

IMPACT OF BUYING FPS COMMODITIES ON THE FAMILY CARDHOLDERS IN THE SELECTED PANCHAYATS OF RAJAKKAMANGALAM BLOCK, KANYAKUMARI DISTRICT

B.Anusha

Full Time Ph.D Research Scholar in Economics

Reg. No. 11414

S.T. Hindu College, Nagercoil, 629 002

Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli – 627 012

Tamil Nadu, India

Dr. A Vinayagaram

Asst. Professor

Department of Economics

S.T. Hindu College, Nagercoil, 629 002

Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli – 627 012

Tamil Nadu, India

Abstract

The operation of public distribution system is under the joint responsibility of Central and State governments. FPS is the ultimate outlet of public distribution system. Most of the FPSs are run by the Co-operatives and Tamil Nadu Civil Supplies Corporation Ltd (TNCSC). The objectives of the study are: i) to discuss about the frequency of buying FPS commodities in the selected panchayats and ii) to assess the impact of the FPS commodities on family cardholders. A total of 120 sample respondents were selected. In addition to the conventional tools, a special tool such as chi-square test was applied. As the respondents were poor, majority of them bought the FPS commodities twice in a month. There exists association between frequency of buying FPS commodities and community and no association between frequency of buying FPS commodities and occupation of the respondents. Cardholders were fully aware of buying rice and sugar. The contribution of FPS to the total requirement of commodities was 55.36 per cent. Out of the 120 respondents, 76 (63.33 per cent) had undergone malpractice and kerosene was the major item in malpractice.

IndexTerms - Fair Price Shop, Malpractice, buying frequency

Introduction

The Public Distribution System has become an important part of Government's policy regarding food economy in our country. The operation of PDS is under the joint responsibility of the Central and the State Governments. Under the PDS, the requirement of commodities namely rice, wheat, sugar and kerosene are being allocated to the states and UTs for distribution to the public. The ultimate outlets of PDSs are Fair Price Shops (FPSs) which are functioning in every district of Tamil Nadu.

Kanyakumari district is a tiny district in Tamil Nadu. The number of Fair Price Shops (FPS) and Cardholders is found lesser than that of other districts. Most of the FPSs are run by the Co-operatives and Tamil Nadu Civil Supplies Corporation Ltd (TNCSC). Kanyakumari district possesses 759 fair price shops and 5,52,785 cardholders. Rajakkamangalam block, one of the blocks in this district, holds 94 fair price shops and 35,674 cardholders. The policy norm of the government is to have at least one FPS in each Village Panchayat and Town Panchayat in the district. The district collector is empowered to open FPS (Full time and Part time) as per the guidelines of the government for ensuring that no card holder travels more than 2 km to get essential commodities from the FPS.

Objectives

The objectives of the study are:

- i) to discuss about the frequency of buying FPS commodities in the selected panchayats and
- ii) to assess the impact of the FPS commodities on family cardholders.

Methodology

The present study is a micro study which needs special and relevant data to fulfill the already formulated objectives. This study depends largely on sample survey to collect the reliable and required data intended for empirical analysis. Strenuous effort was taken to elicit information from the cardholders. Moreover, relevant statistical tools and techniques were used to ensure maximum accuracy in the analysis.

The methodology for any research study must be strong in a careful examination of the available literature and depending largely on the imagination and long-term vision and undertaking of the researcher. The study has been undertaken with the objective of investigating the aspects related to the impact of buying FPS commodities on the family cardholders in the selected panchayats of Rajakkamangalam Block in Kanyakumari District.

An appropriate design of the study or research methodology is very important for a systematic analysis of the research problem and to arrive at meaningful conclusion.

Rajakkamangalam block possesses 35,674 cardholders, of which Dharmapuram town panchayat holds higher number of 7,827 cardholders and Ganapathypuram village panchayat possesses higher number of 5,143 cardholders. Dharmapuram has 27 wards, of which the seventh ward possesses higher number of 301 cardholders and Ganapathypuram holds 18 wards, of which the second ward possesses 297 cardholders. Therefore, these two panchayats were taken as the sample base from which the sample respondents were selected. A total sample of 120 cardholders (20 per cent of the total cardholders from each of Dharmapuram and Ganapathypuram) was selected (60 from Dharmapuram and 60 from Ganapathypuram) by following multi-stage random sampling technique. The study is based only on primary data, collected from the respondents by employing a well-prepared structured interview schedule. The collected data were used to analyse to fulfill the objectives. Conventional tools such as simple average and percentage were employed wherever required. In addition to the conventional tools, one special tool like Chi-square

Test was employed in the study. The formula for this test runs as $\chi^2 = \sum \frac{(O - E)^2}{E}$ where, O = Observed frequency, E = Expected frequency. Chi-square test was used to determine the association between the frequency of buying commodities and the background variables such as community and occupation. The study is confined to one year (cross section) from March 2017 to February 2018 for assessing primary data. Collection of primary data was done during the month of April 2018.

Data Analysis

Under this head, various aspects like demographic features of the respondents and their households, opinion of the cardholders regarding the frequency of buying FPS commodities, association between the buying frequency of FPS commodities and the demographic variables such as community and occupation and extent of buying the FPS commodities by the cardholders.

1. Demographic features of the respondents and their households

Brief information about the demographic features of the respondents and their households in both the town and village panchayats is furnished in Table 1.

Table1: Demographic features of the respondents and their households

Demographic variables	Particulars	Frequencies		Total
		Town Panchayat	Village Panchayat	
Gender	Male	25	22	66 (55.00)
	Female	10	9	54 (45.00)
Religion	Hindu	29	22	76 (63.33)
	Christian	4	6	32 (26.67)
	Muslim	2	3	12 (10.00)
Community	BC	32	36	68 (56.67)
	MBC	13	10	23 (19.17)
	SC	8	21	29 (20.16)
Education status	Secondary	17	18	62 (51.67)
	High School	11	8	31 (25.83)
	Hr. Secondary	6	4	19 (15.83)
	Graduate & above	1	1	08 (06.67)
Occupation	Coolie	29	26	55 (45.83)
	Agriculture	14	27	41 (34.17)
	Petty business	15	9	24 (20.00)
Annual household income (₹)	< 25000	20	17	37 (30.83)
	25001 – 50000	26	19	45 (37.50)
	50001 – 100000	20	13	33 (27.50)
	>100001	3	2	05 (04.17)

Source: Primary data

Note: Figures in parentheses are percentages for 120 respondents

Table I furnishes that, at the aggregate level, 66 (55.00 per cent) out of the total 120 sample respondents were male and the remaining 54 (45.00 per cent) respondents were female. The respondents in Hindu religion outnumbered the Christian and Muslim respondents. With respect to education status, 62 (51.67 per cent) respondents had secondary school level of education.

Seventy eight (65.00 per cent) respondents had the annual household income ranging from ` 20,001 to ` 1,00,000 in the study area.

2. Frequency of buying FPS commodities

The pilot survey made by the researcher showed that the prescribed and essential commodities such as wheat, sugar and kerosene were bought in two or three times in a month. The frequency of buying the essential commodities in a month in the two panchayats is illustrated in Table 2.

Table 2: Buying FPS commodities

Buying frequency	Town panchayat	Village panchayat	Total
Monthly once	14 (23.33)	17 (28.33)	31 (25.83)
Twice in a month	35 (58.34)	34 (56.67)	69 (57.50)
Thrice in a month	11 (18.33)	9 (15.00)	20 (16.67)
Total	60 (100.00)	60 (100.00)	120 (100.00)

Source: Primary data

Note: Figures in parentheses are percentages to each 60 cardholders for town and village panchayats

Figures in parentheses under total are percentages to 120 cardholders

Table 2 mirrors that, of the total 120 cardholders, 69 (57.50 per cent) bought the essential commodities from the fair price shops twice in a month, followed by 31 (25.83 per cent) cardholders having bought the commodities once in a month, 20 (16.67 per cent) cardholders thrice in a month. In the town panchayat, comparatively higher number of 35 (58.34 per cent) cardholders bought commodities twice in a month and least number of 11 (18.33 per cent) cardholders bought thrice in a month. In the village panchayat, comparatively higher number of 34 (56.67 per cent) cardholders bought commodities twice in a month and least number of nine (15.00 per cent) cardholders bought thrice in a month. It is deduced that majority of cardholders bought the essential commodities from the fair price shops twice in a month.

4. Association of variables (Chi-square test)

There exists association and / or non-association between the frequency of buying FPS commodities and the background variables such as community and occupation. Chi-square test, using SPSS (version 20) has been employed to determine the association.

4.1 Frequency of buying FPS commodities and community and association between the two (Aggregate level)

The frequencies of buying FPS commodities and community on the basis of the opinion of the respondents are presented in Table 3.

Table 3: Frequency of buying FPS commodities and community

Community	Frequency of buying commodities (Opinion)			Total	χ^2 Value	p value
	Monthly once	Twice in a month	Thrice in a month			
BC	6 (5.00)	58 (48.33)	4 (3.34)	68 (56.67)	15.350	0.004**
MBC	7 (5.83)	13 (10.83)	3 (2.51)	23 (19.17)		
SC	2 (1.67)	20 (16.67)	7 (5.82)	29 (24.16)		
Total	15 (12.50)	91 (75.83)	14 (11.67)	120 (100.00)		

Source: Primary data

Note: Figures in parentheses are percentages to total.

Table 3 reveals that, out of the 120 respondents, 68 (56.67 per cent) belonged to BC, 29 (24.16 per cent) to SC and 23 (19.17 per cent) to MBC. Among the total 120 respondents, higher number of 91 (75.83 per cent) respondents bought the FPS commodities twice in a month, of them, 58 (48.33 per cent) were BC respondents, 20 (16.67 per cent) SC respondents and 13 (10.83 per cent) were under the MBC category. It is inferred that majority of the respondents belonged to BC and bought the FPS commodities twice in a month.

The association between the two variables such as buying frequency and community is tested with chi-square test on the basis of a null hypothesis (H_0)

H_0 : There is no association between the buying frequency and community.

Since the p value (0.004) is found lying between 0.000 and 0.010, the formulated hypothesis is rejected at 1% level of statistical significance. Thus, we infer that there is significant association between the buying frequency of FPS commodities and community of the respondents.

4.2 Frequency of buying FPS commodities and occupation of the respondents and association between the two (Aggregate level)

The buying frequency of commodities bought from the FPS and the occupation of the respondents are furnished in Table 4.

Table 4: Frequency of buying FPS commodities and occupation of the respondents

Occupation	Frequency of buying commodities (Opinion)			Total	χ^2 Value	p value
	Monthly once	Twice in a month	Thrice in a month			
Coolie	6 (5.00)	45 (37.50)	4	55		

Agriculture	5 (4.17)	32 (26.67)	(3.33) 4	(45.83) 41	6.399	0.171
petty Business	4 (3.33)	14 (11.67)	(3.33) 6	(34.17) 24		
Total	15 (12.50)	91 (75.84)	(5.00) 14 (11.66)	(20.00) 120 (100.00)		

Source: Primary data

Note: Figures in parentheses are percentages to total.

Table 4 reveals that, among the 120 respondents, 55 (45.83 per cent) were coolies, 41 (34.17 per cent) were related to agriculture and 24 (20.00 per cent) to petty business. Among the highest number of 91 respondents who had bought the FPS commodities twice in a month, 45 (37.50 per cent) were coolies, 32 (26.67 per cent) to agriculture and 14 (11.67 per cent) to petty business. It is inferred that those who had bought the FPS commodities twice in a month were coolies.

The association between the two variables such as buying frequency and occupation is tested with chi-square test on the basis of a null hypothesis (H_0).

H_0 : There is no association between the buying frequency and occupation.

The p value (0.171) is not significant. Since the p value is found lying between 0.051 and 1.000, the formulated null hypothesis is accepted at 5% level of statistical significance. Thus, we infer that there is no significant association between the buying frequency of FPS commodities and occupation of the respondents.

4.3 Consolidated Table showing the association between the buying frequency of FPS Commodities and the demographic variables such as community and occupation

The consolidated results in the association between the buying frequency of FPS commodities and the demographic variables such as community and occupation are presented in Table 5.

Table 5: Consolidated results in the association between the buying frequency of FPS commodities and the demographic variables such as community and occupation

Particulars	p value	Notation	Chi-square value	df	Level of significance	Remarks
Buying frequency and Community	0.004	**	15.350	4	Highly Significant	Hypothesis Rejected at 1% level
Buying frequency and occupation	0.171	No Star	6.399	4	Not significant	Hypothesis Accepted at 5% level

Note: **refers to 1% level of statistical significance

5. Impact of FPS commodities on the cardholders

While studying the impact of buying commodities from the FPS, the researcher felt it essential to assess the extent of prescribed commodities bought by the cardholders in percentage from the FPS, contribution of FPS to the total requirements of commodities per household per month and malpractice made by the cardholders in selling rice and kerosene bought from the FPS.

5.1 Extent of prescribed commodities bought by the cardholders from the FPS in percentage (Aggregate level)

It was found from the pilot survey that there was variation in buying the FPS commodities except rice and sugar at the specified period of one year (March, 2017-February 2018). Data were collected from 120 cardholders for 12 months. The extent of FPS commodities bought by the cardholders in percentage is furnished in Table 6.

Table 6: Extent of FPS commodities bought by the cardholders in percentage

Commodities	Months (March 2017 to February 2018)												Avg.
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	
Rice	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Wheat	90.14	95.09	96.70	95.64	93.98	94.62	95.13	92.68	93.59	96.98	96.98	96.99	95.88
Sugar	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Kerosene	91.32	90.94	92.19	91.42	90.75	91.90	92.66	93.54	94.89	95.15	97.37	99.11	93.44
Palmeolin	93.33	94.11	94.34	94.54	95.67	95.90	94.88	96.90	95.12	96.99	97.12	97.79	95.56
Urid dhal	92.54	93.44	94.53	93.65	94.69	95.75	96.11	95.34	94.96	96.23	96.88	97.32	95.62
Dhal	97.78	96.98	98.22	96.45	97.14	97.65	94.89	97.56	98.77	96.67	97.91	98.22	97.35
Atta	72.52	73.68	78.64	78.97	78.65	78.56	78.65	78.79	79.11	79.89	79.96	79.98	78.12
Maida	69.44	69.46	70.22	72.56	71.33	69.97	68.54	73.10	72.65	70.11	70.55	71.59	70.79
Sooji	67.19	66.67	65.69	69.41	64.89	67.95	66.34	68.42	65.65	65.21	66.77	68.73	66.91
Salt	54.98	55.32	56.45	52.48	53.69	55.87	54.78	56.91	54.58	57.62	56.69	58.13	55.63

Source: Primary data

Table 6 reveals that rice and sugar were bought by all the 120 respondents (100.00 per cent). The commodities such as wheat, kerosene, palmeolin, urid dhal and dhal had been bought by 93.44 to 97.35 per cent of the respondents. Atta and maida were bought by 70.79 to 78.12 per cent of the respondents, 66.91 per cent respondents bought sooji and 55.63 per cent bought salt. It is understood that the cardholders were fully aware of buying the two commodities such as rice and sugar and with respect to all the remaining commodities, the respondents were not fully aware of buying the commodities in the study area.

5.2 Contribution of FPS to the total requirements of commodities per household per month

The commodities provided by the FPS were not sufficient for the requirements per month per household. To fulfill the needs for a period of one month, the cardholders bought the deficit amount of commodities, except kerosene, from the open market for the reason that kerosene was not available in the open market for sale. Therefore, kerosene was ignored in the analysis. Table 7 depicts the contribution of FPS to the monthly requirements of commodities per household.

Table 7 reveals that, on the average, the monthly requirement of rice is 31 kg per household, of this, FPS provides 20 kg and the remaining 11 kg is bought from the open market. At the aggregate level, out of the total monthly requirement of the commodities under concern, the FPS supplies 55.36 per cent and the remaining 44.64 per cent is bought from open market. The contribution of FPS in rice is 64.52 per cent, wheat and sugar have each 57.14 per cent, maida, salt and palmoelin each have 50.00 per cent and so on. It is worth noting that 46.40 per cent of the monthly requirement of commodities was fulfilled by the FPS. It is inferred that the FPS contributed considerably to the monthly requirements of the commodities per household and the households were able to save the prices of 46.40 per cent of the monthly requirements of commodities.

Table 7: Monthly requirements of commodities per household (Aggregate level)

Commodities	Total Requirement per month	Contribution made by FPS	Open market	Percentage contribution by FPS
	Qty (kg)	Qty (kg)	Qty (kg)	
Rice	31.00	20	11.00	64.52
Wheat	3.50	2	1.50	57.14
Sugar	3.50	2	1.50	57.14
Palmoelin	2.00	1	1.00	50.00
Urid dhall	3.50	1	2.50	28.57
Dhall	3.00	1	2.00	33.33
Atta	3.00	1	2.00	33.33
Maida	2.00	1	1.00	50.00
Sooji	2.50	1	1.50	40.00
Salt	2.00	1	1.00	50.00
Total	56	31	25	464.03
Percentage of quantity bought	100.00	55.36	44.64	Avg.46.40

Source: Primary data

Note: Figures in parentheses are percentages to total

5.3 Malpractice made by the cardholders in selling rice and kerosene bought from the FPS

Not only have the personnel in the FPS but also the cardholders themselves done malpractice with respect to rice and kerosene. Following Table connotes the extent of malpractice made by the cardholders after buying the above-said commodities in both the town and village panchayats.

Table 8: Malpractice done by the cardholders in selling rice and kerosene

Commodities	Town Panchayat			Village Panchayat			Total
	Respondents under malpractice	FPS price per kg/ltr	Black market price per kg/ltr	Respondents under malpractice	FPS price per kg/ltr	Black market price per kg/ltr	
Rice	17 (58.62)	-	15	12 (41.38)	-	12	29 (100.00) [38.16]
Kerosene	29 (61.70)	17.50	30	18 (38.30)	17.50	25	47 (100.00) [61.84]
Total	46 (60.53)	-	-	30 (39.47)	-	-	76 (100.00) [100.00]
Percentage of respondents who have done malpractice	76 / 120 = 63.33%						

Source: Primary data

Note: Figures in parentheses are percentages to row total

Figures in square brackets are percentages to column total

Table 8 reveals that, out of the 120 respondents, 76 (63.33 per cent) had made malpractice after buying rice and kerosene, 46 (60.53 per cent) belonged to the town panchayat and 30 (39.47 per cent) to the village panchayat. Of the 120 respondents, 29 (38.16 per cent) fall under the category of rice and the remaining 47 (61.84 per cent) respondents under kerosene. Out of 29 respondents who had made malpractice after buying rice from the FPS, 17 (58.62 per cent) belonged to Town panchayat and 12 (41.38 per cent) to the Village panchayat. Regarding the malpractice made by 47 respondents with respect to kerosene, 29 (61.70 per cent) lie in the Town panchayat and 30 (39.47 per cent) in the Village panchayat. It is interesting to note that the respondents in the town panchayat have got ` 15 for rice per kg and the respondents in the village panchayat got ` 12 per kg. With respect to kerosene, the respondents in the town panchayat obtained ` 12.50 per litre and the respondents in the village panchayat got ` 7.50 per litre. It is inferred that higher number of respondents in the town panchayat did malpractice in kerosene. This affects the unique objective of the PDS in the distribution of commodities to the weaker section of the society at the affordable price.

Conclusion

Fair Price Shop is the important outlet of public distribution system through which basic and essential commodities are distributed to the weaker section of the society at affordable prices. However, the monthly issue of essential commodities was found inadequate leading the cardholders to buy the deficit amount of the required commodities from the open market by paying higher prices. This would lead to reduce the saving capacity of the cardholders. The cardholders who were under malpractice

must be advised not to do the malpractice further. If the FPSs issue commodities to the full requirement of the cardholders per month, the savings capacity of the cardholders would increase on the one hand and their standard of living would be boosted up on the other.

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