

# **A Study on Public Distribution System To Mitigate Poverty among The Households in Kottayam District**

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## **ABSTRACT**

The question of Food security is getting more attention in the world today. To reduce the poverty level among the general public and to bring food security, the government of India promoted Public Distribution System for covering the basic essential goods at supported rates. This paper flow a light of PDS in Kerala and in thus a way to understand how this scheme meets the food requirements of the weaker sections that were not able to find for themselves owing to the huge market fluctuation of pricing. The study exclusively based on primary data, a Multistage Purposive Sampling Technique has been used and a personal interview has been adopted. 485 households were selected for the survey. Basic descriptive methods, Food Security Index and Multiple Linear Regression model were used to analyze the role of the public distribution system to mitigate poverty among rural households in Kottayam district, Kerala. The study results revealed that, the socio-economic factors influence the PDS card holders to purchase more. Both PDS and open market are necessary for the people for food security there by eradicating of poverty. As a result, this scheme helps to subdue poverty among the households in the study area.

**KEY WORDS:** PDS, Food Security, Poverty, Food Consumption Score

## **1. INTRODUCTION**

PDS is primarily a social welfare and anti-poverty programme of the Government of India. It provides rational amount of basic food items and other non- food products at below market prices to consumers through a network of fair price shops. It is not possible to neglect the PDS in India, because, majority of the Indian population depend on this system for their living. The focus and coverage of PDS have changed widely over the years. In the year 1992, the Revamped PDS was introduced. Under this system people were allowed to purchase essential food items from the PDS. After the Chief Ministers Conference held in 1996, a revised scheme known as the Targeted PDS was introduced. Under the TPDS, a two tier subsidized pricing system is followed. Card holders are classified as Above Poverty Line (APL) and Below Poverty Line (BPL). The TPDS was further extended in 2000 to include the Anthodia Scheme. Central and State Governments have been actively involved in steering the operation for the success of the PDS. Kerala is considered as a model for the implementation of the PDS programmes, because it helps to eradicate poverty and improves standard of living of the people below the poverty line. Hence the efficiency and impact of PDS in the life of people can be analyzed through the research, with special reference to Kottayam District. So, this studies analyzing the Role of Public Distribution System to mitigate poverty among the households in Kottayam District. Mitigating poverty means fruitfulness of the PDS scheme – whether it has reached the right people and whether the right people are using the scheme to their fuller satisfaction and by this scheme whether they are getting enough food security.

Measuring food security in an accurate and cost effective way is important for targeted food relief and for designing anti-poverty programs. The Food Consumption Score (FCS) is an index that was developed by the World Food Programme (WFP) in 1996. It is the most commonly used food security indicator, and measures current food consumption. The FCS is calculated by examining how often households consume food items from different food groups during a 7 day reference period, and weightage also given to these groups. For FCS calculation the household consumption information over 9 food groups for last 7 days has been used. Then converted these 9 food groups into three standard groups viz; 1. Acceptable 2. Borderline and 3. Poor. The following food groups, viz, (1) cereals and tubers, (2) vegetables, (3) fruits, (4) meat and fish and eggs, (5) pulses/legumes/nuts, (6) milk and milk products, (7) oil/fats, (8) sugar/honey and (9) miscellaneous food items were used to convert into the standard three groups.

## 2. REVIEW OF LITERATURE

The close linkage between public Distribution System and Poverty eradication in developing countries like India is closely examined by **Rajendran et.al (2015)**. According to this study data, the percentage of the total rural and urban population that is poor declined by 23.4 percentage points from 1993-1994 to 2011-2012. The data was also confirmed by **Anjani et.al (2014)** in their paper "PDS in India: Implications for poverty and food security" and attempted to assess the impact of PDS in improving the economic access of the poor to essential food grains and consequent nutritional outcomes over the past decade and half. The study shows that the PDS contributed to overall reduction in poverty by 3.5 per cent points in 2011-2012. And the share of PDS in calorie consumption has been increasing continuously since 2004-2005. There is enough and more data to prove the claims that the impact poverty reduced from 35 to 33 percent in all India level due to PDS purchase **Nirankar et.al (2010)**. **Suryanarayana (2001)** also found that the utilization of Public Distribution of food grains reduced poverty from 59.7 percent in 1970-71 and 25.43 percent in 1993-94. **Kamini (2013)** in her study found that individuals with higher incomes spent less of their total income on food as a percentage. Also those who have higher education spent the least percentage of their income on food. Consumers those who have ration cards spent the highest percentage of their income on food. Also the study shows access to food in Vadamanappakkam was minimally impacted by different economic and social factors such as income levels, education levels, role in food system and the use of ration cards. This is due to the most communities valued food as a basic necessity and therefore it is a top priority for most individuals as it ensures their survival. Consumption level to assess the enhancing of PDS was studied by different authors. There were clear evidences to showcase that PDS meets consumption needs. **Ayyappan et.al (2014)** in their study found that PDS system has increased overtime in meeting the consumption requirements of the households. **Anjani Kumar et.al (2016)** observed that the contribution to cereal consumption and calorie intake went up considerably as the year's moves from 1994 to 2012. **Himanshu (2013)** in his working paper "poverty and food security in India" shows that there is a positive relationship between poverty reduction and the improvement in PDS. PDS households showed higher calorie intake among all quintile groups in rural as well as urban areas. This paper also shows that the consumption of rice and wheat has increased for households which access to the PDS compared to non- PDS households. The report on impact of reforms of PDS in Chhattisgarh on food security by **Krishnamurthy et.al (2014)** showed that, PDS historically has been criticized as being highly inefficient. However, Chhattisgarh was among those that have improved distribution of PDS food grains through a number of reforms. They found that consumption of PDS grains increased and the average calories per capita obtained from PDS rice increased as a result, PDS helped to reduce the food insecure population. **Kumar (1979)**

empirically analyzed the impact of a food price subsidy programme on levels of food consumption and nutrition of a low income population in Kerala. The study report showed that subsidized food distribution programme increase real incomes and food consumption of low income group's also increasing aggregate demand for food.

### **3. OBJECTIVES OF THE STUDY**

- To study the socio-economic factors that influence PDS card holders to purchase more from the PDS shops.
- To examine the effectiveness of the PDS in increasing the food security of the households in the study area.

### **4. METHODOLOGY**

The study will be based exclusively on Primary data. To collect Primary data, Multistage Purposive Sampling technique has been used and personal interview method was adopted. Selecting the Kottayam District of Kerala in the first stage, blocks in the second stage, Panchayat in the third stage and finally the households at stage four.

### **5. RESULTS AND DISCUSSION**

Table 1 depicts the socio-economic characteristics of the PDS card holders. It is important to ascertain the role of male and female in purchasing the commodities from the ration shops. It is familiar that female members have great influence on the purchasing behavior of the family. Purchase of things from ration shops also not exceptional. It could be found from the present study that more than half (60.62%) of the respondents were female. The panchayat wise analysis showed that, the share of the female respondents were more in all these panchayats. Out of 485 respondents under the study, 39.38 percent were from male category and 60.62 percent belonged to female category. Age is an important factor, which also decides the purchasing performance of an individual and which helps to establish the relationship with the market. The present table (Table: 1) narrates the age status of the respondents. In the study, it was found that, majority of the respondents in all the categories were in the age group of 35 to 60. Out of 485 respondents, 38 respondents were in the age group of 0 to 35, 300 respondents were in the age group of 35 to 60 and 147 respondents were in the age group of above 60. The panchayat wise analysis also evidenced that a majority of the sample respondents were in middle age group.

Another socio-economic factor, which can influence the purchase from PDS outlets, is the type of community from which the respondent belonged to. In the present analysis the prevailing communities living in the area are GC, OBC, SC and ST. The cross-tabulation between the community and panchayat results shows that 40.41 per cent of the people belonged to OBC community. In Maravanthuruth panchayat, 46.69 per cent of the people were from OBC category and in Melukav panchayat 95.89 per cent people fell under ST category. Type of family is an important economic factor that decides the household's dependence for the purchasing of food commodities. From the table, a total of, 99.18 percent people belonged to nuclear family and only 0.82 per cent of the sample households belonged to joint family system. This situation was uniform among the panchayats also.

Family size is another significant economic factor that decides the purchasing nature of a household. It is found that out of 485 households, 302 households have an average member between 3 and 4. About 20 per cent of the households consists of 1-2 members. The highest percentage of households came under 3-4 members, that was in Maravanthuruth panchayat.

**SOCIO-ECONOMIC CHARACTERISTICS OF CARD HOLDERS**

SL.NO	SEX	PANCHAYATS			TOTAL
		MELUKAV	UDHAYANAPURAM	MARAVANTHURUTH	
1	Male	23 (31.51)	41 (32.80)	127 (44.25)	191 (39.38)
2	Female	50 (68.49)	84 (67.20)	160 (55.75)	294 (60.62)
<b>Age</b>					
1	Young	6 (8.22)	10 (8.00)	22 (7.67)	38 (7.84)
2	Middle	43 (58.90)	74 (59.20)	183 (63.76)	300 (61.86)
3	Old	24 (32.88)	41 (32.80)	82 (28.57)	147 (30.31)
<b>Community</b>					
1	GC	1 (1.37)	47 (37.60)	32 (11.15)	80 (16.49)
2	OBC	2 (2.74)	60 (48.00)	134 (46.69)	196 (40.41)
3	SC	0 (0.00)	18 (14.40)	46 (16.03)	64 (13.20)
4	ST	70 (95.89)	0 (0.00)	75 (26.13)	145 (29.90)
<b>Type of family</b>					
1	Joint	1 (1.37)	1 (0.80)	2 (0.70)	4 (0.82)
2	Nuclear	72 (98.63)	124 (99.20)	285 (99.30)	481 (99.18)
<b>Family Size</b>					
1	1-2	20 (27.40)	19 (15.20)	62 (21.60)	101 (20.82)
2	3-4	50 (68.49)	84 (67.20)	168 (58.54)	302 (62.27)
3	4-6	3 (4.11)	22 (17.60)	57 (19.86)	82 (16.91)
	Total	73 (100)	125 (100)	287 (100)	485 (100)

Source: Primary Data

**TABLE NO 1**

**OCCUPATION, MONTHLY INCOME AND MONTHLY EXPENDITURE PATTERN OF THE SELECTED HOUSEHOLDS**

SL.NO	OCCUPATION	PANCHAYATS			TOTAL
		MELUKAV	UDHAYANAPURAM	MARAVANTHURUTH	
1	House Wife	37 (50.68)	76 (60.80)	136 (47.39)	249 (51.34)
2	Daily Wage	25 (34.25)	20 (16.00)	108 (37.63)	153 (31.55)
3	Agriculture	4 (5.48)	8 (6.40)	9 (3.14)	21 (4.33)
4	Service Sector	0 (0.00)	8 (6.40)	1 (0.35)	9 (1.86)
5	Business	1 (1.37)	6 (4.80)	6 (2.09)	13 (2.68)
6	Others	6 (8.22)	7 (5.60)	27 (9.41)	40 (8.25)
<b>Monthly Income</b>					
1	Less than 10000	62 (84.93)	48 (38.40)	211 (73.52)	321 (66.19)
2	10000 -20000	9 (12.33)	38 (30.40)	69 (24.04)	116 (23.92)
3	20000 – 30000	0 (0.00)	11 (8.80)	5 (1.74)	16 (3.30)
4	30000 – 4000	0 (0.00)	7 (5.60)	0 (0.00)	7 (1.44)
5	Above 40000	2 (2.74)	21 (16.80)	2 (0.70)	25 (5.15)
<b>Monthly Expenditure</b>					
1	Less than 10000	67 (91.78)	117 (93.60)	272 (94.77)	456 (94.02)
2	10000-20000	2 (2.74)	7 (5.60)	11 (3.83)	20 (4.12)
3	20000-30000	3 (4.11)	1 (0.80)	2 (0.70)	6 (1.24)
4	Above 30000	1 (1.37)	0 (0.00)	2 (0.70)	3 (0.62)
	Total	73 (100)	125 (100)	287 (100)	485 (100)

Source: Primary Data

**TABLE NO 2**

Table 2 explains the occupation, monthly income and the monthly expenditure pattern of the selected households. Occupation decides the income level of the individual and ultimately their purchasing behavior. In this study, more than half of the respondents were house wives. From the study, it is noted that 31.55 per cent were engaged in daily wage and it was their main source of income. 8.25 per cent of the people were engaged in other types of occupations like petty shops, sweeper, *MGNRES*, helper in various institutes, fishing etc. Only 4.33 per cent of the samples were engaged in agriculture. In Maravanthuruth, the highest number of people were engaged in daily wage for their major portion of income (37.63%).

Monthly incomes of the households are also an important factor that determines the economic status of the households. Table 2: highlights the distribution of the monthly income of the selected respondents. Here the distribution values have been classified into five categories. In total, more than half of the respondents (321) have their monthly income range below Rs.10000. Nearly one fourth (23.92%) of the respondents had their monthly income range between Rs. 10000 and Rs.20000. In panchayat wise classification, close to three fourth of the households in Maravanthurtuth had their monthly income below Rs.10000 (73.52%). The reason for this was that, majority of the people were economically backward and they depend on daily wages for their day to day activities. That income was also insufficient to meet their day-to-day needs. In Udhayanapuram panchayat, 16.80 percent respondents have more than 40000 Rupees as their monthly income, because the people residing there have economically high status, and many were employed in service and business sectors.

The same table has also demonstrated the distribution of the value of expenditure of the surveyed respondents. The distribution of monthly expenditure has been classified into four categories. In total, 94.02 percent of the respondents' expenditure was less than Rs.10000 which was followed by Rs. 10000-20000 (4.12 %). It is clear from the panchayat wise analysis too that, the level of expenditure in the range of below Rs.10000 was much more (94.77%) in Maravanthiruth panchayat compared to the rest of the panchayats. The pattern seems to be followed by Udhyanapuram panchayat (93.60%) also.

Table 3 narrates the literacy levels of the selected households. Educational status of the sample households is another socio-economic factor that can influence the purchase from PDS outlets. This study has found that majority of the respondents (79.79) in all the sample panchayats have primary and higher secondary level education (7.42%). About 7 per cent have qualified with a degree. Further, the respondents with no formal education (1.65 %) were little high among Maravanthuruth panchayat than rest of the two places.

**LITERACY LEVELS OF THE SELECTED HOUSEHOLDS**

SL.NO	EDUCATION LEVEL	PANCHAYATHS			TOTAL
		MELUKAV	UDHAYANAPURAM	MARAVANTHURUTH	
1	Informal Education	1 (1.37)	1 (0.80)	6 (2.09)	8 (1.65)
2	Primary Level	61 (83.56)	89 (71.20)	237 (82.58)	387 (79.79)
3	Secondary Level	3 (4.11)	0 (0.00)	0 (0.00)	3 (0.62)
4	Higher Secondary	4 (5.48)	13 (10.40)	19 (6.62)	36 (7.42)
5	Degree	2 (2.74)	15 (12.00)	17 (5.92)	34(7.01)
6	Diploma	2 (2.74)	6 (4.80)	7 (2.44)	15 (3.09)
7	Others	0 (0.00)	1 (0.80)	1 (0.35)	2 (0.41)
	Total	73 (100)	125 (100)	287 (100)	485 (100)

Source: Primary Data

**TABLE NO 3**

Table 4 presents determinants of the total purchase of commodities from PDS. it is observed that the socio economic characteristics such as the type of card, educational level, occupation, number of children in the families, marital status of the respondents, the total monthly income of the respondents, age, available quantity, community, sex, assets and income of the households were the major determinants. To find the major determinants, multiple linear regression model was used. In which the total kilogram of purchase from PDS was taken as dependent variable. The major independent variables used in the model are the type of card, educational level, occupation and number of children in the family, marital status of the respondents, the total monthly income of the respondents, age, available quantity, community, sex and assets income of the households. Multicollinearity among the variables was also checked before the estimation. As the F value (32.278) was significant at one percent level the construction of the model was good. The R square 0.429 indicated that the above said variables together influence the purchase by 43 per cent. Among the independent variables, types of card, total number of children in the family, marital status and sex of the respondents, self - sufficiency were significant at one per cent level. While occupation of the respondents was significant at ten percent level, and the rest of the independent variables like education level of the households, monthly income of the households, age-wise classification, community of the respondents and yearly asset income were significant at ten per cent level.

**MULTIPLE REGRESSION ANALYSIS OF SOCIO ECONOMIC VARIABLES WITH TOTAL KILOGRAM OF PURCHASE FROM PDS**

SL.NO	INDEPENDENT VARIABLES	B	STD. ERROR	T	SIG.
1	Constant	.568	1.498	.379	.705
2	Types of card	2.599	.287	9.053	.000
3	Educational level	-.008	.123	-.067	.946
4	Occupation	-.162	.095	-1.709	.088
5	Total Child	.366	.137	2.665	.008
6	Marital Status	1.278	.253	5.053	.000
7	Total Income	8.534	.000	.388	.698
8	Age	-.117	.240	-.486	.627
9	Self Sufficiency	-1.431	.391	-3.658	.000
10	Community	.027	.149	.181	.856
11	Sex	.856	.278	3.077	.002
12	Assets Value	1.345	.000	.001	1.000
	R Square	.429			
	Adjusted R Square	.416			
	F	32.278			.000

Source: Primary Data

Significant at one percent level, Significant at five percent level, and significant at ten percent level

**TABLE NO 4**

The present table clarified that, for the improving consumption pattern of the sample households, they have to rely on open market. If the surveyed households depend only open market for their food consumption, then 27.9 percent from BPL, 90.4 from AAY and 6.4 per cent from APL they fell under severe food insecurity; 0.7 percent from BPL and 51.2 percent from APL were satisfied with the available food articles from the open market. It means they were at the stage of acceptable condition. They come under the category of food secured people when they are consuming only from the open markets.

If all the three categories of households are consuming from the PDS and the open market, there are no food insecure people in the selected households that is no poor category. In the study, 24 households are in slight food insecure stage and 461 households are food secured people; also there was no one in the stage of poor. So it is concluded that for the food consumption and for the eradication of poverty, both PDS and open market were necessary for the people. So from the evaluations it is said that PDS system is considered as a strong weapon in the hands of the Government for providing food and non-food items to the poor and the oppressed. The role of Public Distribution System in ensuring food security to the poor people in India at the time of poverty is very essential. Public Distribution System promises food for all at all times. It helps to eradicate the absolute mass poverty and lays the foundation for the growth and development of the society. In nutshell, PDS scheme plays a vital role in reducing the global hunger levels of India and ensure the basic ‘‘right to food’’ to all at subsids prices and also at free of cost to the possible extent.

## **6. CONCLUSION**

To conclude the role of Public Distribution System in ensuring food security to the poor people in India is vital. It helps to eradicate absolute mass poverty and lays the foundation for the growth and development of the society. PDS is primarily a social welfare and antipoverty programme of the Government of India. Essential commodities like rice, wheat, sugar and other non-food products are supplied to the people under PDS at below-market prices. In this study, the researcher has adapted Kottayam District of Kerala and studied how the PDS works and benefits the poor people. Since the beneficiaries of the PDS belong to the people of low educated and low income, PDS helps them to save their income and thus increases their standard of living by eradicating poverty.



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