

Impact of E-PoS Machines in Ration Shops

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ABSTRACT

The Food & Civil Supplies Department of Kerala Government has been battling various issues like corruption, misuses of rations allotted to the Fair Price Shops by the vendors, misappropriation of commodities by shadows who use fake ration cards. As a solution to track the issue of flow of ration in the FPS to the beneficiary the government has introduced electronic point of sale (E-PoS) machines from January 7, 2018. The implementation of E-PoS machines has invoked both criticisms as well as appreciations from different strata of the society. This paper attempts to draw light on the impact of E-PoS machines introduced in ration shops of Kerala from the view point of beneficiaries and the objectives of the paper is to analyse the level of satisfaction of the beneficiaries regarding the performance of ration shops before and after the introduction of E-PoS machine and to highlight the major problems associated with the performance of ration shops after introduction of E-PoS machines.

1. Introduction

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.

Kerala State has the privilege of having the best system of Public Distribution in the whole country. The system is evenly spread over the whole state without any distinction between urban or rural to ensure equitable distribution of the food grains at a fairly low cost to all people especially to the weaker sections of the population. There is a very good network of wholesale and retail outlets for the distribution of rationed articles under the Public Distribution System.

In order to make the Rationing system high tech the government implemented E-POS machine in Ration Shops in Kerala. With this, the public distribution mechanism in the state will move into the Aadhaar-enabled PDS (AePDS) mode. As part of enforcing the National Food Security Act (NFSA), the e-POS machines are expected to bring in transparency in the distribution of the food grain quota and check the corruption that has been rampant in PDS.

Under the new system, ration goods will be distributed to beneficiaries after validation of biometric identification.

1.1 Significance of the Study

This paper attempts to draw light on the impact of E-PoS machines introduced in ration shops of Kerala from the view point of beneficiaries and the objectives of the paper is to analyse the level of satisfaction of the beneficiaries regarding the performance of ration shops before and after the introduction of E-PoS machine and to highlight the major problems associated with the performance of ration shops after introduction of E-PoS machines.

1.2 Scope of the Study

The study is conducted among BPL ration beneficiaries residing in Paipra Gramapanchayath of Ernakulam district. Total BPL households in this Panchayath are 4981 approximately, Simple random sampling of 1% of the total population were used for selecting the sample. 50 respondents were selected for the study. Interview schedule is used for the data collection.

1.3 Objectives of the Study

The major objectives of the study are:

- To examine the satisfaction level of the respondents regarding the rationing system after the implementation of E-POS machine.
- To examine the major problems associated with the implementation of E-POS machine.

1.4 Hypotheses of the Study

The major hypotheses of the study are;

- There is no significant difference in the satisfaction level of the beneficiaries after the implementation of e-pos machine.
- There is no significant difference in the problems faced by the beneficiaries after the implementation of e-pos machine.

1.5 Methodology of the Study

- Selection of sample

The study is conducted among BPL ration beneficiaries residing in Paipra Gramapanchayath of Ernakulam district. Total BPL households in this Panchayath are 4981 approximately. Simple random sampling of 1% of the total population was used for selecting the sample. 50 respondents were selected for the study.

- Source of data

Data were collected using primary and secondary sources. Primary data were collected using interview

schedule. Secondary sources include published journals, magazines, books and from various websites.

Tools of analysis

The data collected were suitably classified and analysed keeping in view the objectives of the study. For the purpose of analysis, statistical tools like percentages and averages were used. Freidman Chi-Square and T test was applied to test the hypotheses.

1.6 Limitations of the Study

The study is completed in the midst of certain limitations and constraints. The following are some of the limitations:

- Availability of time and resources are important limiting factor for the study.
- Reliability of the study depends on the reliability of the information given by the respondents.
- Inherent limitations of sampling technique have affected the study to a certain extent.

1.7 Analysis and Interpretation

Table 1.6(1) Age of the respondent

Age	Frequency	Percent
Below 20	7	14
20-40	17	34
40-60	17	34
Above 60	9	18
Total	50	100

Source: Primary data

The above table shows that (68%) of the respondents belong to the age group of 20-60 years.

Table 1.6(2) Gender Wise Classifications

Gender	Frequency	Percent
Male	19	38
Female	31	62
Total	50	100

Source: Primary data

The above table shows that majority of the respondents are female(62%) while only (38%) are male.

Table 1.6(3) Marital status

Marital status	Frequency	Percent
Single	7	14
Married	35	70
Widow/Widower	8	16
Total	50	100

Source: Primary data

Table 1.6(3) clearly shows that majority (70%) of the respondents are married. (16%) of the respondents are single or unmarried and only (14%) of them are widows/ widowers

Table 1.6(4) Occupations of respondents

Occupation	Frequency	Percent
Daily Wage Worker	8	16
Agriculture	18	36
Stationery Shop Owners	1	2
Student	6	12
Homemaker	17	34
Total	50	100

Source: Primary data

When respondents are classified based on their occupations it is revealed that (36%) among them are agriculturists, (34%) are homemakers, (16%) are daily wage workers, (12%) are students and only (2%) stationery shop owners.

Table 1.6(5) Annual Income of Family

Annual Income of Family	Frequency	Percent
Below 20000	16	32
20000-40000	26	52
40000-60000	7	14
Above 60000	1	2
Total	50	100

Source: Primary data

Table 1.6(5) depicts that (52%) of the respondents have annual income between the range of Rs.20000-40000, (32%) have income below Rs.20000, (14%) have income between the range of Rs.40000-60000 and only (2%) have income above Rs.60000.

Table 1.6(6) No. Of Family Members Having Aadhar Card

No.Of Family Members Having Aadhar Card	Frequency	Percent
All members	13	26
More than 1	37	74
Total	50	100

Source: Primary data

It is clear from table 1.6(6) that majority (74%) of the respondents are of the opinion that more than 1 of their family members have Aadhar card while only (26%) of the respondents have said that all of their family members have Aadhar card.

Table 1.6(7) Linkage of Aadhar Card with Ration Card

Linkage of Aadhar With Ration Card	Frequency	Percent
All members	13	26
More than 1	37	74
Total	50	100

Source: Primary data

From the table 1.6(7) it is evident that (74%) of the respondents have said that more than 1 of their family members have linked their Aadhar card with their ration cards while only (26%) of the respondents have opined that all family members with Aadhar card have linked it with their ration cards.

Table 1.6(8) Purchaser of Products

Purchaser of Products	Frequency	Percent
Card Owner	44	88
Any other family member having name in ration card	6	12
Total	50	100

Source: Primary data

The analysis has revealed that (88%) of the respondents are of the opinion that the products are purchased by the ration card owner of their family. On the other hand (12%) have opined that products are purchased by any other family member whose name is there in the ration card.

Table 1.6(9) Awareness of Working of E-POS Machine

Awareness	Frequency	Percent
Yes	43	86
No	7	14
Total	50	100

Source: Primary data

From the table 1.6(9) it is understood that (86%) of the respondents are aware of the working of E-PoS machine while (14%) have no awareness regarding its working and require help of somebody else.

Table 1.6(10) Receipt of Bill after Purchase

Receipt of bill after purchase	Frequency	Percent
Yes	20	40

No	30	60
Total	50	100

Source: Primary data

Table 1.6(10) highlights the fact that majority (60%) of the respondents do not get bill after making their purchase and (40%) receive bill after making purchase from their respective ration shops.

Table 1.6(11) Availability of products before and after E-POS machine

Products	Before		After	
	Mean Value	Rank	Mean Value	Rank
Rice	4.0200	3	2.4000	4
Sugar	4.2600	4	4.2600	5
Kerosene	4.7400	5	2.2400	3
Wheat	2.0000	2	2.0000	2
Wheat Flour	1.1400	1	1.0000	1

Source: Primary data

Table 1.6(11) shows mean values of the availability of products before and after the implementation of E-PoS machine. Friedman Chi-Square reveals that wheat flour is the most available product.

After the implementation of E-PoS machine availability of rice and sugar is reduced.

Table 1.6(12) Satisfaction level of respondents

Factors	Mean	Std. Deviation	T value	P value	Rank
Availability Of Product	2.320	.71257	-6.748	.000	2
Prescribed Quantity	1.980	.51468	-14.01	.000	5
Behaviour Of Shop Dealer	1.880	.32826	-24.12	.000	7
Availability Of Bill	2.200	1.48461	-3.810	.000	3
Finger Print Scanning	1.800	.98974	-8.573	.000	8
Aadhar Card Linkage	2.060	.86685	-7.668	.000	4
Working Of Machine	1.940	.93481	-8.018	.000	6
Messaging System	4.200	.67006	12.663	.000	1
Time Taken For Purchase	1.800	.98974	-8.573	.000	8
Quality Of Product	1.540	.50346	-20.50	.000	9

Source: Primary data

The above table 1.6(12) reveals that majority of the respondents are satisfied with the messaging system as the mean value is greater than the central scale of measurement 3. Majority of the respondents are highly dissatisfied with the time taken for purchase and quality of product as the mean values

of these variables are less than the central score of scale of measurement 3 with p value .000.

Testing of Hypothesis- Overall satisfaction of respondents

H₀₁: There is no significant difference in the satisfaction level of the beneficiaries after the implementation of E-PoS machine.

Table 1.6(12a)

Testing of Hypothesis- Overall satisfaction of respondents

Summated Mean	Standard Deviation	T value	P value
2.1720	.74537	-3.513	.007

Source: Primary data

Table 1.12(1) reveals that the mean value is significantly less than the central score of scale of measurement 3 (p value is 0.007), so the hypothesis is accepted and it can be

concluded that there is no significant difference in the satisfaction level of the beneficiaries after the implementation of E-PoS machine.

Table 1.6(13) Problems faced by Respondents

Problems	Mean	Std. Deviation	t-value	P value	Rank
Standing In Queue	4.600	.4948	22.86	.000	1
Lack Of Proper Inspection	3.960	1.009	6.725	.000	4
No Provision For Representative Purchasing	4.360	.6928	13.880	.000	2
Lack Of Aadhar Card	2.820	1.172	-1.085	.283	6
Black Marketing	4.080	.7782	9.812	.000	3
Non-Display Of Stock Details In Ration Shops	4.600	.7284	15.532	.000	1
Working Time Of Ration Shops	3.200	.6700	2.111	.040	5

Source: Primary data

The above table 1.6(13) shows the mean value of the problems faced by the respondents. Ranks are assigned on the basis of mean values. The main problem faced by the respondents is standing in queue (mean value 4.600) and non-display of stock details in ration shops (mean value 4.600). Working time of ration shop is not a problem for the respondents as the mean value is greater than the central score of scale of measurement 3.

Table 1.6(14) Filing of Complaints

Filing of Complaints	Frequency	Percent
Yes	20	40
No	30	60
Total	50	100

Source: Primary data

The analysis of table 1.6(14) reveals that (60%) of the respondents have not filed any complaints while only (40%) have filed complaints.

Table 1.6(15) Follow up of Complaints

Follow up of Complaints	Frequency	Percent
NO	12	60
YES	8	40
TOTAL	20	100

Source: Primary data

Table 1.6(15) shows the fact that out of the (20%) of the filed complaints, (40%) of the complaints have been followed up by the authorities while (60%) of the complaints have not been followed.

Table 1.6(16) Suggestions

Suggestions	Mean Value	Rank
Proper Inspection should be conducted in ration shops	2.20	2
Ensuring The Availability Of Bill To Beneficiary	1.48	3
Quality Of Machine Should Be Improved	2.32	1

Source: Primary data

Table 1.16 shows that the respondents have opined that quality of machine should be improved as it is given rank 1 with mean value 2.32. Friedman Chi-Square also reveals that ensuring availability of bill to the beneficiary is the least sought after suggestion by the respondents with mean value 1.48.

2. Major Findings of the Study

- (68%) of the respondents belonged to the age group of 20-60 years while only (18%) consisted of people above 60 years.

- Majority of the respondents were female (62%).
- Majority (70%) of the respondents were married.
- (36%) of the respondents were agriculturists.
- (52%) of the respondents had annual income between the range of Rs.20000-40000.
- Majority (74%) of the respondents were of the opinion that more than 1 of their family members have Aadhar card.
- (74%) of the respondents were of the opinion that more than 1 of their family members have linked their Aadhar card with their ration cards.
- (88%) of the respondents were of the opinion that the products were purchased by the ration card owner of their family.
- (86%) of the respondents were aware of the working of E-PoS machine.
- Majority (60%) of the respondents do not get bill after making their purchase.
- Wheat flour is the most available product in the ration shops.
- After the implementation of E-PoS machine availability of rice and sugar have reduced.
- There was no significant difference in the satisfaction level of the beneficiaries after the implementation of E-PoS machine.
- The main problem faced by the respondents was standing in queue and non-display of stock details in ration shops.
- Working time of ration shops was not a problem for the respondents.
- (40%) of the respondents have filed complaints against the working of E-PoS machine.
- (60%) of the complaints filed have not been followed.

3. Suggestions

- Quality of machine should be improved.
- Proper Inspection should be conducted in ration shops.
- Bill should be made available to the beneficiary.

4. Conclusion

From the study it can be concluded that the respondents residing in Paipra Grama Panchayath are dissatisfied with the implementation of E-PoS machine in ration shops. Even after the implementation of the machine standing in queue is still a major problem faced by respondents in ration shops.

References

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