3829	495	4324
Burgampadu	3586	3190	6776
Chandrugonda	1658	3899	5557
Cherla	1327	4893	6220
Chinthakani	3729	306	4035
Chintur	324	7419	7743
Dammapeta	1699	6436	8135
Dummugudem	1107	6670	7777
Enkuru	1298	3641	4939
Garla	1147	4832	5979
Gundala	381	3713	4094
Julurpad	942	4337	5279
Kalluru	4244	1496	5740
Kamepalle	1331	4753	6084
Khammam Rural	5788	2770	8558
Khammam Urban	1561	4843	6404
Konijerla	3072	2188	5260
Kothagudem	4067	8573	12640
Kukunoor	1759	2232	3991
Kunavaram	866	4341	5207
Kusumanchi	3000	3817	6817
Madhira	3041	293	3334
Manuguru	1327	1977	3304
Mudigonda	5334	447	5781
Mulakalapalle	790	5521	6311
Nelakondapalle	3492	1636	5128
Palawancha	1179	3984	5163
Penuballi	2771	1935	4706
Pinapaka	1709	4610	6319
Sathupalle	2730	2092	4822
Singareni	953	5973	6926
Tekulapalle	589	8095	8684
Thallada	3795	707	4502
Thirumalayapalem	4454	3695	8149
Vararamachandrapuram	181	4066	4247
Velairpad	679	3635	4314
Vemsoor	3201	446	3647
Venkatapuram	1346	2818	4164
Wazeed	927	3148	4075
Wyra	4187	506	4693
Yellandu	1650	8020	9670
Yerrupalem	3462	410	3872

TABLE. 7 Khammam

Panchayat Name	POP TOTOAL HOUSEHOLDS SC/ST	SC HH	ST HH
Anisettipalli	61	32	29
Bangaruchelka	574	99	475
Chatakonda (r)	311	242	69
Chunchupalle	1534	684	850
Gareebpeta	222	97	125
Karukonda	829	272	557
Laxmidevipalle	526	224	302
Mylaram	412	3	409
Narsimhanagar	354	111	243
Penagadapa	315	232	83
Penuballim	448	268	180
Raghavapuram	217	102	115
Regalla	1071	75	996
Rudrampur	860	727	133
Sarvaram	1000	2	998
Seethampeta	553	36	517
Seetharampuram	763	8	755
Singabhupalem	1071	192	879
Sujathanagar	996	318	678
Three incline	276	156	120
Venkateshkhani	247	187	60

KOTTAGUDEM MANDAL



Appendix: II

Household Questionnaire

Ramesh Vadlamudi
Research scholar
School of Economics
University of Hyderabad

Village_____ Gram Panchayat_____

Mandal_____ District_____

State_____ Date_____

Name of the respondent_____

SECTION: I

A. Respondent's details:

1. Age (years) []
2. Sex (1=Male,2=Female) []
3. Educational level (1=illiterate,2=primary,3=high school,4=higher education)[]
4. Marital status (1=married,2=unmarried,3=others) []
5. Occupation (1=agriculture,2=business,3=employee,4=a.labour,5=others) []
6. Religion (1=hindu,2=muslim,3=Christian,4=others) []
7. Category (1=sc,2=st,3=obc,4=oc,5=others) []

B. Household details:

1. Number of household: []

	Female	Male
Below 14 years :	[]	[]
15 – 65 years :	[]	[]
Above 65 :	[]	[]

2. Type of house hold: (1= nuclear, 2=joint, 3=others) []
3. Type of dwelling :(1=kachha,2=semi-pukka, 3=pukka, 4=others) []
4. Main occupation of the household:
(1=agriculture, 2=business, 3=employee, 4=a.labour, 5=others) []

5. House hold total annual income:

(1=below one lakh, 2=one lakh to two lakhs, 3=two lakhs above) []

6. House hold assets: (1=yes, 2=no) []

a. Agricultural land (specify acres_____) []

b. Electricity []; c. Fan []; d. Television []; e. Motor cycle []

f. Mobile phone []; g. Bath room []; h. Piped water []

SECTION:II

A. Ration card details:

1. Do you have ration card: (1=yes, 2=no) []

2. If say yes, whether they real beneficiaries

3. If say no what are the reasons.....

4. Type of ration card: (1=APL, 2=BPL, 3=AP, 4=AAY, 5=OTHERS) []

5. Since how many years you had this ration card (year of issue____) []

6. Are you have the ration card at this moment (1=yes, 2=no) []

B. PDS Utilization:

1. How frequently do you purchase the food items from the fair price shops

(1.Every month, 2.occasionally, 3. never) []

2. Which commodities do you mainly purchase from fair price shops?

(1.Rice, 2.wheat, 3.sugar, 4.kirosene 5.oil, 6.others) []

3. Why do you prefer purchasing food items from the FPS than the open market?

(1.low price, 2.high quality, 3.easy availability, 4.other reason) []

4. Whether the ration commodities are available on time at FPS? (1=yes, 2=no)[]

If no what are the reasons

a. Irregular supply from government

b. Black marketing by dealers

c. Lack of government supervision and control

d. Storage problem

e. Transport problem

7. Are you satisfied with weighing procedure in the FPS? (1=yes, 2=no) []

If no what are the reasons for dissatisfaction

a. Under weighing

- b. Not as per government specification
- c. Any other reason
8. How much commodity of rice purchased from FPS []
(1.4kgs, 2.8kgs, 3.12 kgs, 4.16kgs, 5.20 &above)
9. Is the quantity issued in the FPS under PDS sufficient for your family?
- a. Rice (1=yes, 2=no) []
- b. wheat (1=yes, 2=no) []
- c. sugar (1=yes, 2=no) []
- d. kerosene (1=yes, 2=no) []
- e. oil (1=yes, 2=no) []
- f. others (1=yes, 2=no) []
10. How much commodity (rice) utilized in a month for your family? []
(1.1-20 kgs, 2.21-30 kgs , 3.31-40 kgs 4.41 and above)
11. How much commodity (rice) purchased from open market? []
(1.1-10kgs, 2.11-20kgs, 3.21-30kgs, 4.31-40kgs)
10. How much paid for per kg of rice in open market? []
(1.20-30Rs, 2.30-40Rs, 3.40 and above)
11. How do you rate the quality of commodities supplied by FPS under PDS?
- a. Rice (1.high, 2.average, 3.low) []
- b. Wheat (1.high, 2.average, 3.low) []
- c. Sugar (1.high, 2.average, 3.low) []
- d. Oil (1.high, 2.average, 3.low) []
- e. Others (1.high, 2.average, 3.low) []
12. Are you satisfied pricing system of the FPS []
- a. (1=yes, 2=no)
- If no why _____
13. How far is the FPS from your house? (Kms) []
14. Is FPS open all the days of the month? []
(1=yes, 2=no)
- If no how many days it opens []

(1.less than one week, 2.two weeks, 3. three weeks)

15. Are you satisfied with the location of FPS []

(1=yes, 2=no)

If no why_____

16. Do you have any complaint about the functioning of FPS in your area? []

(1=yes, 2=no)

If yes which are the complaints?

- a. FPS not opened daily
- b. Inadequate and irregular supply from government itself
- c. Inconvenient working hours
- d. Heavy rush and long queues
- e. Any other(specify)_____

17. How would you describe the importance of the PDS for your family welfare?

(1. Very important, 2. Quite important, 3.not important, 4.unclear) []

C. Cash Transfers:

1. Any of your household member have a bank account []

(1=yes, 2=no)

2. If yes, where do you have an account []

(1.Nationalized bank 2.Rural bank, 3.Post office, 4.others)

3. How far is the bank or post office from your house (Kms) []

4. Are you aware of bank transactions (1=yes, 2=no) []

5. Suppose that instead of giving you food rations through the PDS every month, the government deposited some money every month in your bank account-enough to buy the same amount of food on the market – and closed the PDS outlet. How would you feel about it? Would it be better, worse or the same as getting food from the PDS outlet?

SECTION – III

1. What are your suggestions for overall functioning of PDS

2. Observations

3. Remarks

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