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PUBLIC DISTRIBUTION SYSTEM (PDS) AND FOOD SECURITY IN RURAL KERALA: A STUDY OF ERNAD TALUK, MALAPPURAM DISTRICT

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Abstract

The Public Distribution System (PDS) in Kerala Plays a crucial role ensuring food security for rural households by providing essential food grains and commodities prices.. Kerala has the unique distinction of being the forerunner among states in establishing universal PDS, ensuring equity and social justice. The introduction of the Targeted Public Distribution System (TPDS) in 1997, replacing the universal food distribution system, was a major policy shift in the wake of globalization. While the TPDS provided subsidized food grains to BPL families, several equally deserving APL families were thrown out of the scheme. Though the PDS ensured food grains to every deserving family in the state, the distribution system remained leaky. There was insufficient mechanism to monitor the off- take system. Mismanagement, corruption and bureaucratization were rampant during the earlier regime. The AePDS has radically transformed the rationing system in Kerala. The present study examined the efficiency and effectiveness of the Aadhar Enabled Public Distribution Mechanism (AePDS) established in 2015. Through the study, the author attempted to unravel the accessibility of PDF, service delivery satisfaction, and efficacy of the electronic system developed for the purpose. A select number of authorised ration dealers from E r n a d Taluk of Malappuram district were studied. The study was completed by selectively incorporating quantitative as well as qualitative data. The Researcher conducted in-depth interviews with ration card holders, shop owners, and taluk-level officials of the AePDS.

Keywords: Food Security, Public Distribution System, Fair Price Shop, Rural Food Insecurity

Introduction

Food is one of the most basic requirements for the survival of human beings. Ensuring food security is one of the top priorities of every country in the modern world. History has noted that hunger and poverty are the biggest enemies of food security. Historical records have documented a number of incidences where human society has struggled to deal with food insecurity (Asian Development Bank, 2013). Man Made disasters like world wars and natural disasters like famine have harmed food security). Various internationally recognized institutions, such as the Food and Agricultural Organizations (FAO), the United Nations World Food

Programme (WFP), and the International Fund for Agricultural Development (IFAD), are contributing to a multidimensional platform to achieve food security. Ensuring food security is a widely debated topic with the rapid growth of the population in the 21st century

International institutions have warned that the Sustainable Development Target of zero hunger in 2030 will become impossible due to the current adverse impact created by prolonged and interrupting pandemic challenges. The war between Russia and Ukraine has further deteriorated the world food supply. Both countries have a significant share of the world wheat market(Guterres, 2022). From this development, one must be sure that there are many reasons behind world food insecurity (Guterres, 2022). Here, this study would like to evaluate the possibilities of PDS and its challenges in ensuring rural food security in Kerala.

What does food security mean?

Food security is generally defined as access to food through an ensured supply system. Most of the food security definitions are by international institutions. In one of the publications of IFPRI authored by John Hoddinot, it has been highlighted that food security has approximately 200 definitions and 450 indicators (Hoddinott, 1999). According to the United States Department of Agriculture (USDA), "food security for a household means all members' access to enough food for an active, healthy life. Food security includes at a minimum (1) the ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies'' (Saikia & Dutta, 2018. In 1996, the World Food Conference defined food security as "it declares that food security exists 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" (Saikia & Dutta, 2018). This definition of food security thus covers all dimensions like availability, accessibility, utilisation, and absorption.

Food security in India

The awareness of food security has emerged in India since the outbreak of two major famines in the Bengal region of India. The geographical nature of India shows it was one of the most fertile lands on the earth. But the fertile geographical structure and abundance of the river system were not at all able to curb the famine throughout India. Twelve major famines broke out during British rule, and among them, the Bengal famine of 1943 is considered one of the biggest tragedies in the history of India. Records show that the Bengal famine alone was responsible for the death of approximately 3.8 million people (Sen, 1981). The negligence of colonial rule and exploitative British policy is the main reason for the deteriorated food security situations during the last phase of British rule. Failure of timely monsoon and irresponsible governance of the British led to consequences created by the famine becoming further high. Since India's independence, the high prevalence of food insecurity has become one of the major challenges faced by the policy. In order to address the food insecurity issues, the first five-year plan was given priority to the development of the agricultural sector.Since the green revolution, food production in India has improved on a large scale, shifting India's food deficit status into a food surplus state (Yadav & Anand, 2019).

Public Distribution System: A Principal Instrument of Food Security

The idea of the public distribution system is a colonial legacy of India. It started as a wartime rationing measure but was later extended to the urban areas to check the high inflationary situation. Since independence, policymakers in India have decided to continue this practice to fight against the high prevalence of chronic hunger. The core and basic principles of the public distribution system were laid down in the 6th Price Control Conference of 1942. (Swaminathan, 2003). Sixth five- year plan (1980-85) had envisaged that the public distribution system would "have to be so developed that it remains hereafter a stable and permanent feature of our strategy to control prices, reduce fluctuations in them, and achieve equitable distribution of essential consumer goods" (Ahluvalia, 2005). The public distribution system is a State-funded chain of stores that distribute basic food and non-food goods at relatively cheap rates to the poor sections of society (Thushar, 2018). PDS evolved as a system of managing scarcity by distributing food grains at affordable prices.

Progress Evaluation Commission, Government of India (1985) defined PDS as a "set up under which specified commodities of everyday use are procured and made available to consumers through FPSs in urban as well as in rural area"(Ahluvalia, 2005). The definition of a public distribution system shows it is bulky. Since the implementation of the Universal Public Distribution System and Revamped Public Distribution System, the scope of PDS was enlarged and extended all over the country. In India, the public distribution system is one of the crucial tools in welfare policies. It had a greater penetration and impact on the improvement and stability of food situations in the country.

Emerging trends and situational context of the 20th and 21st centuries demanded the public distribution system be updated to meet new challenges. Post-independence situations in India have forced Indian policymakers to adopt a Universal Public Distribution System to counter the high prevalence of chronic food insecurity in India (Das, 2015). Due to the public distribution system's welfare motive nature and huge operational cost, the efficiency and effectiveness of the system are outdated. Enlarged operation of public distribution to meet other populations at a subsidised rate made policy makers reconsider modifying the existing nature of the public distribution system. To extend the reachability of the public distribution system to geographically challenging and remote corners of the country, a new form known as Revamped Public Distribution System was introduced. Revamped PDS shifted from urban-natured rationing to rural and remote-centric operation (Das, 2015). Ensuring rural food security in a country like India is a significant requirement for overall development. Being dominated by an agri-based economy and rural-centric characteristics, much-needed attention has been required to address the rural food insecurity of India. The Statista Research Department report at the beginning of 2022 shows 905 million people living in rural India. India's rural areas are still persistent, with 32% of poverty-ridden people (Kanwal, 2020), due to diversified causes like lack of infrastructure, proper storage facilities, seasonal, cyclical imbalance, lack of purchasing ability, absence of social security measures, lack of compensation and awareness, etc. All these challenges have made the hunger of the producer not satisfied from his plate (Kanwal, 2020). The condition of non-food producers and the rest of the rural population is severe and pathetic. The pandemic resulting in a nationwide lockdown in India has destroyed everyday life, and the overall negative impact on the economy has widely been believed to be responsible for new challenges in food security (Pathak, Gope & Bader, 2020).

The food deficit situation of Kerala has been identified for this study. Being able to produce only 15% of the total domestic demand, this State has a history of relying on the better-performing public distribution system to meet the overall food grain demands (Venu, 2020). Western Ghat-influenced terrains and people's engagement in growing primary non-grain cultivations like rubber, coconut, and arecanut had made the rural population in Kerala extremely vulnerable to food insecurity. This study strongly believes that the universal presence of the Kerala model of public distribution system would be beneficial towards ensuring food security in rural Kerala. Kerala is one of the very few states in India with an excellent public distribution system. Introducing an electronic-enabled public distribution system has brought more structural and functional modifications to the system (Nair, 2014).

Objectives Of the study

1. To investigate the efficiency and effectiveness of the electronic-enabled public distribution system.
2. To Analyze the role of public distribution system in improving rural food security needs.
3. To identify the accessibility challenges the rural population faces in meeting food security.

Research Methodology

The area of the study was Ernad taluk of Malappuram district. Both quantitative and qualitative methods have been used for the study. Fifteen remotely located ration shops were selected out of the total 177 Fair Price Shops (FPS). From each FPS, 10 ration cardholders were selected transportation. The total sample size of the study was 100.

Data has been collected by administering closed-ended questionnaires in Malayalam. A simple random sampling technique was used to collect the data. A total of 100 respondents were selected, and questionnaires

were given. Questions were set according to the Likert scale method. A Likert scale is a psychometric rating scale used to measure opinions, attitudes, or behaviors. It consists of a statement or a question, followed by a series of five or seven answer statements. Respondents choose the option that best corresponds with their feelings about the statement or question.

Results and Discussions

The objective of the study has been divided into three major variables. They are service delivery satisfaction, electronic initiative, and the accessibility and availability of public distribution systems by the respondents. Each variable has further split into a set of questions. Likert's five-point scale ('strongly agree, agree, neutral, disagree and strongly disagree') responses were used here.

There is an individual mean value to each question, and the variable mean value will be calculated through the aggregate mean value of the question set of particular variables. The overall mean value is used to understand the overall people's perception of the performance of government programmes.

The mean value between 1 and 2 indicates positive perception, neutral if it comes closer to 3, and negative if it crosses 4 and 5. The mean value would be the best measuring tool to identify the average of the answer point. To get overall people's perception, the aggregate mean value was taken.

TABLE 1:Service Delivery Satisfaction in PDS

Parameter	Mean value
PDS food grains helped improve quality of life	1.28
Subsidized PDS food grains reduce family food expenditure	1.59
Timely and efficient distribution through fair price shop (FPS)	1.66
Allotted food grain quantity sufficient for one month	2.34
Quality of consumable food grains from PDS	1.22

Source: Primary Data

The effectiveness of the public distribution system was identified through the above five service satisfaction criteria. The first description is the public distribution system and quality of life. This question is intended to know whether the respondent benefited from the public distribution system or not. The mean value of 1.28 shows most of the respondents highly benefited from the service of the public distribution system

The second description is the continuation of the first one and about the relevance of subsidised food grains. Out of the total respondents, 83% belong to the BPL card category. The mean value of 1.59 denotes that most of the respondents are satisfied by availing subsidised food grains. In addition, Prime Minister Garib Kalyan Yojana (PMGKY) extended a subsidised benefit of 5 kg of rice and 1 kg of pulses during the pandemic period.

The third description concerns the timely and efficient food grain distribution through FPS. The mean value of 1.66 shows that the people have a positive attitude toward the service delivery pattern PDS and they also have a positive attitude towards the FPS owner's service. The pattern of precautionary measures taken since the introduction of the electronic initiative and the taluk level, the National Food Security godown, played a major role in ensuring timely food grain supply to each ration shop.

The study shows that 66.7 percent of the respondents are satisfied with the present quantity of food grains allotted to them, while 32 percent are not satisfied with the food grains. Most of those who are unsatisfied are white and blue card owners (non-priority/ non-subsidy and priority cards).The mean value of the off-take of quality consumable food grains is 1.22. This shows that the respondents are highly satisfied with the quality of food grains. The study found that the quality of food grains distributed before the pandemic was poor, which improved during the pandemic.

The overall mean value of 1.22 shows that the present food grain distribution system has improved a lot in meeting the demand and aspirations of the people. It is also proved that; the public distribution system of Kerala is the most effective system among the Indian states. The political and administrative will to improve the system and the vibrant society are strong reasons behind the effective implementation of the public distribution system in Kerala.

TABLE 2:Effectiveness of electronic initiatives in PDS

Parameter	Mean value
Introduction pf e-PDS (Biometric Authentication System) is beneficial	1.32
Printed receipts from e-PDS enhance transparency	1.35
Mobile linked PDS helps track food grain availability	1.56
Satisfaction with electronic weighing machines	1.44

Source: Primary Data

This table represents the respondents' views on electronic applications and the mode of usage in the FPSs. The awareness about the e-pose machine was checked with the first description. The mean value of 1.32 shows that most respondents are well aware of the implementation and impact of e-pose machines in PDS. The respondents appreciated this development as it helps reduce system leakages. The e-pose machine or biometric authentication system was to identify and facilitate the food grains to actual beneficiaries only. This initiative was popularised throughout India to avoid bogus cards and manual manipulations. About 86 percent of the respondents strongly believed that introducing e-pose machines is effective in all ways.

The second description is the continuation of the e-pose machine, and the intention was to know whether the respondents were aware/properly checking the printed receipt of food grains from the ration shop allotted to them. About 77 percent of the respondents agree that they are aware of it. The mean value of 1.56 shows that the respondents agree that the system is improving and getting transparent.

The third description was about the mobile message alert for availing the food grains from the ration shop. This message includes the family member's name, the allotted quantity of food grains, and the time and date of supply. This initiative was implemented by linking Aadhar numbers with their ration cards. This process will help the beneficiaries to ensure the accessibility of assured monthly allotment of food grains to the respective cardholders. About 90 percent of the respondents opined that they are receiving messages on time.

The last description is about using electronic weighing used in FPSs to measure the food grains. Conventional balance was used earlier to measure the weight of food grains. The accuracy of the balance was disputed by the cardholders earlier. With the introduction of digital weighing machines, transparency, and accuracy were ensured. About 96 percent of the respondents opinioned that their respective ration shops use digital weighing machines.

TABLE 3: Accessibility and convenience of PDS

Parameter	Mean value
Distance between ration shops and Home	3.49
Mode of transport of food grains from PDS outlets to home	1.99
Proper road connectivity	1.13
Difficulty in transporting bulk quantities from PDS to home	2.75

Source: Primary Data

This variable aimed to understand rural people's convenience, ability, and constraints in accessing nearby ration shops. The researchers studied the impact of the geographical features like hilly areas in Ernad taluk, the availability of road connections and the mode of transportation facility, and other complex issues rural beneficiaries face. Out of the total respondents, 61 percent are below the poverty line. For them, owning a vehicle and hiring is a challenge. Only 22 percent of the respondents have a vehicle, and almost 55 percent depend on taxis because of the difficulty of covering long distances. As per the data, 23 percent of the people are still manually transporting the food grains. Besides this, 70 percent of the respondents' houses are more than 2 km from the ration shop. This hampers the easy transportation of food grains from the ration shop to their dwelling place. About 48 percent of the respondents shared that they face difficulty accessing food grains. There should be FPSs available to people within a radius of 2 km. The need for enhancing appropriate measures to address the remote area difficulty is significant.

Findings and suggestions

1. The overall satisfaction with P DS services is positive, with beneficiaries acknowledging the improvement in their quality of life.
2. The quality of food grains is well received, but the quantity allotted per family is sometimes insufficient.
3. Timely and efficient distribution is generally satisfactory but could be enhanced further.
4. The introduction of e-PDS and biometric authentication has improved transparency and efficiency.
5. Printed receipts and mobile linked tracking systems have increased trust among beneficiaries.
6. Electronic weighing machines have reduced discrepancies in food grain distribution
7. While road connectivity is good, the distance to ration shops remains a concern for some beneficiaries.
8. Transportation of bulk food grains is challenging, especially for families residing in remote areas.

Suggestions for improvement:

1.Ensure that the quantity of food grains distributed per household is sufficient to meet monthly needs, reducing food insecurity.
2.Improve the reliability of e-PDS, provide training to beneficiaries on digital tracking, and introduce mobile alerts for ration availability.
3.Establish additional fair price shops in remote areas and introduce doorstep delivery services for elderly and disabled individuals.
4.Implement a transparent complaint resolution system, including a toll free helpline and online feedback mechanisms, to address issues properly.

Conclusion

The PDS in Kerala constitutes the foundation on which the entire food security system is founded. The state has the distinction of running the best PDS in India in terms of efficiency and access. The PDS has gone a long way in Kerala during the last decade. Modernization and digitization activities, renovation and automation of ration shops and implementation of the E-Ration Card Project has revolutionized the sector. The issue of ATM card type ration cards, introduced One Nation One Ration Card for easy accessibility of ration from anywhere and installation of E-Poss machines in all fair price shops in the State and an efficient enforcement mechanism ensured a better delivery system. The state ensured universal coverage by issuing ration cards to almost all sections of the people and families even beyond the scope of NFSA. The state ensured end to end computerization, grievance redressal portal, supply chain management from Food Corporation of India to the authorized ration dealers-level, GPS tracking of vehicle carrying food grains and CCTV installation for efficient and transparent service delivery. The study shows that revolutionary changes has occurred in the PDS in Ernad Taluk. The priority sectors were particularly benefited by the revamped system. The system could ensure better availability and accessibility. Availability and utilization were not covered in the study as it requires extensive research based on scientific tools and techniques.

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