

NAVIGATING PROGRESS: A CRITICAL ANALYSIS OF TRANSPARENCY AND EFFICIENCY IN KERALA'S PDS

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CERTIFICATE

This is to certify that the project titled **“NAVIGATING PROGRESS: A CRITICAL ANALYSIS OF TRANSPARENCY AND EFFICIENCY IN KERALA’S PDS”** submitted in partial fulfilment of the requirement for the award of the Degree of Bachelor of arts in Economics to **St.Teresa’s College (Autonomous) (Affiliated to Mahatma Gandhi University, Kottayam)** is a bonafide of the work done by the project group under my supervision and guidance.

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DECLARATION

We here by declare that the project “**NAVIGATING PROGRESS: A CRITICAL ANALYSIS OF TRANSPARENCY AND EFFICIENCY IN KERALA’S PDS**” submitted by us for the Bachelor of Arts Degree in Economics is our original work.

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CHAPTER 1

NAVIGATING PROGRESS:A CRITICAL ANALYSIS OF TRANSPARENCY AND EFFICIENCY IN KERALA'S PDS

1.1 Introduction

The Public distribution system (PDS) is an Indian food Security System established under the Ministry of Consumer Affairs, Food, and Public Distribution in 1945 right before India's Independence in 1945, and was put into effect from 1947. As per its concept, it is entrusted with the responsibility of managing the scarcity of food by establishing a proper distribution channel of major as well as minor food grains at cheaper rates. It emerges to be one of the largest programs of the Indian Government which helps the farmers in selling their monthly or yearly production at lucrative prices as well as provide the poor sections of the society with food grains at affordable prices. . PDS evolved as a system of management of scarcity through distribution of food grains at affordable prices. It is a government-sponsored chain of shops entrusted with the work of distributing basic food and non-food commodities to the needy sections of the society at very cheap prices.

India happens to be the epicentre or home to a huge population of hungry as well as malnourished people. India is characterized by high mortality rates and diseases with certain nutritional deficiencies mixed with high poverty rates. India ranks 101 among 116 nations on the Global Hunger Index (GHI) which indicates that one in three Indian children is undersized which represents one-third of the world's undersized population. Looking at these issues, the Government of India established the PDS system. PDS is operated under the joint responsibility of the Central and the State Governments. The Central Government, through Food Corporation of India (FCI), has assumed the responsibility for procurement, storage, transportation and bulk allocation of food grains to the State Governments.

The operational responsibilities including allocation within the State, identification of eligible families, issue of Ration Cards and supervision of the functioning of Fair Price Shops (FPSs) etc., rest with the State Governments.

Under the PDS, presently the commodities namely wheat, rice, sugar and kerosene are being allocated to the States/UTs for distribution. Some States/UTs also distribute additional items of mass consumption through the PDS outlets such as pulses, edible oils, iodized salt, spices, etc.

Over the years, PDS has become an important part of Government's policy for management of food economy in the country. It is supplemental in nature and is not intended to make available the entire requirement of any of the commodities distributed under it to a household or a section of the society.

The public distribution of essential commodities was in existence in the country during the inter-war period. However, PDS, with its focus on distribution of food grains in urban scarcity areas, had emanated from the critical food shortages of 1960s. PDS had substantially contributed to the containment of rise in food grains prices and ensured access of food to urban consumers. As the national agricultural production had grown in the aftermath of Green Revolution, the outreach of PDS was extended to tribal blocks and areas of high incidence of poverty in the 1970s and 1980s. In June, 1997 the government started the Targeted Public Distribution System in which states were required to formulate arrangements for the identification of the poor for delivery of food grains, and for its distribution in a transparent and accountable manner at the FPS level. A National Sample Survey exercise pointed towards the fact that about 5per cent

of the total population in the country sleep without two square meals a day. This section of the population could be called as “hungry”. In order to make TPDS more focused and targeted towards this category of population, the Anthyodaya Anna Yojana (AAY) was launched in December 2000 for one crore poorest of the poor families. Digitalization of Public Distribution System has played a very significant role in ensuring food security of the country the digitalization of PDS will ensure that, at every step from field to fork, the government would track the movement of food grains so that they reached the right beneficiaries It involves leveraging technology to streamline processes such as food procurement, distribution, and monitoring. This can include digitizing beneficiary databases, implementing smart card or biometric authentication systems, and using mobile apps for real-time tracking of supplies and transactions. Digitalization aims to enhance transparency, efficiency, and accountability within the system, ultimately improving access to essential commodities for beneficiaries.

The PDS system is considered to be the most crucial food safety measure introduced by the Government under various food security programmes like ICDS(Integrated Child Development Scheme),MDM (Mid- Day Meals Program) by making basic necessities affordable and accessible to those in need.

1.2 REVIEW OF LITERATURE

P.S. George (1974) has attempted to analyse public distribution of food grains and their income distribution effects in Kerala. He has tried to estimate the possible impact of rationing on incomes of the consumers using the relationship. The results for Kerala suggest that the system is economically viable. Further, ration rice, according to this study, accounted for a major share of rice consumption of consumers belonging to low income groups. The criteria of identifying target groups differed across studies. Rajkrishna suggested that the beneficiaries of the distribution system could be arrived at by deducting from the total population (1) the number of income-tax assesses, and (2) cultivators households multiplied by five which is the average size of the families

Grace Carswell & Geert De Neve (2022) Transparency, exclusion and mediation: how digital and biometric technologies are transforming social protection in Tamil Nadu studies the intervention of technology in PDS ,automation and digitalization in sales through the introduction of smart card scheme. It also talks about the persistent exclusion errors.

Ajay Abraham in E-POS IN PUBLIC DISTRIBUTION SYSTEM: A STUDY ON THE CONSUMER PERCEPTION studies the introduction of E-PoS machine in the ration shops of Kerala as a bold move to put curb on the unethical practices of diverting the ration articles by ration shop owners and operators.

Madhusoodana and Devi Parvathy in Public Distribution System (PDS) and Food Security in Rural Kerala: A Study of Manjeswaram Taluk, Kasaragod District(2023)talks about how food security is achieved in rural parts of Kasargod with PDS system. The service delivery satisfaction, developments made through electronic initiatives, and the accessibility of public distribution systems are discussed.

Dr. S Nakkiran (December 2004) studies the efficiency of PDS in Tamil Nadu with reference to the allocation and distribution of commodities in different districts of Tamil Nadu. Respondents were also categorized in the basis of their sex, educational qualifications, marital status, job, membership in cooperatives, exposure to mass media etc.

The Tata Economic Consultancy Service conducted a study in 2000 to know how much PDS supplies were diverted from the system. At the national level it was found that there was the diversion of 36 per cent of wheat supplies, 31 per cent of rice and 23 per cent of sugar. In the case of rice in Bihar and Assam the extent of diversion was as high as 65 per cent. In the case of wheat the diversion was estimated to 10 per cent in Nagaland and 69 per cent in Punjab. The report found no correlation between the frequencies of the use of Enforcement Acts and extent of diversion. In Northern Region U.P has more diversion of rice and sugar despite a higher number of raids and convictions.

A detailed study was published on “Food security and Targeted PDS in U.P”. The study was undertaken by Ravi Srivastava and was published in March 2000. The study was carried among 2250 households across 120 villages found that multiplicities of agencies, poor coordination and low administrative accountability have combined to cripple the delivery machinery.

1.3 Research Problem

"The problem identification for the project PDS system in Kerala is to minimize the poverty level among the general public distribution system by extending basic necessary goods at subsidized rates, ensuring regular supply of food grains, and improving the quality of the commodities.

However, ensuring regular supply to beneficiaries has been a persistent challenge in many regions. Identifying the root causes of this problem is crucial to improving the effectiveness of the PDS system. Inefficient transportation and distribution mechanisms can lead to delays and disruptions in the supply chain. Budgetary constraints or delays in fund allocation for procuring commodities can affect the regular supply of essential goods through the PDS system.

Additionally, the PDS system in Kerala faces various challenges regarding the quality of

products provided to the beneficiaries. One of the primary issues in the PDS system in Kerala is the lack of stringent quality control measures for the products distributed through the system. "Corruption in the supply chain is another problem of poor quality products in the PDS system, as well as complaints from beneficiaries regarding the quality of products. Through the PDS system, beneficiaries are not receiving the things they are supposed to due to corruption. However, incidents of black market activities or corruption in the PDS can severely undermine the system' effectiveness. To ensure the efficient and transparent distribution of goods, the implementation of biometric authentication technology has been introduced in the PDS system.

Biometric authentication involves using unique biological characteristics, such fingerprints and iris scans, to verify the identity of individuals. The integration of biometric authentication in the PDS system in Kerala signifies a progressive step towards enhancing transparency, accuracy, and security in the distribution of essential

commodities. The PDS system in Kerala highlights several key issues that need to be addressed in a project aimed at improving the system.

1.4 Objectives of the Study

- To understand the efficiency of PDS system in Kerala with reference to the quality of commodities distributed , consistency in the supply, distribution during emergency situations.
- To analyse the transparency of the system by evaluating the digitalisation and technological interventions made in the PDS such as biometric authentication and the effectiveness of smart card introduction etc.

1.5 Significance of the Study

This is to signify the PDS system of Kerala and analyse the problems ration card holders are facing.

PDS System Overview:

- The Public Distribution System (PDS) in Kerala is designed to distribute essential commodities like rice, wheat, sugar, and kerosene to eligible households at subsidized rates.
- Ration cards are issued to households based on their socio-economic status, with different categories determining the quantity and type of commodities they are entitled to receive.
- Challenges Faced by Ration Card Holders:
 - Quality and Availability: Many ration card holders face challenges in obtaining quality commodities through the PDS system. Sometimes, the quality of the commodities provided is substandard, or certain items are frequently unavailable.
 - Lack of Awareness: Ration card holders often lack awareness regarding whom to approach and how to address issues related to the quality or availability of commodities. This leads to frustration and unresolved concerns among beneficiaries.

By addressing these issues we expect to implement appropriate solutions for the same and ensure the efficient distribution of essential commodities to eligible households.

1.6 Methodology

The study is based on primary and secondary data . Scheduled data method was used for primary data collection. Scheduled data method is set of predetermined questions in a sequence. We selected several locations in Kerala to collect the data from . Since data is collected from many places, Google form was created and used for data collection. It was decided to collect samples from one member in a household. The form was

designed with questions regarding the general information with respect to availing the PDS services. Most of the questions are about family income, number of people in the family and quality of ration shops, the quality of the commodities received and other information. 62 samples have been collected. Out of which 43.5 per cent are urban people and 56.5 per cent are rural people. Therefore the data for the present study used in it is taken from both primary and secondary data. The secondary data was collected from published source like articles from Malayala Manorama and Indian Express etc , Paper presentation by Shruthi Cyriac, Vishishta Sam, and Naomi Jacob from centre for public policy research. Their Topic is (The PDS system in Kerala A review). And through other websites and YouTube videos.

1.7 Area Of Study

The area of study confined urban and rural places in Kerala.

1.8 Type Of Analysis

The present study is both descriptive and analytical.

1.9 Period Of Analysis

The process of data collection was carried out over a period of three months. We started the data collection process from January 2024 and finished it by the end of March 2024.

1.10 Theoretical Framework

The project taken on to study and analyse the efficiency, sufficiency and transparency of the Kerala's Public Distribution System involves in it several economic theories and application of economic principles. The study of Kerala's Public Distribution System is interdisciplinary in nature, as it correlates and intersects with multiple fields of knowledge such as economics, sociology, public policy, development studies, political science, nutrition and public health, supply chain management.

The Public Distribution System comes under the purview of welfare economics and public economics. The project mainly focus on how it maximizes social welfare through accessibility, and affordability of food products at subsidized price, to particularly those who are economically disadvantaged and the role of government intervention in improving the quality, transparency, efficiency and availability of the resources. The main theory associated with the objectives is the Theory Of Equity And Social Justice, a combination of social and economic elements to promote equality, fairness and justice. Other associated economic theories include the Theory Of Market Failure analysing the insufficiency and unequal distribution and Theory of Distributive Justice associated

with the regional disparity in distribution of food resources. The study also focuses on the level of information available with the people regarding new technology , latest

trends in the PDS system , its accessibility and the transparency of the system to improve its efficiency and reduce potential welfare losses which comes under the domain of Information Economics. Focus is also given on the problems and errors in The Public Distribution System and the government intervention and initiative of the authorities to resolve them , which comes under the domain of Public Finance And Regulatory Economics.

1.11 Limitations of the study

- **Data Collection** : The aim of the study was to identify the operations and efficiency of the PDS of Kerala on a general basis. The study was not confined to a particular district, panchayat or ward . Thus the sample population being large made it difficult and time consuming for data collection .
- **Number of observations** : The sample size was limited to 58 respondents against a large population since data collection of a large population is time consuming and expensive.
- **Information Barrier** : The lack of information among the citizens regarding latest technology and new developments in the system made the collection process time consuming.
- **Participation** : Few respondents remained reluctant to take part in the survey even when no inquiry was made for their personal information.
- **Sensitivity** : Much care was taken to avoid disputes and sensitive questions regarding personal finances thus this lack of information may have limited the research process and reduced the number of eligible participants.

1.12 Scheme of the Study

Chapter 1 - Introduction

The first chapter deals with introduction, review of literature, concepts and definitions, Significance of the study, problem identification, methodology, objectives, period of Study and limitations .

Chapter 2 - Overview

The second chapter give an outlook of the structure, performance and distribution of the PDS system.

Chapter 3 -Analysis and interpretation

The third chapter deals with analysis and interpretation of the primary data collected about the functioning of PDS system in Kerala.

Chapter 4 – Findings, Suggestions and Conclusion

The fourth chapter presents findings, suggestions and conclusions drawn from the Analysis of primary data.

CHAPTER 2

AN OVERVIEW OF EFFICIENCY AND TRANSPARENCY IN INDIAN PUBLIC DISTRIBUTION SYSTEM (PDS)

2.1 EFFICIENCY

2.1.1 STRUCTURE OF KERALA -PDS

The Public Distribution System came into existence in the state of Kerala with effect from 1st July 1965. The state which has very high deficit in the production of food grains, the PDS has great relevance and importance. Keeping in view the importance and need of promotion of consumer awareness and protection of human rights, Government have formed a separate wing in the food, Civil supplies and Consumer Affairs Department in the secretariat to attend the subject, Consumer Affairs. Similarly a Consumer Affairs Cell has been formed in the Commissionerate of Civil Supplies also.

The Civil Supplies Department discharges the important responsibilities of Public Distribution, enforcement of markets discipline and promotion of consumer awareness and protection of their interest. In the 60s and 70s it won many accolades for the pioneering achievements in the implementation of Universal Rationing System. The Department of Civil Supplies functions under the Department of Food, Civil Supplies and Consumer Affairs of the Government of Kerala. The Commissioner of Civil Supplies is the Principal Head of the Department and Principal Advisor to the Minister in charge of Food & Civil Supplies. The Director of Civil Supplies is the administrative head of the Department of Civil Supplies. He exercises the statutory functions entrusted with him under the Kerala Rationing Order 1966, PDS (Control) Order, 2001 and other control orders issued by the Government of Kerala under the Essential Commodities Act.

The Civil Supplies Department discharges the important responsibilities of Public Distribution enforcement of markets discipline and promotion of consumer awareness and protection of their interests.

The Organizational Structure Of Commissionerate Of Civil Supplies is include Commissioner of Civil Supplies & Consumer Affairs on the top then there are various posts like Controller of Rationing, Senior Administrative Officer, Chief Accounts Officer, Vigilance Officer, Finance Officer, Law Officer, Assistant Secretary - I, Assistant Secretary -2, Assistant Secretary -3, Accounts Officer and Statistical Officer. And there are different sections and Cells like CA Cell, IT Cell and different parties were classified for the Work Distribution in the Commissionerate of Civil Supplies & Consumer Affairs.

2.1.2 Role of PDS in ensuring food security

The main purpose and role of PDS-Public Distribution System is to ensure food security. In a country like India with huge population and poverty the functioning of PDS is very important and an influencing factor to fill bloated stomachs at cheap. PDS of India plays a crucial role in reducing food insecurity by acting as a safety net by distributing essentials at a subsidised rate. There are hundreds of thousands of people who struggle to buy even essential food items due to very low income or lack of sources of income. Food items like wheat, rice, sugar.. obtained through PDS provide great relief to the above mentioned people. That way they can get essential food items and can afford other items with their disposable income. Thus they try to balance their diet

and ensure their food security. PDS act as a saviour for them to cover their hunger and malnutrition.

The program provides that no one dies from hunger. It provides the availability of food at affordable and subsidized rates.

“Food security refers to a situation when ‘all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life’-FAO 1996.

The government of India have adopted a range of policies over the last 60 years in an attempt to strengthen food security . One of the key responses to food insecurity and hunger in India is the distribution of food grains through the government controlled Public Distribution System (PDS). PDS has evolved to the largest universal distribution system in the world for the supply of subsidised food grains. However, like other solutions to food scarcity, this program is not intended to provide all required household foods, but rather provide goods to supplement purchased or farmed goods . To facilitate the distribution, the Food Corporation of India (FCI) acts a central nodal agency responsible for the procurement of food grains from farmers at a price that is often higher than market price . The individual state governments then procure the food grains at a subsidised price known as the ‘central issue price’ from the FCI , these goods are then distributed to consumers via fair price or ration shops .

Amendments made to the PDS in June 1992 and in June 1997 sought to improve the coverage and to better target lower socio-economic areas. This Targeted Public Distribution System (TPDS) aimed to provide over seven million tonnes of foods to 60 million households identified as below the poverty line . This was followed by the introduction of the Antyodaya Anna Yojana (a “grain scheme for the downtrodden”) in 2000. The scheme was an attempt to streamline the PDS to more efficiently target the poorest of the poor. This expansion of the PDS also included provision of food and goods to senior citizens and pensioners over 60 years, as well as widows and people affected by disease or infirmity.

While the PDS forms a cornerstone of government food and nutrition policy, India continues to be home to a large population of hungry and malnourished people. There are some concern relating to issues of miss-targeting, under-coverage, corruption and diversion affecting the implementation and operation of the food safety network in India. In recent years , the Global Food Security Index ranked India at 68th out of the 113 major countries in terms of food security and the Global Hunger Index ranked India at 111th out of 125 countries. According to United Nations, there are nearly 195 million undernourished people in India that make up a quarter of the world's undernourished population.

Even today India is experiencing severe food insecurity but we have come a long way in ensuring food security and PDS is one of the main reason for that.

2.1.3 Comparison of PDS performance in Kerala with other Indian states

Kerala's performance in the Public Distribution System (PDS) is often regarded as one of the best in India. The state has been praised for its efficient distribution network, high coverage, and effective targeting of beneficiaries, ensuring food security for its citizens. But when we compare it's performance with other Indian States it's position is

nearly middle. According to the “State ranking Index for NFSA” 2022 Kerala ranks eleven with an index score 0.750 while Odisha ranks top With Index Score 0.836 and Goa is at the bottom level with least Index Score Of 0.631.

Delivery Mechanism –Variation Across States

The administrative structures built by different States for delivery of PDS food grains are similar. Most large States have three/ four tiers above the retail outlets and in most States are operated by private individuals, while in some others, these are partly or fully in cooperative sector.

While food grains are door-delivered in Andhra Pradesh, Arunachal Pradesh, Haryana, Himachal Pradesh, Madhya Pradesh and Tamil Nadu, the FPSs in other States, do not enjoy this facility. Irregular delivery schedule of FPS quota is a persistent problem in most States.

Kerala allowed off-take of monthly ration quota in multiple instalments, while other States did not. More than three-fourths of the sample BPL cardholders expressed their desire to have the facility of weekly off-take extended to them. Monitoring of activities of FPSs through inspection by district/ taluka level officials was irregular and ineffective. The involvement of the PRIs was effective only in a few States, like, Kerala, Rajasthan, Madhya Pradesh, Andhra Pradesh, Orissa and West Bengal.

**Viability of FPSs & Its Determinants*

The number of ration cards attached to a FPS, their BPL-APL break-up, offtake of grains (and other commodities), margin on commodities, cost incurred on transport and handling, rents, etc. are the determinants of viability of FPSs. By viability, we mean an annual return of 12 percent or more on the working capital. Ensuring FPSs viability is critical to sustenance of PDS retail trade and minimizing leakages/ diversions of PDS grains. Only about 22.7 percent of the FPSs were found to be earning a return of 12 per cent on capital. The majority of the FPSs in this sense are viable in Andhra Pradesh (67 per cent), Maharashtra (50 percent), Meghalaya (100 percent) and Tamil Nadu (88 per cent) with reference to their present levels of operation.

**Targeting Errors, Leakages & Diversions –Inter-State Variation*

Kerala have only low Leakage less than 25 percent with exclusion error 16.28, Inclusion error 21.04 and shadow ownership error 4.05 while the states like UP, Bihar, Punjab, Haryana, MP have very high leakage rate.

(per cent of households)

States	Exclusion Error (*)	Inclusion Error	Shadow Ownership Error
1	2	3	4
Andhra Pradesh	3.20	36.39	0.0
Assam	47.29	17.16	12.30
Bihar	29.81	12.20	13.55
Gujarat	45.84	9.78	11.87
Haryana	27.90	14.16	0.42
Himachal Pradesh	8.86	20.39	7.01
Karnataka	23.38	42.43	20.58
Kerala	16.28	21.04	4.05
Madhya Pradesh	19.61	12.49	5.27
Maharashtra	32.69	11.11	4.34
Orissa	26.56	16.78	8.37
Punjab	7.75	12.33	0.0
Rajasthan	16.73	5.22	0.0
Tamil Nadu	-	49.65	10.20
Uttar Pradesh	26.75	13.25	10.50
West Bengal	31.74	10.23	4.69

2.1.4 Access to PDS outlets and distribution centre

The PDS outlets and distribution centres are also known as ration shops. These shops and outlets comes under the Ministry of Consumer Affairs. Ration shops are present in most locality all over the country. According to the 2011 census India has around 5.5 lakh ration shops all around the country. India has one of the largest public good distribution network all around the world. Kerala have more than 14000 ration shops.

The Government of India has set up these ration shops to enable the accessibility of subsidized food products and non-food products to people. Usually people can buy the commodities from ration shops that are assigned to them with respect to their native or residential area. These PDS outlets and centres are operated by individuals or they can also be supervised by government officials or appointed agents. These officials keep in check the transparency and the problems that arise in the distribution process.

The management of the PDS outlets and distribution centres involves a lot of disciplines including supply chain management, pricing policy by the government, quality control, monitoring stock levels etc. Now people can avail subsidized food products from any of the PDS outlets or ration shop. They can avail the commodity from any place in the country. The ONE NATION ONE RATION CARD (ONORC) service provided by the Government of India has enabled people to buy food from ration shops anywhere in the country. This has encouraged more people to utilise the scheme.

2.1.5 Distribution During Emergency situation

In times of emergency, such as natural disasters or pandemics, the Public Distribution System (PDS) is pivotal in safeguarding food security for vulnerable populations. The allocation of essential provisions through the PDS aids in averting food scarcities and guarantees that individuals have access to fundamental necessities during challenging circumstances.

One fundamental aspect of PDS distribution in emergency scenarios is to guarantee the timely and effective delivery of crucial commodities to those requiring assistance. Moreover, it is imperative to uphold the safety and cleanliness of the distribution process to prevent the transmission of diseases, particularly during a pandemic. The PDS assumes a critical role in lessening the repercussions of emergencies on food security and promoting the welfare of all members of society.

2.1.6 Market Prices vs PDS Prices

Market prices represent the valuation of goods and services within a competitive market framework driven by the interplay of supply and demand forces. These prices are subject to change due to multiple variables, including production costs, market competition, and external influences like weather patterns or global trends.

Conversely, Public Distribution System (PDS) prices are controlled by the government and set for essential commodities like food grains, sugar, and kerosene, which are distributed to disadvantaged or low-income populations.

The PDS serves as a fundamental aspect of social welfare initiatives in many nations, with the primary objective being to ensure food security and alleviate poverty through affordable access to vital goods. Striking a balance between these two pricing systems is essential to achieve both market efficiency and social welfare objectives

2.1.7 Regularity And Quality Of Supplies

The Public Distribution System (PDS) in Kerala plays a crucial role in safeguarding food security for its populace by providing essential commodities at subsidized rates. The Kerala state government has undertaken substantial endeavours to enhance the consistency and quality of supplies within the PDS framework. Regarding the regularity of supplies, Kerala has achieved relative success in ensuring consistent provisions through its PDS system. The state administration has introduced various measures to streamline the distribution process, ensuring the prompt delivery of commodities to designated outlets.

Quality control of distributed supplies is a paramount concern for the Kerala government. The state has enforced rigorous quality control mechanisms to guarantee that food grains and other commodities meet the requisite standards. Kerala has also emphasized sourcing commodities from reputable suppliers to uphold the quality standards of provisions in the PDS system.

2.2 TRANSPARENCY

2.2.1 Digitization of Public Distribution System in India

The digitalization of India's Public Distribution System (PDS) has been pivotal in ensuring food security and combating malnutrition. Traditionally aimed at providing subsidized foodgrains to economically vulnerable sections, the PDS has undergone reforms to address issues like supply chain leakages and administrative inefficiencies. The introduction of technology, particularly digitization, has been a significant part of these reforms. This upgrade is anticipated to boost system efficiency, reduce leakages, and improve transparency and delivery speed. Notably, studies have shown that a substantial portion of foodgrains earmarked for Below Poverty Line (BPL) families fails to reach them. The government's broader agenda of modernizing public service delivery and governance has been a driving force behind this digitization effort. The adoption of Aadhaar, a biometric identification system introduced in 2009, marked a significant milestone in this process. Aadhaar aimed to provide a unique 12-digit identity number linked with biometric and demographic data for every Indian resident, further facilitating the digitization of the PDS.

Major Aspects of Digitization in PDS

2.2.2 Linkage with Aadhaar Cards

Aadhaar has played a pivotal role in the digitization of various government initiatives, including the Public Distribution System (PDS). By linking Aadhaar with ration cards and beneficiaries, the government established a more efficient identification mechanism. This linkage has facilitated the identification and elimination of duplicate or fake ration cards and beneficiaries, thereby expected to decrease leakages and enhance subsidy targeting accuracy. Moreover, biometric authentication through Aadhaar has streamlined the verification process, saving time. The Aadhaar linkage has also increased the transparency of the PDS by digitally recording all transactions, enabling real-time tracking and preventing unauthorized exploitation of the system. These measures not only curtail government resource losses due to leakages but also ensure that subsidies reach only deserving households. The technology-driven beneficiary identification and authentication processes have boosted operational

efficiency within the PDS, minimizing errors from manual record-keeping and leading to more effective resource allocation and utilization.

2.2.3 Implementation of Electronic Point of Sale (ePoS) Machines

Another crucial aspect of the digitization initiative was the introduction of ePoS machines at ration shops. These machines facilitated live tracking of transactions and stock levels, replacing manual sales recording methods prone to errors and manipulation. With ePoS machines, the entire process became automated, reducing opportunities for malpractices and human errors. Furthermore, beneficiaries can now easily access information about their monthly entitlements through ePoS, ensuring they receive their rightful allocations.

2.2.4 Computerization and Automation

The push for digitization extends beyond just the retail ration shops, encompassing the entire food grain supply chain from procurement to distribution. Technology integration has led to improved inventory management, reduced wastage, and enhanced accountability at every stage of the supply chain. This technological shift marks a significant departure from the manual and paper-based processes of the traditional PDS framework, bringing about efficiency and accuracy throughout the distribution process. Digital tracking, a key aspect of computerization, facilitates efficient coordination between distribution centres and ration shops, optimizing transportation routes, reducing transit time and costs, and mitigating risks of spoilage. Real-time updates on stock levels enable effective stock rotation, minimizing wastage, a persistent issue in PDS storage, while enhancing overall accountability and transparency in the supply chain.

The introduction of computerization ensures the documentation of every transaction, movement, and utilization of food grains, crucial for combating mismanagement, nepotism, leakages, and other malpractices associated with manual systems. This transparency empowers authorities to promptly identify irregularities and take corrective measures, safeguarding the integrity of the distribution process. Computerization and automation play a pivotal role in reducing manual interventions and human errors, particularly in stock management and beneficiary identification procedures.

2.2.5 Impact of new policies in Indian PDS

According to a note from the food ministry, there has been an 86 per cent computerization rate in the supply chain management of foodgrains.

Since the launch of the One Nation One Ration Card scheme in August 2019, which allows migrant labour to access highly subsidized food grains under PDS from their preferred locations, more than 18 million metric tons of food grains have been supplied.

In efforts to enhance the economic viability of Fair Price Shops (FPSs) by generating additional revenues, the Department of Food and Public Distribution, in collaboration with the Ministry of Electronics and Information Technology, has transformed 38,000 FPSs into Common Service centre (CSCs).

Under the Integrated Management of the Scheme of PDS, which is set to conclude this fiscal year, a significant portion of the 193 million ration cards has been digitized and linked with Aadhaar numbers. Additionally, approximately 99 per cent of the 0.53 million ration shops have installed electronic point-of-sale (ePoS) machines.

2.2.6 Challenges and Public response

The current IT system of the Public Distribution System (PDS) faces several challenges, including fragmented systems across states, lack of integration with other ministries, and limited usage of data analytics and advanced technologies in PDS operations.

The response of the public towards the new reforms and digitalization in the Public Distribution System (PDS) has been mixed. While some segments of the population have welcomed the changes, appreciating the potential for improved efficiency, transparency, and accessibility, others have expressed concerns and faced challenges. Concerns have been raised about the reliability and security of digital systems, particularly regarding the protection of personal data linked to Aadhaar numbers. Additionally, some individuals, especially those in remote or marginalized communities, may face difficulties in accessing or using digital technologies, potentially leading to exclusion from welfare benefits. Furthermore, the transition to digital platforms may pose initial hurdles for both beneficiaries and government officials, requiring time and resources for adaptation and training. Public though reluctant in the beginning is now thoroughly enjoying all the benefits of digitalisation by skipping the queue and everything at their fingertips.

CHAPTER 3

AN ANALYSIS ON EFFICENCY AND TRANSPARENCY IN PDS OF KERALA

GENDER OF RESPONDENTS

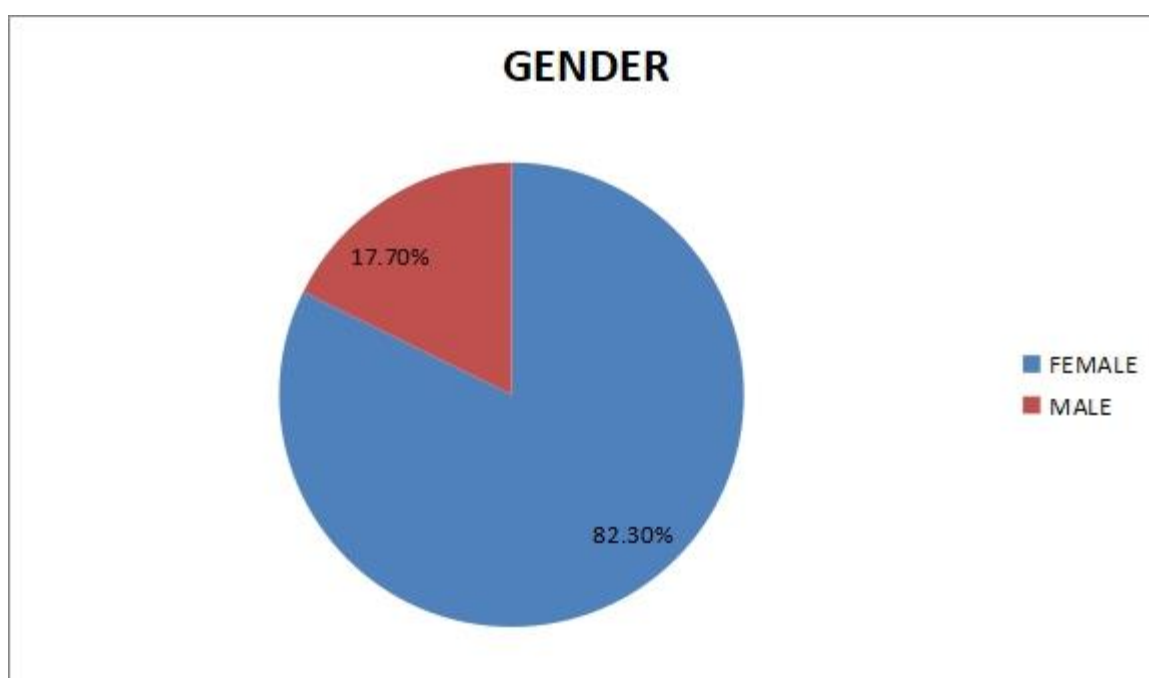


FIG 3.1

Source: Primary data

The total number of respondents are 62. This pie chart refers to the gender. Blue colour indicates females (82.3 per cent) and the red colour indicates males (17.7 per cent). The data shows that majority of the respondents are females.

CATEGORY OF RATION CARD

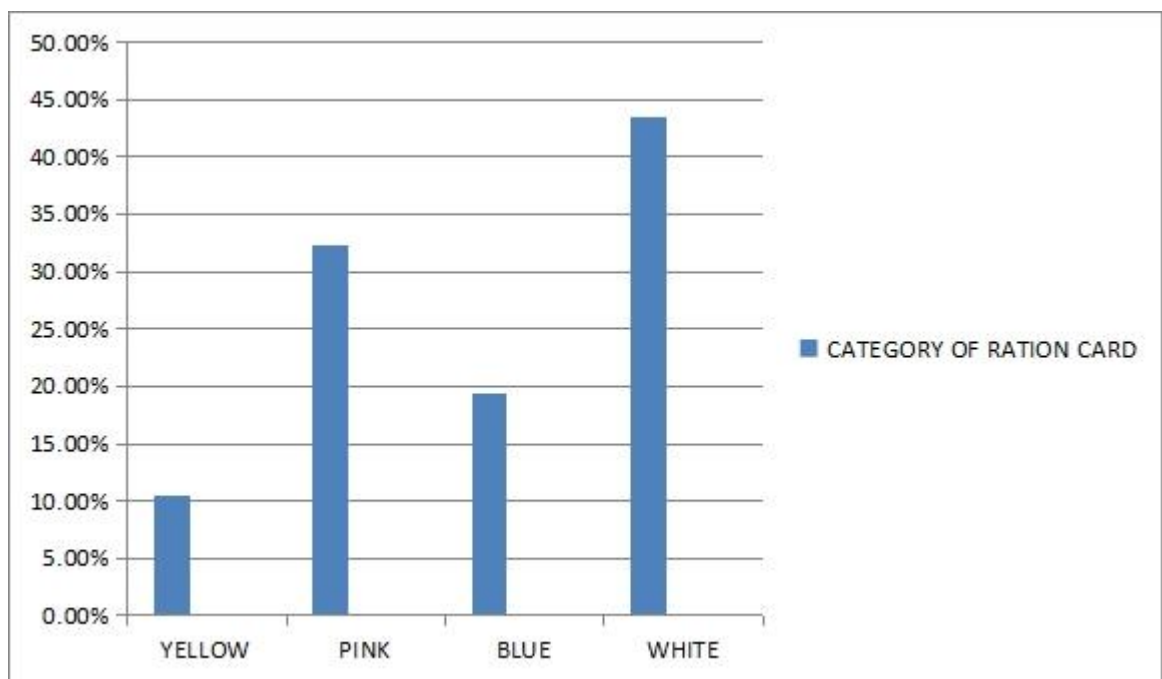


Fig 3.2

Source: primary data

The data shows categories of ration card among the respondents. Among the 62 respondents almost 41 per cent are white card holders, 18 per cent are blue card holders, 31 per cent are pink card holders and the remaining 10 per cent are yellow card holders. Pink and Yellow indicate Below Poverty Line (BPL) and White and Blue indicate Above Poverty Line (APL). The colour variations in the ration cards are based on the level of income. The level of income in descending order is yellow-pink-blue-white.

AREA OF RESIDENCE

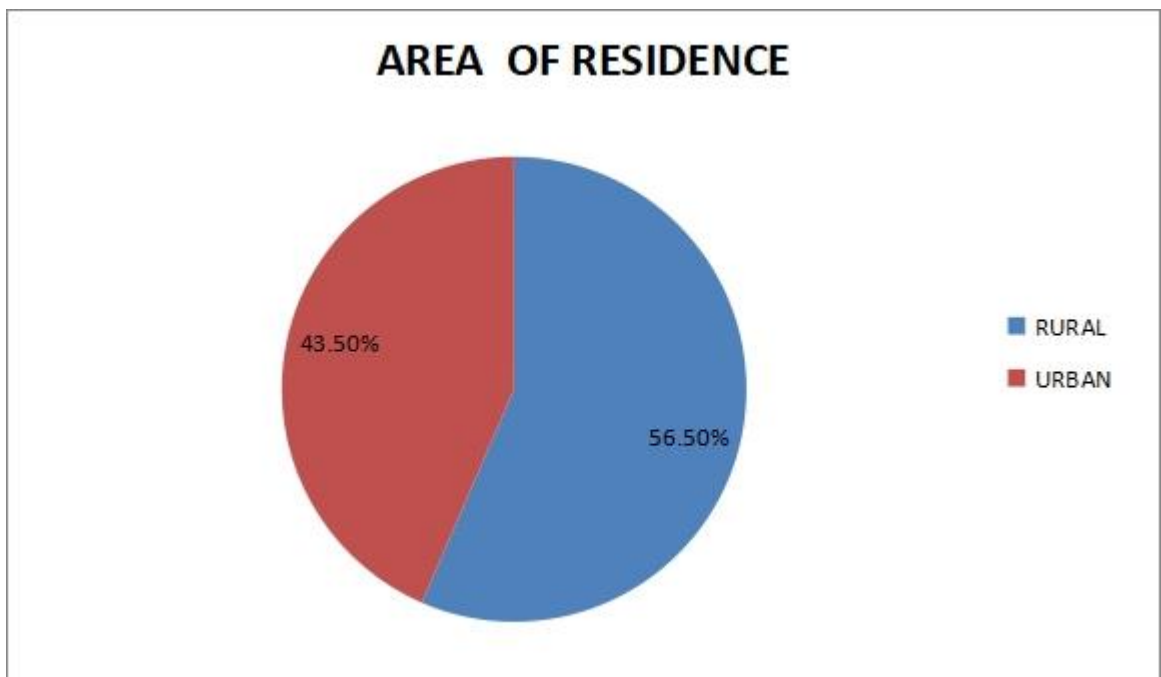


Fig 3.3

Source: Primary data

The data shows area of residence of the respondents. 56.50per cent of respondents are living in rural areas and 43.50per cent of respondents are living in urban or semi urban areas. Majority of respondents under study belongs to rural area and at the same time there is high coverage among urban population also .

TYPE OF LOCAL SELF GOVERNMENT

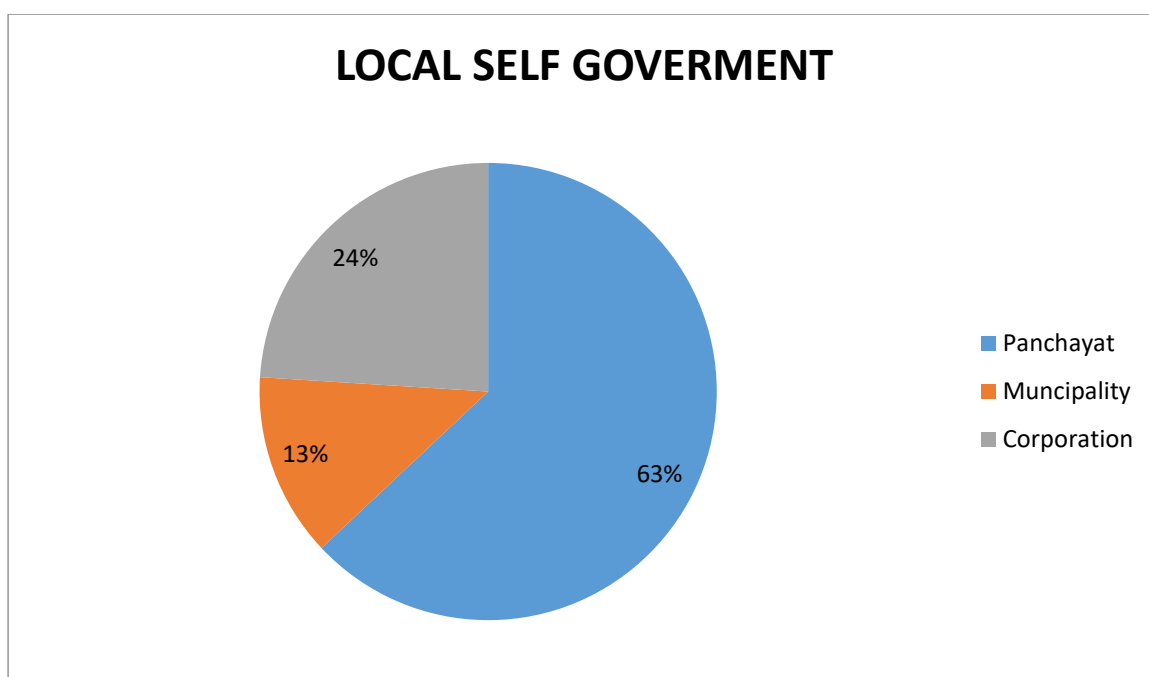


Fig 3.4

Source : Primary data

The above data shows various forms of local self - government in which the respondents under study belongs to .63per cent of respondents are under the administration of panchayat , 13 per cent under municipality and 24 per cent belongs to corporation.. Majority of respondents under study belongs to panchayat level.

NATURE OF RESIDENCY

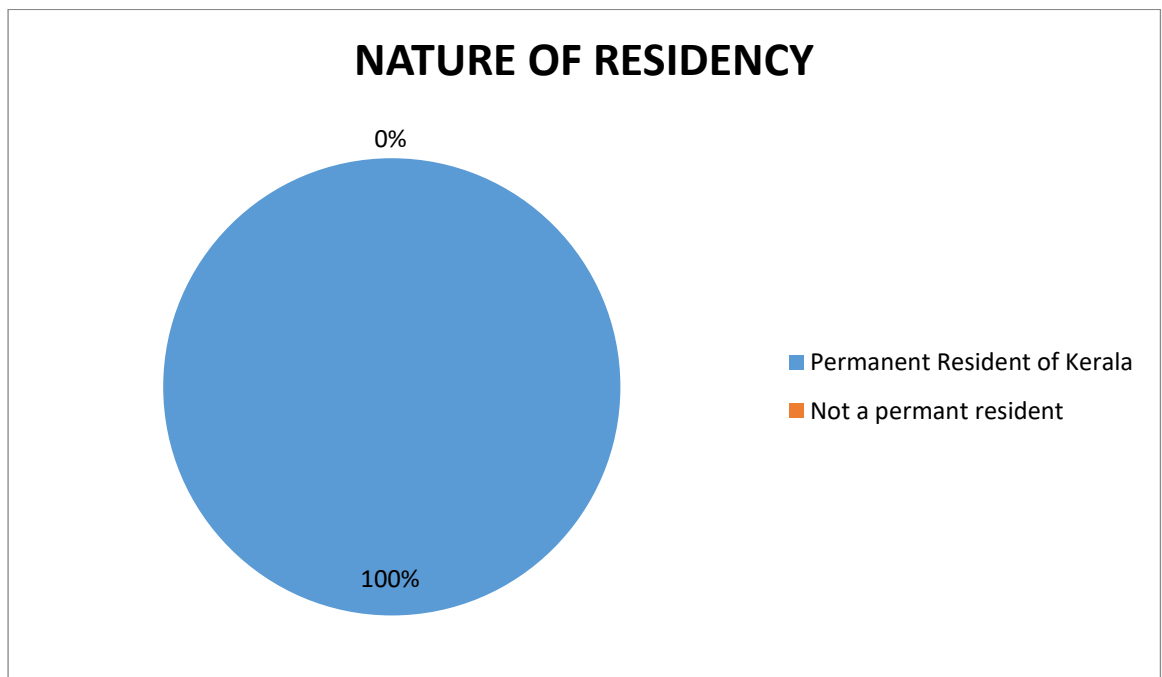


Fig 3.5

Source : Primary data

The total number of respondents are 62. The above data shows their nature of residency, which shows they are permanent residents of Kerala or not a permanent resident. All the respondents are permanent residents of Kerala, which means there are no temporary residents of Kerala under study.

RATION CARD HOLDER

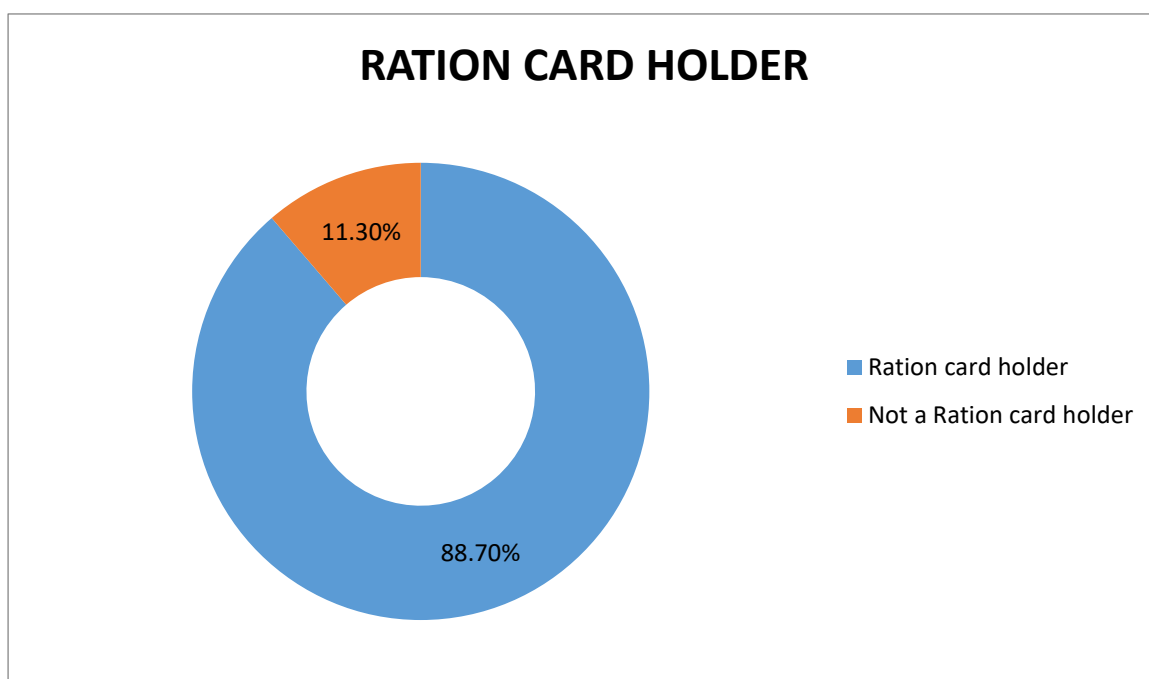


Fig 3.6

Source : Primary data

The given figure shows the proportion of ration card holder and Non ration card holders among the respondents under study. 88.07 per cent of respondents are ration card holders while 11.30 per cent of respondents are Non ration card holders.

NUMBER OF MEMBERS IN A FAMILY

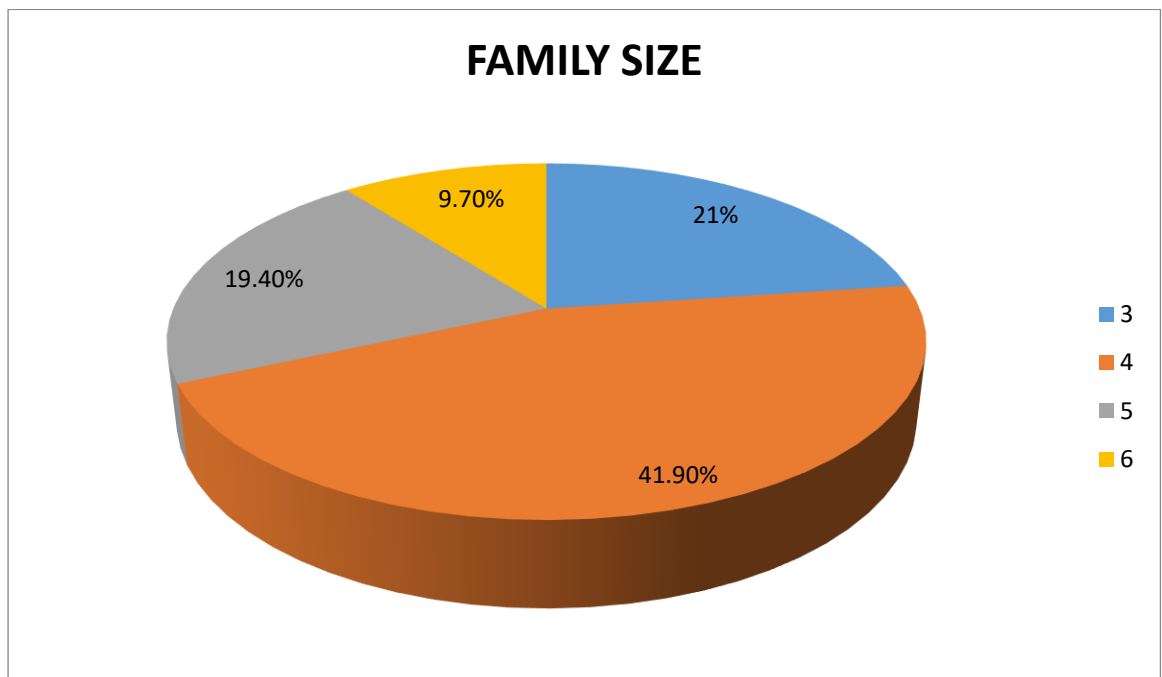


Fig 3.6

Source : Primary data

The figure shows about the Size of family or number of members included in a family of the respondents under study .It shows that majority of house holders were classified as nuclear families.Specifically,21per cent of respondents are living in a 3 member family ,41.9 per cent of respondents are four member family,19.40 per cent are five member family and 9.70 per cent of respondents are six member family. Most of the respondents are small family size holders and majority family have four members.

PURCHASE AND DISTRIBUTION OF MONTHLY RATION

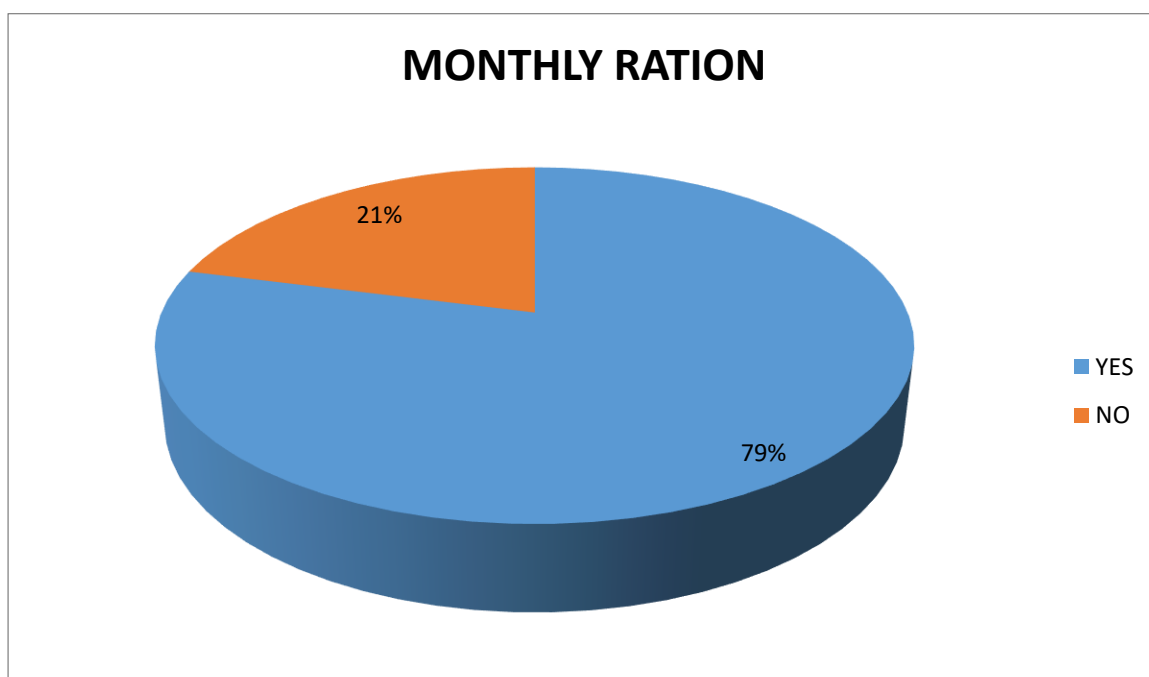


Fig 3.7

Source : Primary data

The above data shows demand and supply of monthly ration. 79 per cent of respondents receives ration in every month and 21 per cent of the respondents not receives the monthly ration regularly. Most of the respondents receives the monthly ration regularly because of their demand for subsidized products and its efficient supply and a minor population receives monthly ration irregularly either because of their low preference for the subsidized products or because of the shortage in the supply.

SHORTAGE OF ITEMS IN THE DISTRIBUTION

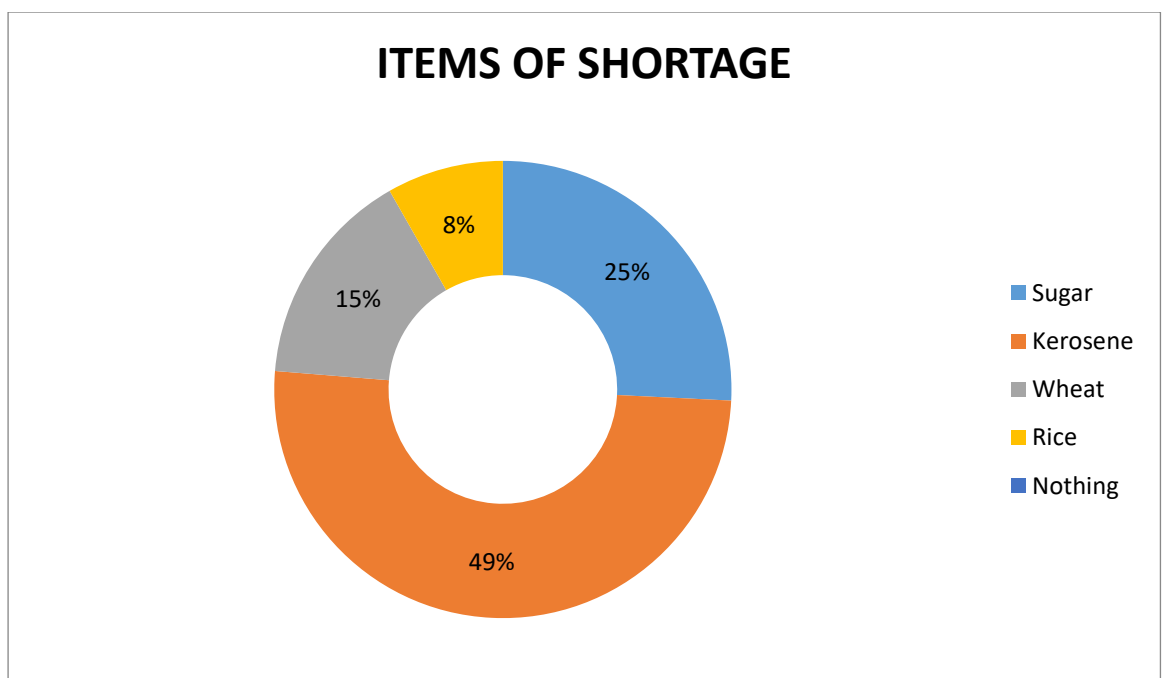


Fig 3.8

Source : Primary data

The above data is an proper evidence for the shortages in the supply of subsidized products given through Public Distribution System. As per the Data there is only few responses stating about no shortage in the products. There is shortage in the availability of kerosene , sugar , wheat , and rice. There is 25 per cent of shortage in sugar,49 per cent in kerosene , 15 per cent in wheat and 8 per cent of shortage in rice. Kerosene is the least available product and rice is the most available product.

MAIN REASONS FOR THE SHORTAGE OF ITEMS

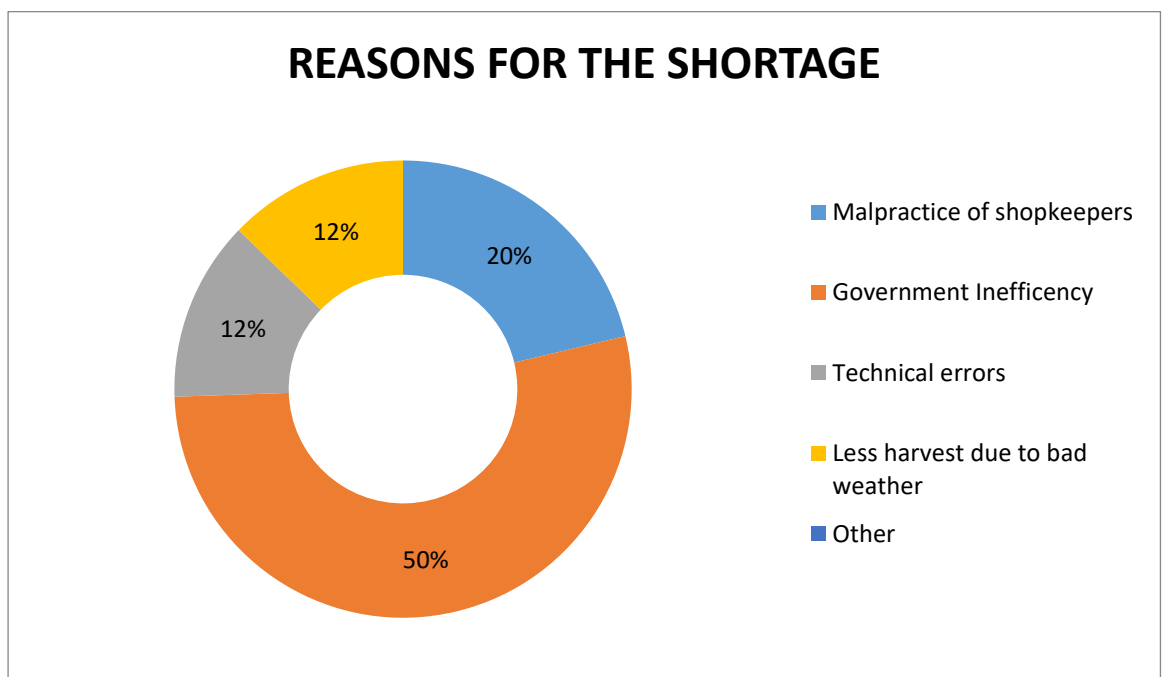


Fig 3.9

Source : Primary data

The above data shows various opinions of respondents about the reasons for the shortage in supply of subsidized products. Half of the population states that the main reason for the shortage of products or irregularity in the supply of products is mainly because of the inefficiency of the ruling government. 20 per cent of respondents voted for malpractice of shopkeepers, 12 per cent for technical errors and other 12 per cent for less harvest due to bad weather. The remaining respondents stated that there are various other reasons for the shortage other than the above mentioned reasons.

PRODUCT QUALITY AND CUSTOMER SATISFACTION

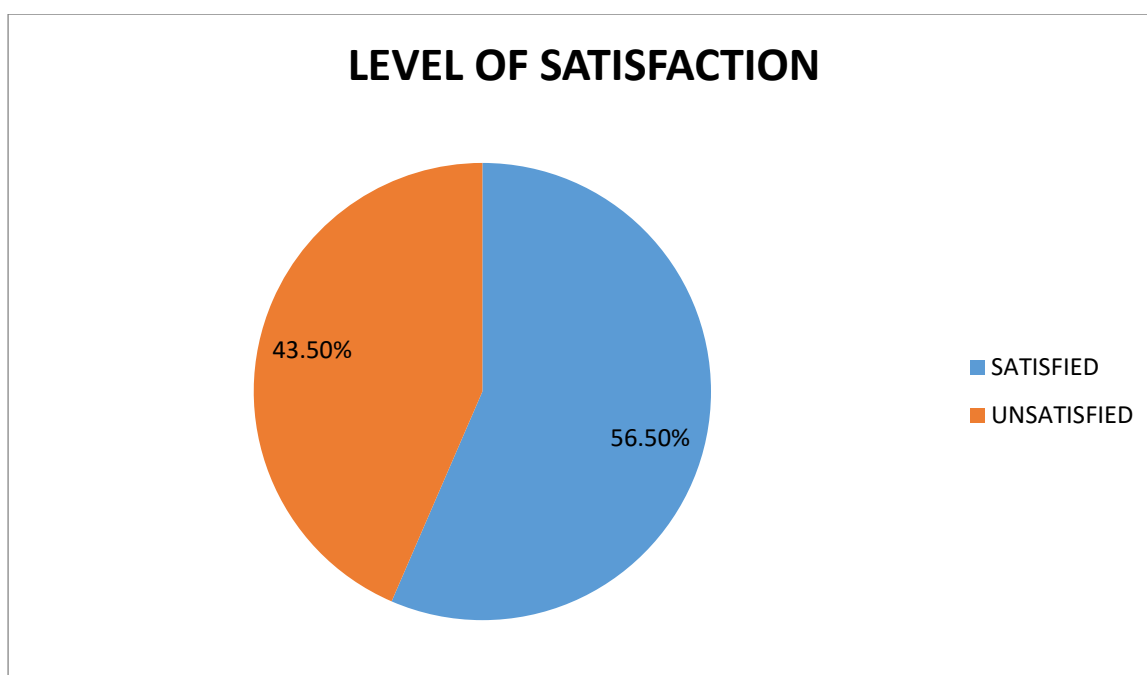


Fig 3.10

Source : Primary Data

The above pie chart represents the level of satisfaction among the PDS system beneficiaries. The chart shows a clear image of the level of satisfaction regarding the quality of the commodities provided through the PDS. Out of the 62 responses recorded almost 56.5 per cent of user availing the benefits are satisfied with the quality of the food products while the rest of the 43.5 per cent of users remain unsatisfied with the quality of the commodities. We can notice that almost half of the users availing the commodities are not satisfied, thus we can understand that most of the users still look forward to have accessibility to better quality products.

NATURAL CALAMITY AND FOOD SUPPLY

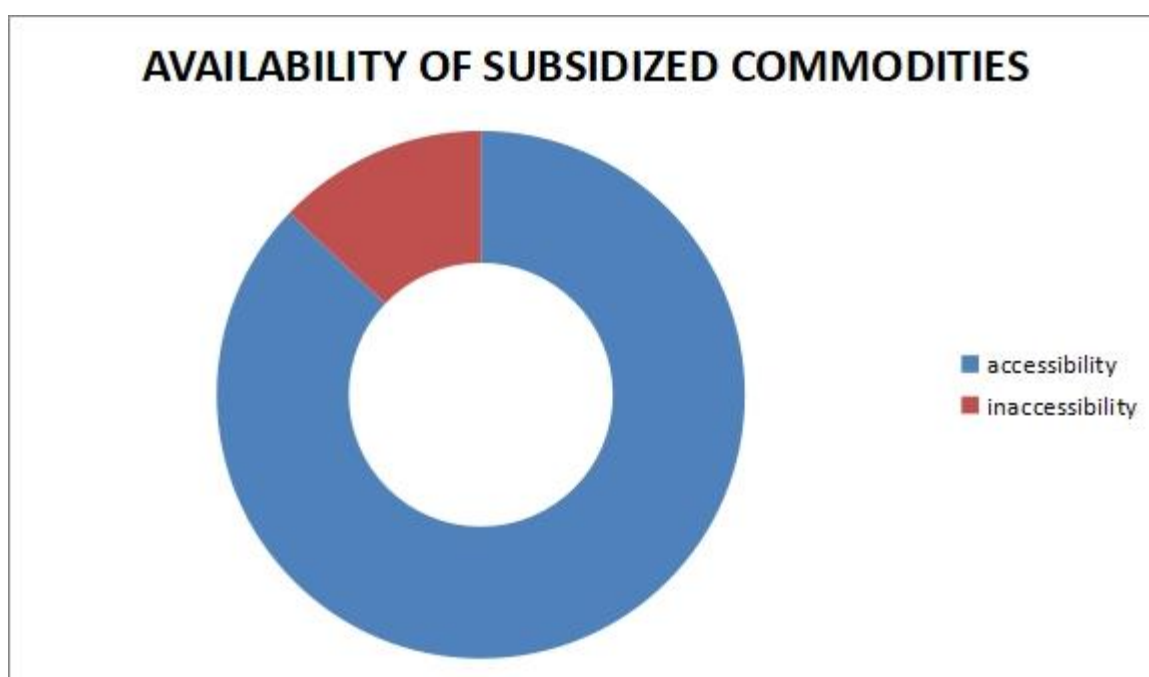


Fig 3.11

Source : Primary Data

Out of the 62 respondents almost 87.1 per cent of the respondents were positive about the accessibility of the food supplies during the time of emergencies. They were also much satisfied with the level of quality and availability of the commodities as well. And 12.9 per cent were not able to have accessibility to the commodities during natural calamities. Since the survey was conducted upon the database available from Kerala , much more accurate information was available since the state of Kerala was affected by several issue in the last decade like the Kerala Flood that occurred in 2018 which left the state in a devastated manner. The state was also affected by COVID-19 pandemic during when the Kerala Government increased the availability of the food commodities at a much cheaper rate and ensured vast availability of the commodities to all citizens despite their economic background.

FOOD QUALITY AND CONTAMINATION

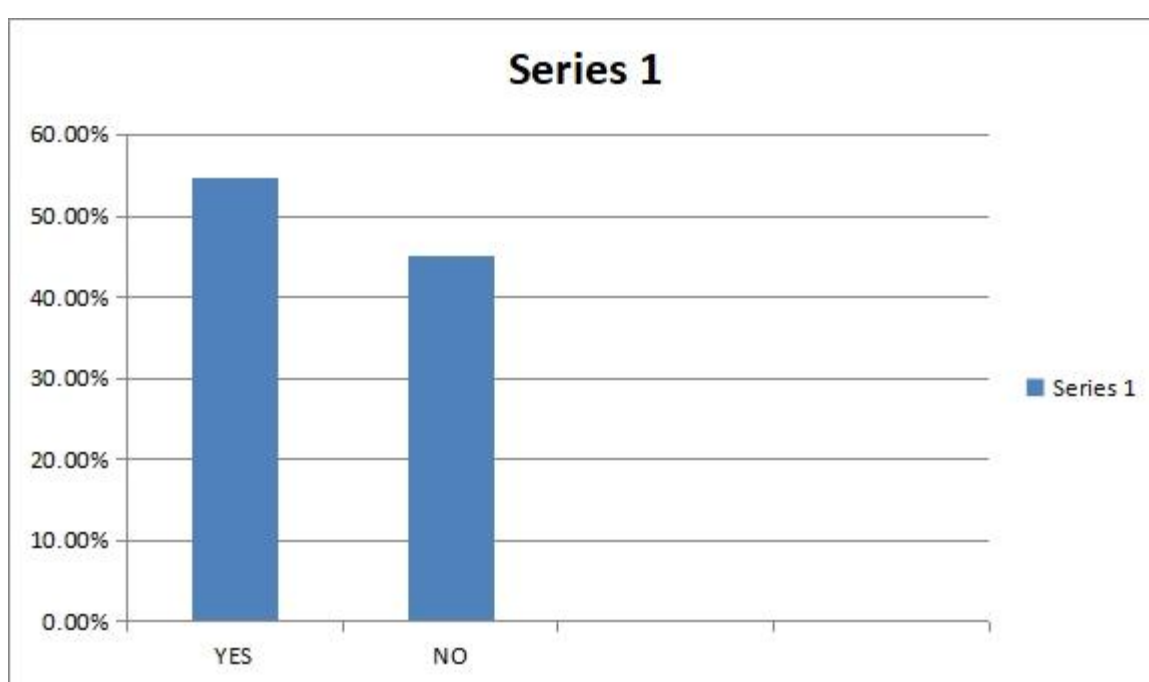


Fig 3.12

Source : primary data

Almost 54.8 per cent of people have received that were contaminated. The users have found Pests or Bugs in the subsidized commodities. The food supply and the inventory management of the PDS is carried out by government agents or private individuals. The food products are stored in warehouses as well. The pests and insects can get inside the food commodities when they are stored either in the warehouses or when they are stored in the ration shops. The insects can also contaminate the food during logistics and distribution. Superior machinery, storage devices and latest technology is required to prevent the contamination by insects but this is more expensive .

SUBMISSION OF COMPLAINTS TO AUTHORITY

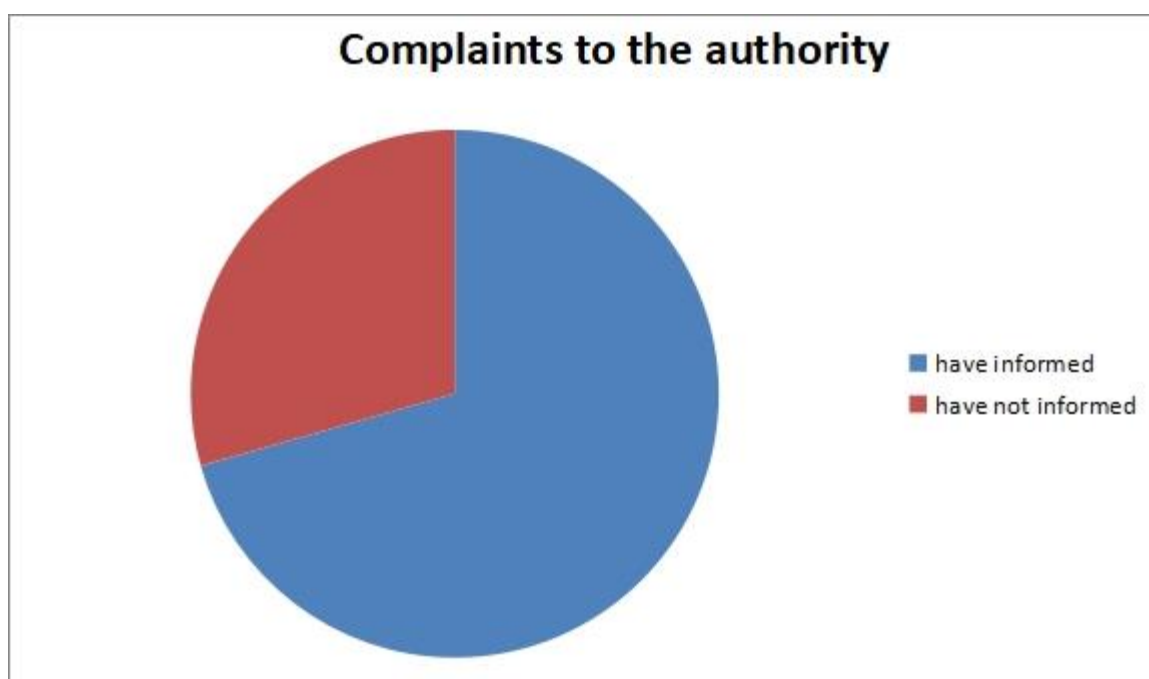


Fig 3.13

Source : primary data

Out of the 60 respondents majority of the beneficiaries have tried to file complaints or inform the government authority or the government officials regarding the quality of the products. The PDS system comes under the MINISTRY OF CIVIL SUPPLIES AND CONSUMER AFFAIRS. Most of the users have tried to inform the ministry or the government officials regarding the quality directly or indirectly through the websites while 29.4 per cent have not tried to inform. The people may have a lack of information regarding the procedure that must be followed to inform the authority or they may be ignorant or have a knowledge gap.

INFORMATION GAP AND AWARENESS

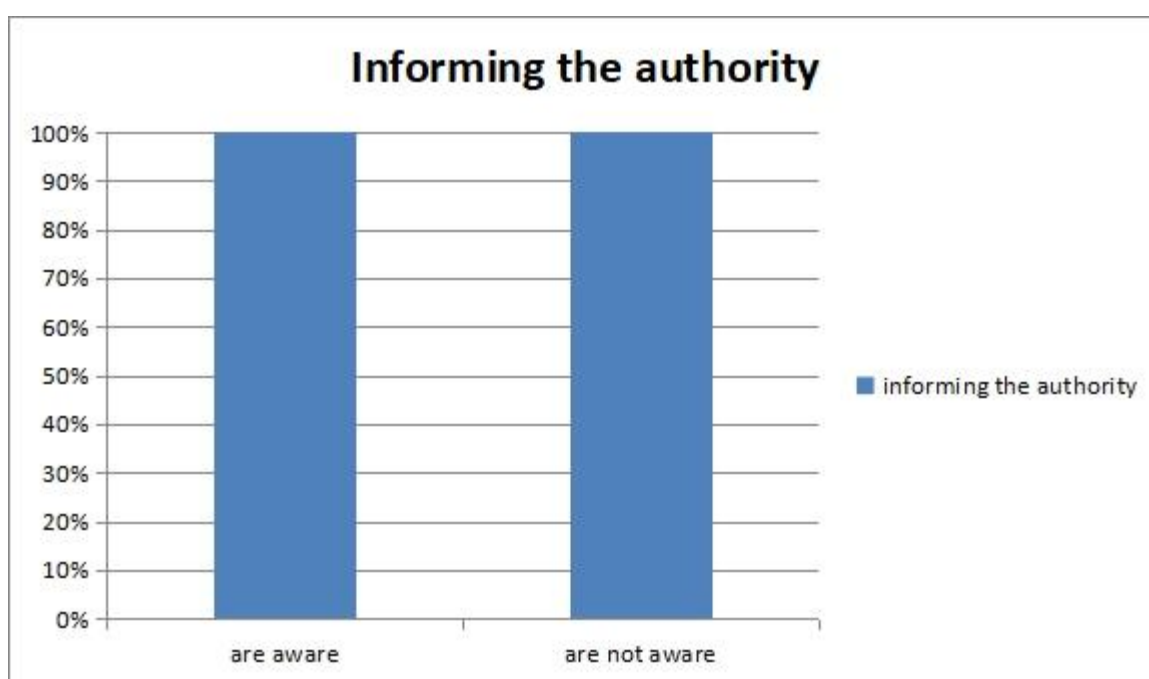


Fig 3.14

Source ; primary data

Almost half of the respondents are aware of the procedure to follow to inform the authority regarding the quality of the commodities or file any complaints regarding any contamination. While there exists a significant and concerning information gap among the people. While half are aware almost other half of people are unaware of the procedure to follow. Today in the age of digitalization and technology, people have more accessibility to information to take appropriate action. Each ministry have their official website and portals through which the people can make inquiries directly.

ACTIONS , RESPONSIVENESS AND RESOLUTIONS

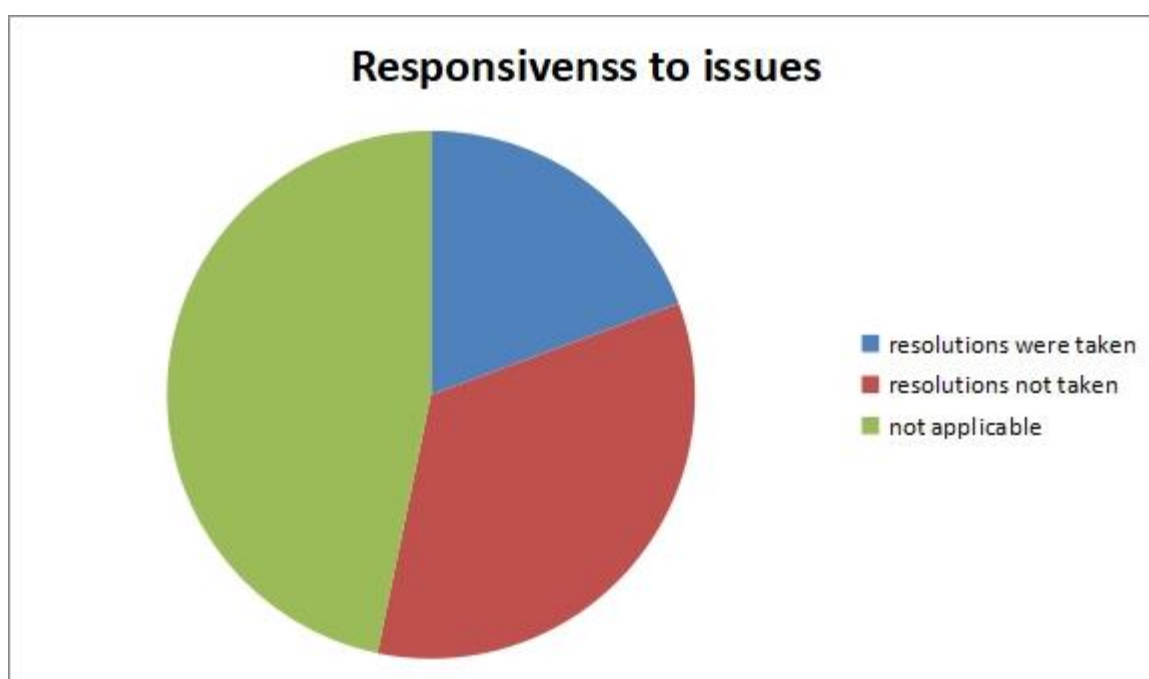


Fig 3.15

Source : primary data

Most of the times when complaints were filed , actions were not taken and it was found that there are not much responsiveness to complaints from the PDS authorities and not much action were taken to resolve the problems. Only 19.4 per cent of respondents have experienced any responses or any actions taken by the PDS authority. While the rest of the users were not able to have any solutions to the issues they have filed.

ENSURING BETTER QUALITY

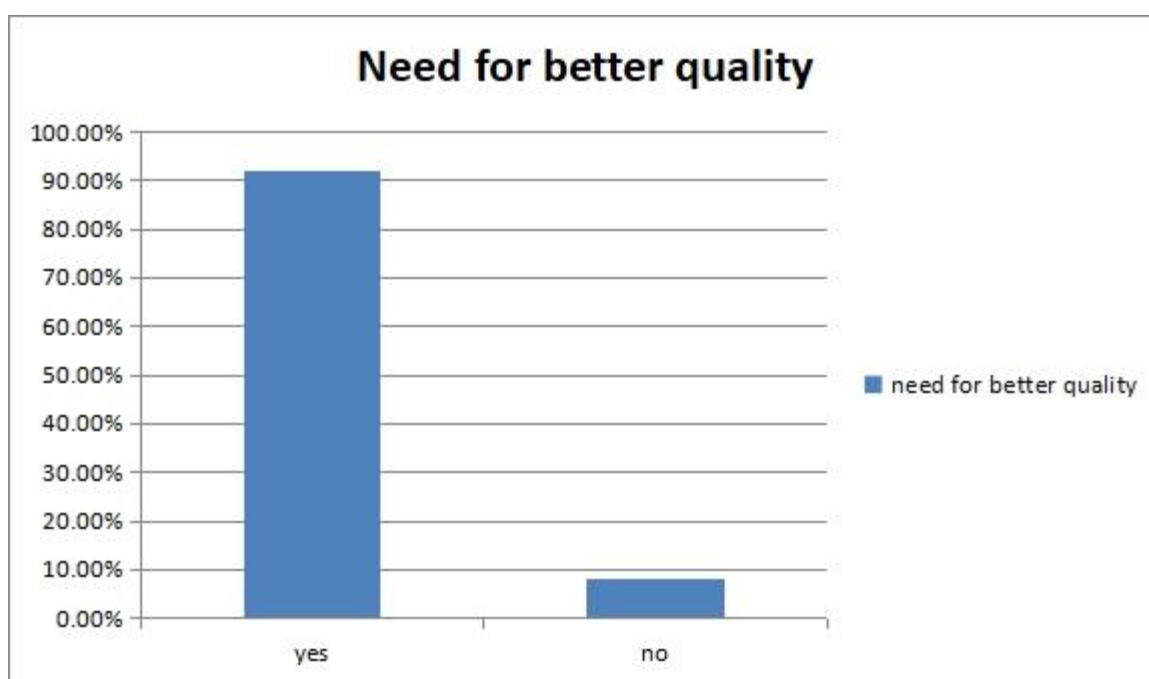


Fig 3.16

Source : primary data

Majority of the respondents believe or have the opinion that there is need for increased inspection to ensure quality of the products. Most of the users are not satisfied with the quality of the products . half of the users have found pests or insects in the food products. The PDS authority also have less responsiveness to the complaints and issues raised by the people. People also suffer from a knowledge and information gap. Thus the users believe there must be conducted regular inspection to increase the food quality. Almost 91.9 per cent of respondents were positive to conducting inspections while the rest 8.1 per cent remain indifferent.

ENSURING FOOD SUFFICIENCY

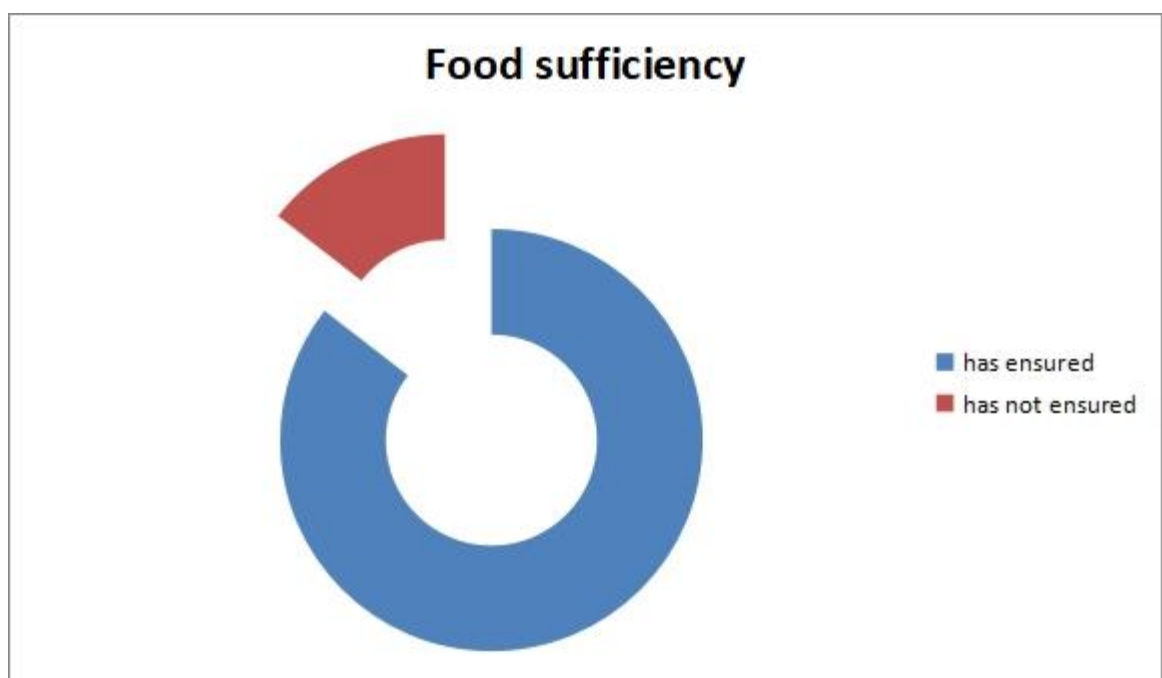


Fig 3.17

Source : Primary data

The survey also focused on finding the impact and role of the PDS system. Almost 85PER CENT of respondents believe that the PDS plays an effective role in ensuring food sufficiency while the rest of 14.5 be per cent lieve that there are not much additional value of the PDS. Ensuring food sufficiency is a primary objective behind setting up of the PDS. The PDS ensures food sufficiency by collecting food stocks from farmers, traders and restocking them every month to meet the demand of the upcoming month whilst keeping inventory in check. The system has been able to provide commodities for almost all BPL households and also during the pandemic.

RESELLING OF SUBSIDIZED PRODUCTS IN THE BLACK MARKET

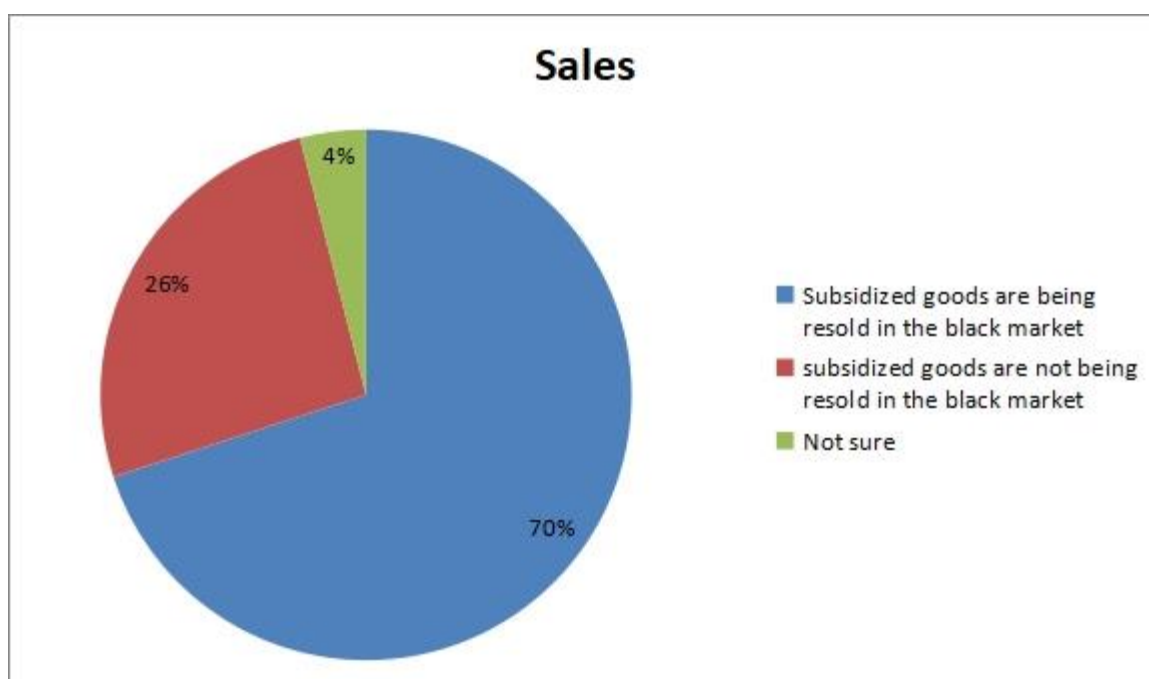


Fig 3.18

Source: primary data

The data shows that around 70percentage of respondents think the subsidized products like sugar ,wheat, kerosene, rice, etc given through ration shops are being resold in the black markets. They suggested this mainly because of they themselves or their relatives sometimes buy these products especially kerosene at cheap rates from ration shops and resell it at high price in other shops or to separate individuals for money surplus. They prefer high quality products than the subsidized products. Almost 26 percentage of respondents are of the opinion that there is no such reselling

or black markets exist in their locality. And the remaining 4 percentage of respondents are not sure about the process of reselling the subsidized products at high price or the existence of black market.

REGIONAL DISPARITY IN DISTRIBUTION OF GOODS

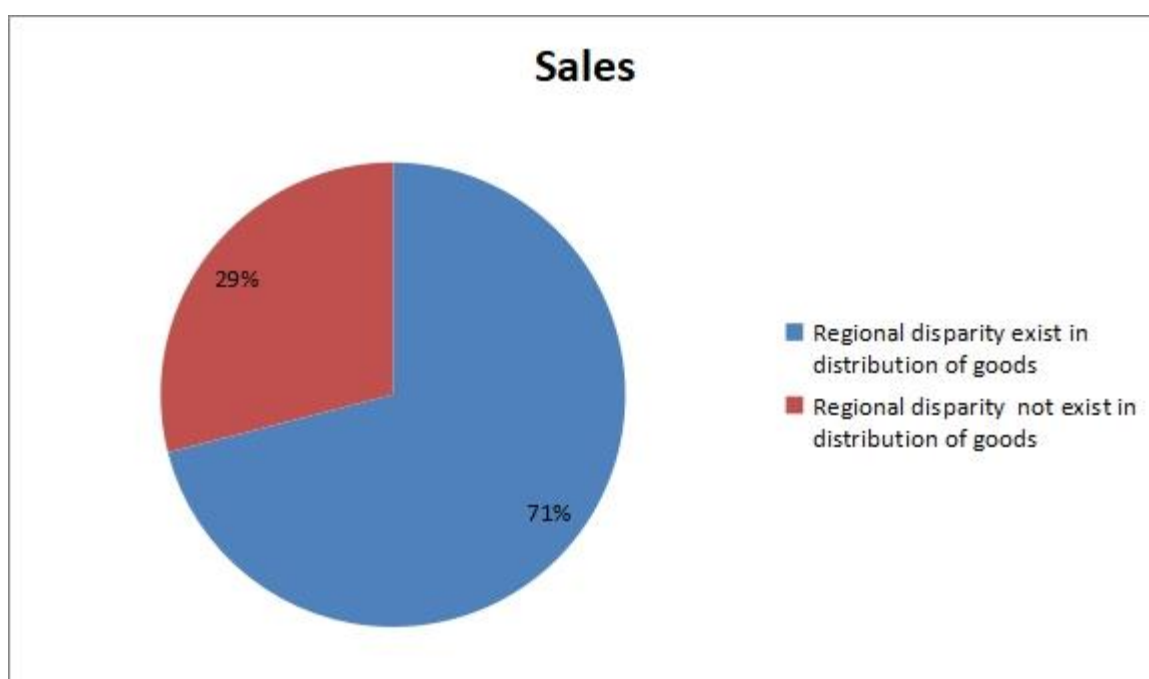


Fig 3.19

Source :primary data

The given data is an evident for the existence of large scale regional disparity in the distribution of subsidized products available in the ration shops.71 per cent of respondents were voted for the existence of regional disparity in the distribution of goods all over the state and 29 per cent of respondents suggested that there is no such disparities

in the distribution ,that means the supply of all products available in the ration shops is equally distributed throughout the state in same quantity and quality.

They suggest the disparity is mainly in the form of differences in the quantity & quality ,unavailability of some products in certain regions which are available in other regions etc...

Satisfaction in the level of transparency in the PDS system

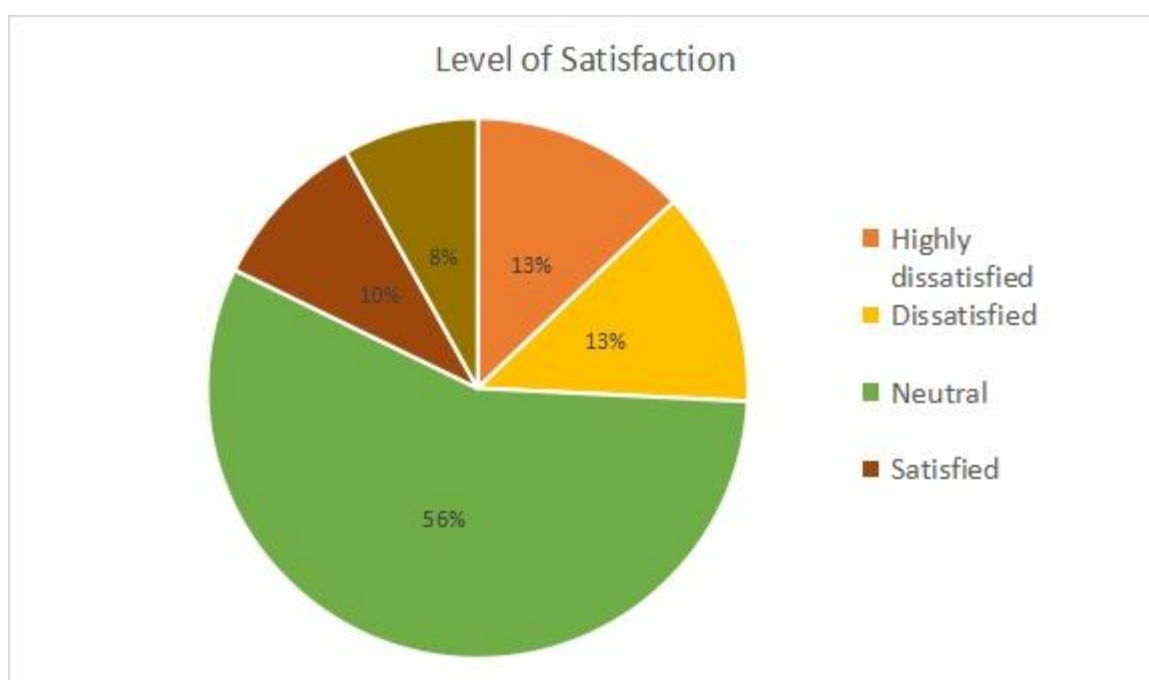


Fig 3.20

Source :Primary data

Government has introduced many initiatives like ePoS , linkage of ration card with Aadhar ,Biometric Authentication ,Smart ration card etc.. for improving transparency in the system but only 8.1 per cent are highly satisfied and 9.7 per cent are satisfied with the transparency.26 per cent of the sample are still dissatisfied with the transparency and 56 per cent have a neutral opinion on this. The causes of dissatisfaction maybe

primarily due to technical errors, lack of technical knowledge to make use of the new changes, improper usage by the retail shop holders.

**Is the introduction of ONORC(One Nation One Ration Card)
useful?**

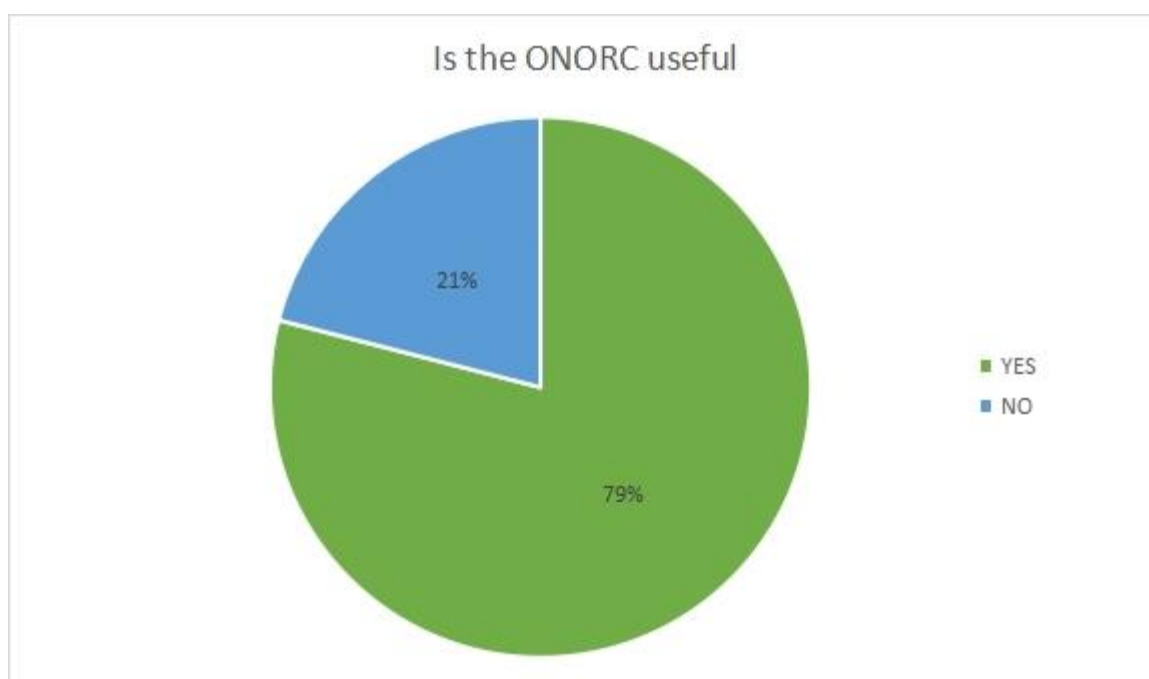


Fig 3.21

Source :Primary data

The main objective of ONORC -One Nation One Ration Card is to ensure that beneficiaries can access their PDS food grains from any fair price shop (FPS) across the country using the same ration card. This initiative aims to provide greater flexibility and convenience to migrant workers and their families who move from one place to

another in search of employment. 79 per cent of the people were of the opinion that they find this policy useful and 21 per cent didn't find this as a much useful policy.

Are you a Smart Ration Card holder?

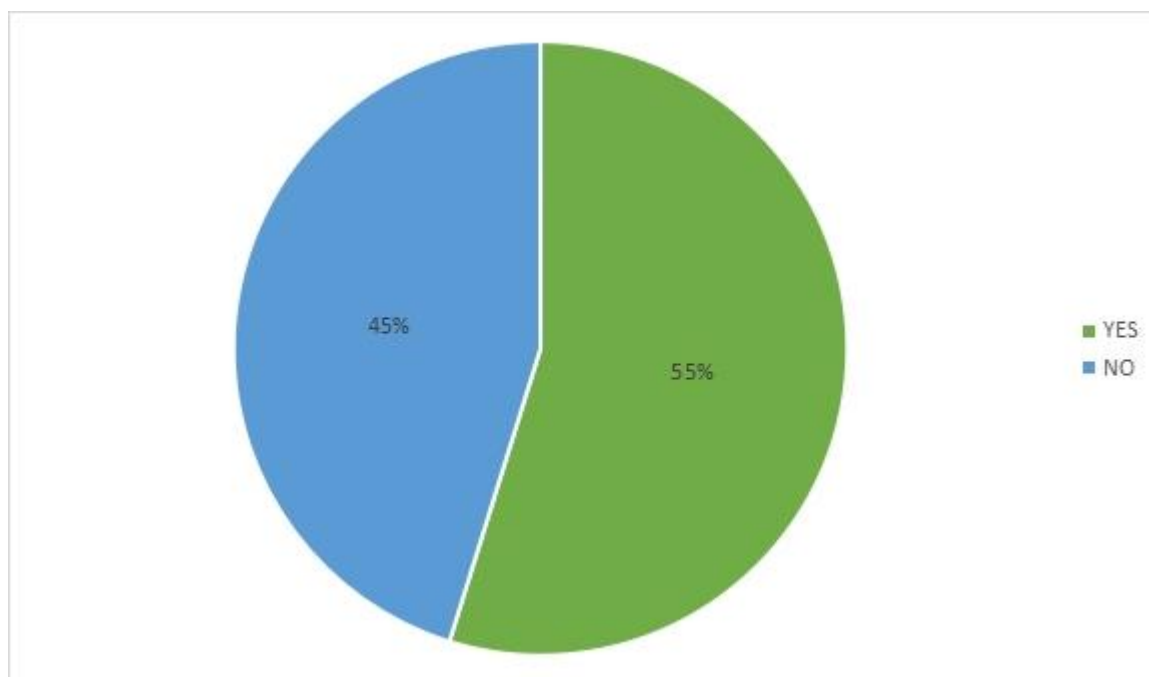


Fig 3.22

Source : Primary data

Smart Ration is the improved digitalized version of the old ration card. It was introduced throughout the state on 4th August 2018. Through digitalization and biometric authentication, the initiative ensures swift and secure access to essential food supplies while curbing fraudulent practices. The integration of Aadhaar numbers

streamlines the application process, promoting transparency and accountability in resource allocation. But only 55 per cent of the people have received smart ration card which is low proportion.

ONORC in increasing efficiency

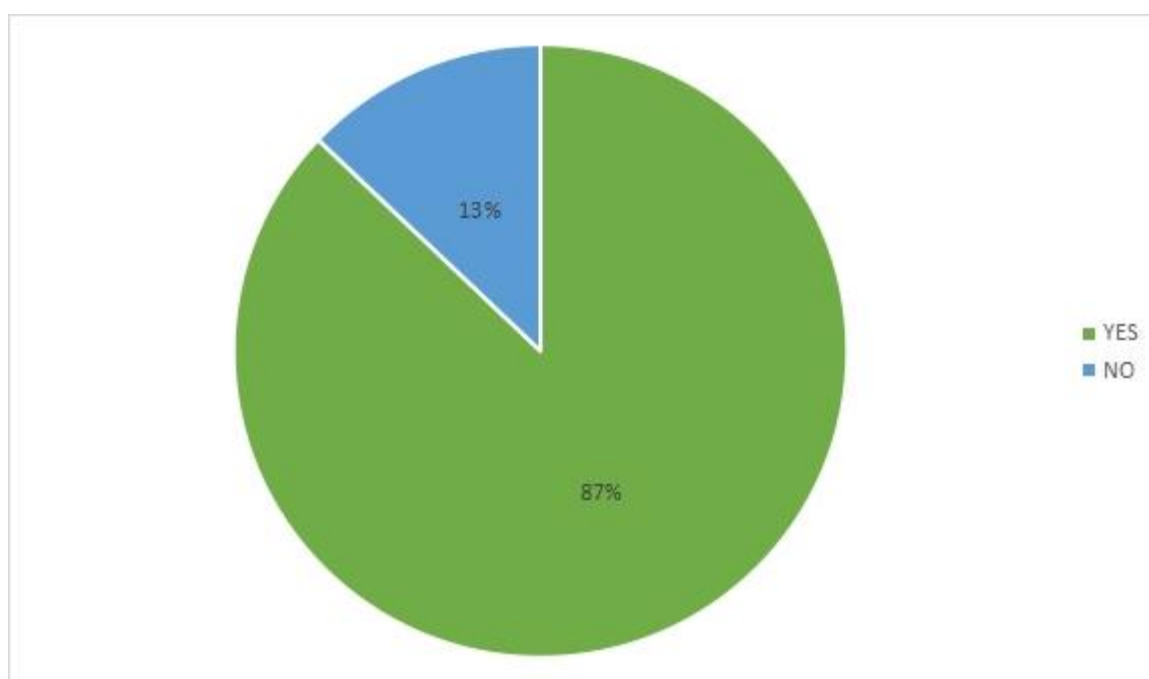


Fig 3.23

Source : Primary data

87 per cent the respondents believed that the introduction of ONORC helps in improving efficiency of the PDS through better distribution and more beneficiaries.

Increasing efficiency through biometric authentication

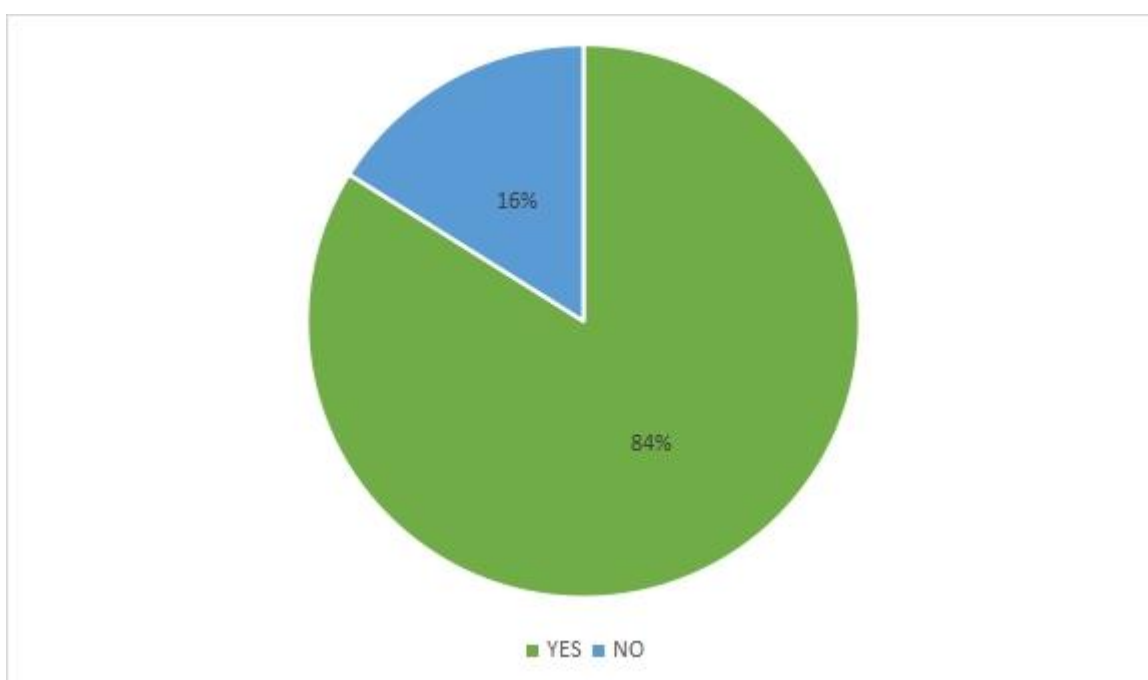


Fig 3.24

Source : Primary data

Biometric authentication in ration cards involves the use of unique biological characteristics such as fingerprints or iris scans to verify the identity of beneficiaries when accessing food supplies from fair price shops. This technology enhances security

and reduces the risk of fraud, ensuring that entitlements reach the intended recipients. By linking biometric data to ration cards, governments can streamline distribution processes, promote transparency, and effectively manage resources in public distribution systems. 84 per cent the respondents believe that this helps in improving transparency.

CHAPTER 4

FINDINGS, RECOMMENDATIONS AND

CONCLUSION

4.1 FINDINGS

- Total respondents were 62 people. Most of them were women. About 82.3 per cent of women responded while the percentage of male response was 17.7 per cent
- 43.5 per cent of the respondents live in urban areas. But people living in rural areas are much more than urban people 56.5 per cent people live in rural areas.
- Most people live in villages and therefore Panchayats are the local self-governing level for 62.9 per cent of the people. But if they depend on the corporation, there are about 24.6 per cent. But if we compare Panchayats and Corporations, there are very few people living under Municipal Territorial Self-Government. They constitute about 12.9 per cent of the population.
- Most of the people own the ration card which is white in colour. That is about 43.5 per cent people. But the population below the poverty line is 32.3 per cent. It can be said that ration card holders in blue colour are around 19.4 per cent. But those with yellow colour are only 10.5 per cent. Most of the respondents are rural dwellers. Rural respondents accounted for 56.5 per cent

- Majority of the Indian Citizen owns a ration card today. Almost 88 of the per cent respondents and their family members are ration card holders . Only 11.3 per cent of the respondents do not hold ration cards.
- Urban and rural people now live as nuclear families. They may lead a family life of father mother one child. Because most are members of 3-member families. That's 21 per cent of people. But if we look at the family with 5 (19.4 per cent) and 6 (9.7 per cent) members, they are ahead in percentage from the family with 4 (4.9) per cent members
- From the response of the people, it is known that many ration items are taking a long time to reach the people. 48.4 per cent of the people say that it is difficult for them to reach essential commodities like kerosene, but 22.6 per cent of the people say that sugar is delayed. Although rice and wheat are hard to come by, few people react against them. Their response rate is close to 20 per cent.
- When asked why the ration items are delayed, 50 per cent of the people agree that it is because of the negligence of the government. But apart from these, 14.5 per cent people believe that there is hoarding and reverse selling of ration workers. But 14-12 per cent people say that due to technology and less harvest due to natural calamities people are losing the benefits of ration.
- Agreed that most of the people buy ration items. But 79 per cent people buy ration items while 21 per cent people are not forced to buy ration items
- Out of the 62 respondents only half of them were satisfied with the quality of the products they received, almost only 56.5 per cent of people were satisfied with the quality of the commodities while 43.5 per cent of users were dissatisfied. The quality of the food and non-food commodities provided by the PDS is influenced and limited by the constraints of storage and inventory management and they are quite expensive methods.
- As we studied the usage of PDS in the state of Kerala , we found that the system was quite successful in ensuring the availability and showed great efficiency in distribution during the times of natural calamities and emergencies that occurred in the state of Kerala. Almost 87.1 per cent of users successfully got accessibility to subsidized food and non-food commodities during natural calamities. Only 12.9 per cent of the

respondents were dissatisfied. The Government of Kerala carried out a well efficient distribution procedure via the PDS during the COVID-19 pandemic and the Kerala flood disaster, 2018.

- Half of the respondents have encountered situations where they found pests and insects in the commodities received via the PDS. 45.2 per cent of the respondents have not received contaminated supplies but the majority of 54.8 per cent of users received commodities contaminated with insects and pests in several occasions .
- The respondents who are availing the services of the PDS have encountered situations where they have experienced poor quality of food products or commodities contaminated with insects and pests, out of the 62 respondents majority of them , almost 70.6 per cent of them have tried to inform the authorities to bring their attention to the problem or have informed others to find the solutions whereas 29.4 per cent of the respondents did not take such efforts and remained passive.
- Out of the 70.6 per cent of the 62 respondents , only half of the respondents were aware of the correct procedure to follow when filing complaints or informing the authorities of the PDS. The survey showed that only 51.6 per cent of the people were aware of the correct procedure to follow whilst the rest 48.4 per cent of respondents were not thorough with the process. This indicates a dearth of information and a knowledge gap among the people, even during the age of digitalization when the common citizens can make enquiries to the authorities via their official websites.
- When the respondents availing the PDS filed complaints or when they informed the authority the responsiveness from the PDS authority and the government officials were the least. Only 19.4 per cent of the users received any responses while the majority of the people , accounting to 50 per cent of the respondents did not receive any responses from the authorities , leaving their complaints and concerns to be neglected and overlooked.
- The survey asked the respondents their suggestions for steps that can be taken to ensure better quality of the distributed products , majority of the people suggested that improvement must be made in the storage facilities. Suggestions to check the quality before distribution as well as method of direct purchases and distribution was also suggested.
- Almost majority of the respondents are of the opinion that the PDS has benefited the BPL class and has succeeded in ensuring food sufficiency. Ensuring food sufficiency were the primary objective of the PDS. 85.5 per cent of people says that the PDS has succeeded in its primary objectives while 14.5 per cent still believes that there is room for improvement for the PDS since India has a large population with 10 per cent of the population living below the poverty line.
- Majority of the respondents believes that the PDS has succeeded in reaching the marginalized group or secluded communities in the distribution of external commodities while almost 30 per cent of respondents believe that the marginalized communities still don't have access to the subsidized external commodities.

- 91.9 per cent of the respondents affirms that there is a need for improvement in the inspection process for ensuring the quality of the food products since almost half of the users have found insects and pests and received bad quality commodities and received no responses or actions taken from the PDS authorities and 8.1 per cent of the users do not think such actions are necessary.
- When asked about trading the subsidized goods in the black market , almost 69.5 per cent of people responded positively affirming that they believe the subsidized goods are being sold in the black market while almost 25.5 per cent of the users do not think the same while the rest 5 per cent are much unsure about it.
- 71 per cent of the respondents thinks there exists still regional disparities in the distribution of goods. They say that goods do not reach all the marginalized communities who are residing in very secluded villages and there are still people in the BPL category who don't have access to the subsidized goods, while 29 per cent thinks that PDS has removed the regional disparities and has successfully ensured food availability to all.
- The respondents have reacted positively to the introduction of latest technology in the PDS. Almost 83.9 per cent of users says that the introduction of the biometric authentication has increased the efficiency security while the rest 16.1 per cent remains averse to it.
- 75.8 per cent of the respondents are availing the benefits of the digitalized PDS system. The digitalization has increased the transparency of the system. 24.2 per cent of the respondents did not avail any benefits of the digitalized system on account of knowledge gap, inaccessibility or marginalization. The digitalization of the system may cover the full population in the coming years since it increases the efficiency of the distribution system.
- Though the digitalization is carried out on a wide scale almost half of the respondents have faced technical errors . 53.2 per cent of users have experienced technical issues while 46.8 per cent are satisfied and have not experienced such problems. The availability of efficient technical system in a country depends on the economic infrastructure of the country like improved and widespread telecommunication facilities, availability of internet and technical knowledge of the software developers. Such problems can be solved in the coming years since India is a rapidly developing nation now.
- The linkage of the ration card with the Aadhaar card has been well received by majority of the users. Almost 77.4 per cent of the respondents says that the method has increased the efficiency and the transparency of the PDS while 22.6 per cent says that there is a much need for increased efficiency and transparency.
- 67.7 per cent of the respondents have kept up with the changing technology in the PDS. 67.7 per cent of the respondents and their family members are aware of the technology and equipped with the technical know how for checking the authenticity and validity of the smart ration card. While 32.3

per cent of the respondents and their families have not kept up with it thus indicating an information gap or an aversion to technology.

- Majority of the respondents still remain positive and hopeful in the capabilities and the promises of the government ministries and its authorities. When asked, we found that almost a majority of, 64.5 per cent of the respondents believe that the system will use the citizens feedback and the suggestions to improve their system while the 35.5 per cent of the respondents have lost all expectations believing that the authorities will not take heed to their grievances.

4.2 RECOMMENDATIONS

- Collaborating with manufacturers, suppliers, regulatory bodies, and consumers is crucial for the successful implementation of the PDS in Kerala. Manufacturers can ensure the quality of products, suppliers can facilitate timely delivery, regulatory bodies can enforce standards, and consumers can provide feedback for improvement.
- Adapting the data fields in the PDS system to reflect Kerala's unique product quality parameters is essential. This customization allows for better monitoring and control over the quality of products distributed through the system
- To ensure transparency, elected representatives from Panchayati Raj Institutions (PRIs) should participate in food grain distribution. Additionally, licenses for Fair Price Shops (FPS) could be granted to Self Help Groups (SHGs) and gram panchayats.
- States should prioritize doorstep delivery of food grains whenever feasible, rather than relying on private transporters or wholesalers for the transportation of goods.
- It's important to pay close attention to program design: while a digital Public Distribution System (PDS) can detect and monitor corruption, this oversight should be comprehensive, spanning the entire supply chain, rather than solely targeting one aspect of the system as being solely responsible.
- Enhancing storage capacity and implementing calibrated weighing equipment in fair price shops has become crucial for ensuring consistent and uninterrupted supplies, as well as efficient sales.
- Boosting the turnover and profitability of fair price shops, providing credit to facilitate regular procurement and sales, and conducting frequent monitoring of retail transactions are essential to effectively address and prevent diversions and other malpractices such as contamination.
- Increasing the working time of fair price shops can also ensure more supply of products.
- It is imperative to regularly update the PDS system with compliance and regulatory requirements specific to product quality standards in Kerala.

- Engaging employees, customers, and stakeholders to share their perspectives on product quality concerns and recommendations is vital.
- Incorporating feedback mechanisms within the PDS system for ongoing enhancements is crucial.
- The incorporation of traceability mechanisms into the PDS system is essential for overseeing product origins, production processes, and quality assurance measures.
- The implementation of a proficient product data management system in Kerala has the potential to elevate product quality standards through a focus on accuracy, accessibility, integration, and ongoing enhancements.
- The establishment of a digital PDS system in Kerala is crucial for ensuring the consistent distribution of essential goods to the population.
- The digital system will facilitate the monitoring of goods from warehouses to recipients, upkeep of transaction records, detection of anomalies, and promotion of transparency.
- Regular audits are imperative for detecting discrepancies, and an SMS alert system can serve as a reminder to beneficiaries regarding entitlements and distribution timelines for adherence to the system.
Establish a feedback mechanism for PDS beneficiaries to report any issues they may face.
- Introduce a digital platform to streamline the management of the PDS system.
- It is important to provide easy access to information on stock availability, prices, and distribution records.
- Transparency in procurement is crucial for preventing corruption, and we will achieve this by publishing details and involving stakeholders.
- Transparency plays a significant role in promoting accountability, building trust, and improving outcomes within the PDS system.

4.3 CONCLUSION

The Public Distribution System (PDS) in Kerala has improved its efficiency and transparency. The implementation of digitalization and computerization has significantly contributed to enhancing the effectiveness and transparency of the PDS system across India.

Despite facing challenges such as miss-targeting and corruption, the PDS has adapted by introducing targeted schemes to reach the most vulnerable populations. The major challenges faced by PDS are irregular supply and lack of quality of commodities. Kerala haven't utilised the full potential of digitalised PDS. People are facing hindrances in buying goods due to technical errors ,steps should be taken to improve the software .While ongoing improvements are necessary, Kerala's PDS serves as a vital component in advancing food security initiatives and ensuring equitable access to affordable and nutritious food for all citizens.

Kerala's PDS demonstrates commendable operational efforts, including initiatives aimed at targeting vulnerable populations and raising consumer awareness. Compared to other states, Kerala boasts higher coverage, better beneficiary targeting, and lower levels of corruption in its PDS. This reflects the state government's strong commitment to guaranteeing food security for its citizens, resulting in the efficient functioning of its PDS. The Public Distribution System in Kerala exemplifies a remarkable blend of efficiency and transparency, establishing itself as a model for effective food distribution mechanisms. It stands as a beacon of effective governance, ensuring subsidized essential food items are accessible to all citizens. While ongoing efforts are required to address existing challenges, the system's unwavering dedication to transparency and consumer welfare solidifies its role as a cornerstone of socio-economic development in the state.

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Primary Data Collection -Questionnaire

Navigating Progress: A Critical Analysis of Efficiency and Transparency in Kerala's PDS.

We, the 3rd year BA Economics students of St. Teresa's College (Autonomous), Ernakulam, intend to conduct a comprehensive study on the Public Distribution System in Kerala. Our main objectives for the study are to check, understand, and analyse the efficiency, sufficiency, and transparency in Kerala's PDS since its establishment. For the success of our study, we seek your active involvement in this survey.

Your response will be used to:

Understand the usefulness of the Public Distribution System to the people of Kerala

Verify the efficiency of the system

Confirm the sufficiency of the products distributed through the system

Analyse transparency in this sector

Identify limitations in the system.

The information given will be kept confidential. Thank you for participating in this survey.

(Please tick appropriately)

1. Name :

2. Gender :

Male Female Other

3. Area of Residence :

Urban Rural

4. Type of local self -government:

Panchayat Municipality Corporation

5. Are you a Permanent Resident of Kerala :

Yes No

6.Are you a Ration card holder:

Yes No

7.Category of Ration card :

Yellow Pink Blue White

8.Number of members in family:

9.Do you avail the benefits of public distribution system monthly? If no why ?

10.Do you receive your monthly ration regularly?

11. If no in which of the following items do you face a shortage?

Kerosene

Rice

Wheat

Sugar

Other

12. In the scenario of shortage of food grains, which among the following are the reason for it

Malpractice of shopkeepers

Government inefficiency

Less harvest due to natural calamities

Technical errors

Other

13. Are you satisfied with the quality of the products received?

Yes No

14. Did you receive food supply during natural calamities?

Yes No

15.Have you ever encountered a situation where you found insects, pests or bugs in the distributed commodities?

Yes No

16. If yes, have you tried to inform the authority or try to bring attention to the matter?

Yes No

17. Are you aware of the procedure to do so?

Yes No

18. Were any actions taken to resolve the issue/matter?

Yes No

19. What steps could be taken to ensure better quality of food supplies?

20. Do you think PDS system plays an effective role in ensuring food sufficiency?

Yes No

21. To what extent do you think the PDS effectively reaches marginalised or remote communities in need of external commodities.

22. How satisfied are you with the response of PDS authorities to address and resolve issues or complaints related to distribution efficiency on a scale of 1-5.

1 – least satisfied

2

3

4

5- most satisfied

23. Do you believe there is a need for increased inspection to ensure quality?

Yes No

24. Do you think the subsidized goods are being resold the black market?

Yes No

25. Do you think there exist a regional disparity in distribution of goods?

Yes No

26. How satisfied are with the transparency in the distribution of subsidized goods?

1 – least satisfied

2

3

4

5 – most satisfied

27. Do you think the introduction of ONORC (One nation One Ration Card) is useful?

Yes No

28. Are you a smart ration card holder?

Yes No

29. Do you think it helps in increasing efficiency?

Yes No

30. Does biometric authentication contribute to PDS efficiency security?

Yes No

31. Are you availing the benefits of digitalised PDS system?

Yes No

32. Have you faced any technical error ?

Yes No

33. Do you think linkage of ration card with aadhaar has influenced the efficiency and transparency of PDS system?

Yes No

34. Are your families aware of the mechanisms available for checking the authenticity and validity of your smart ration card?

Yes No

35. Are your families aware of the mechanisms available for checking the authenticity and validity of your smart ration card?

Yes No