



An investigative study of the performance of public distribution system in Kohima district, Nagaland state

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Abstract

In this paper a few findings of an empirical investigation conducted to assess the performance of public distribution system (PDS) in Kohima district of Nagaland is briefly discussed. The assessment is done based on information collected from both sampled beneficiaries of the scheme and Fair Price Shops (FPSs) dealers through personal interviews with the help of questionnaire framed based on pertinent issues such as irregularities in the implementation of PDS, uneven distribution of kinds and quantities of ration items, arbitrary pricing problems, gap between required quantity and obtained quantity, income transfer due to PDS, reasons of dissatisfaction of beneficiaries, functioning of FPS, major problems faced by beneficiaries and FPS dealers, anomaly in identification of beneficiaries, inclusion error, etc. Besides, a few questions to understand socio-economic condition of the beneficiaries are also included. The paper has presented a number of defects in the implementation of PDS in the district as well as indispensable role of PDS in ensuring food security for economically weaker section of the region to a certain extent.

Keywords: Fair Price Shops, Income Transfer, National Food Security Act, Public Distribution System, Ration Items, Stratified two-stage Sampling

Introduction

India's public distribution system (PDS) is the world's largest food subsidy program as well as distribution network aimed at ensuring food (DEPD, 2017) ^[3] & (WEP, 2017) ^[10] and nutritional security to all the people of India which is home of large population of hungry and malnourished people. Moreover, since the enactment of National Food Security Act (NFSA), 2013, the scope of PDS has been widened with the increase of level of subsidies and expansion of coverage upto 75% of the rural population and upto 50% of urban population, thus two third of the population of India has been covered for receiving subsidised food grains under Targeted Public Distribution System (TPDS). Although PDS has the potential to eradicate food insecurity in the country, the program has still been affected with operational inefficiencies, corruption, arbitrary pricing by dealers, irregularity in delivery of foodgrains, distribution of low quality foodgrains, ineffective grievance redressal, etc. Hence PDS has not been able meet its objective of ensuring food security to all the citizens of the country. PDS has been the sole program for providing access to adequate food to the hungry and nutritionally challenged people, but the problems associated with it in its implementation have remained a hard nut to crack national issue. When this issue is observed in the context of Nagaland state, several studies and reports have highlighted rather grim situation. Gulati and Saini (2015) ^[4] estimated the average leakage from off-taken foodgrains of PDS in the country to be 46.7 percent in the year 2011-2012. In their state-wise leakage estimation, Nagaland state was shown to have 94.7% percent leakage of PDS off-taken foodgrains in the same year.

Gupta (2014) ^[5] estimated state-wise kerosene leakage from PDS based on data from the 68th round of National Sample Survey

pertaining to 2011-12 in which all India level average leakage was shown to be around 45% whereas Nagaland state's leakage was estimated to be 96.6%. Over and above, the report of the audit conducted by Comptroller and Auditor General of India during the period from 2005 to 2011 had unearthed serious irregularities in the operational activities and management of PDS. The report stated the performance of PDS suffered seriously due to various factors among which serious flaw in beneficiaries' list due to which 41% of deserving households remained outside the PDS. This deprivation was due to non-conducting of any baseline survey for addition/deletion of eligible/ineligible beneficiaries. Moreover, the department issued cards randomly, large scale diversion of foodgrains to open market was shown; allocation of foodgrains to non-existent institutions, hostels and Village Grain Banks, short allocation, short lifting and delayed distribution of foodgrains, charging higher rates and inadequate infrastructure etc., had seriously affected implementation of PDS in the state (CAG, 2011) ^[1]. Moreover, proper functioning of PDS scheme in the state like Nagaland, where 36.82% of rural population and 29.39% of urban population, i.e., 33.83% in the average of total population (Jamir and Ezung, 2017) ^[6] are living below poverty line, is vitally important. Taking into consideration all these prior information, an empirical investigation has been conducted in Kohima district of Nagaland to assess the performance of PDS in the district. In this paper, flaws and efficacies, strengths and weaknesses of the functioning of PDS are summarily analysed and presented. The paper also offers some recommendations for remedying the flaws and enhancing the effectiveness.

Methodology

The study is empirical in which information are collected with the help of questionnaire, framed based on significant problems relevant to the functioning of PDS, from the sampled households and all FPS dealers of the sampled villages of the district. The questions in questionnaire are made so as to draw information on income of households, educational status of the highest educated member in the family, price, quantity and variety of ration items obtained from FPSs, price in open market, problems faced by beneficiaries and FPS dealers, perceived impact on livelihood and food security, regularity/irregularity in the distribution of foodgrains from FPSs, gap between requirement and obtained quantity etc. Statistical test is used in a few data analysis.

Sampling Design

Stratified two-stage sampling design (Singh and Chaudhary, 1995)^[8] is used in the survey. List of villages of in district along with their respective total number of households is prepared for first stage sampling frame. Then, the villages of the district are stratified optimally into four numbers of strata based on village sizes (number of households) by using Dalenius's (1950)^[2] equations for optimum stratification. The number of strata in this case is arbitrarily chosen by seeing the nature of heterogeneity of villages' sizes. 20% of the population of villages is taken as first stage sample. The selection of samples from each strata is done with optimum allocation of sample sizes from different strata by using Tschuprow (1923)^[9] and Neyman (1934)^[7] optimum allocation, samples are selected from each of the four strata by simple random sampling without replacement (SRSWOR) design and sum total of samples from all strata is the sample of first stage sampling.

Thus sample of first stage units (fsu's), i.e., villages have been selected. Then data of PDS beneficiary households of all those selected villages are collected by personally going to the field and contacting Village Headman, Church Organisations and Village Councils of the selected villages. Thus, we prepare second stage sampling frame with beneficiary households of all the selected villages as second stage sampling units. In the second stage sampling, second stage units (ssu's) are selected from the sampling frame of ssu's (list of beneficiary households) for each of the selected villages, 15% of households are selected by SRSWOR method from each selected village. Thus from Kohima district, 19 villages are selected from the total 91 villages and 813 beneficiary households are selected from the 19 selected villages. Field survey is done by interviewing with each of the 813 selected households.

Findings and Discussion

Educational status, occupation and income of PDS beneficiary households

In the survey, it is found that 64.32% of priority households (PHH), 68.51% of Antyodaya Anna Yojana (AAY) households and 34.04% of card-less beneficiary households have household members of educational qualification under metric. 23.55% of PHH, 32.9% of AAY households and 12.76% of card-less beneficiary households have all the family members illiterate. This finding on educational status of beneficiaries has shown the section of the population is extremely educationally backward. On investigating nature of occupation of the beneficiaries, 63.47% are agricultural and non-agricultural labours and landless

farmers. However 5.5% of the beneficiaries are govt. employees who are still taking benefits of PDS due to inclusion error. Taking into account education, income and nature of occupation of the beneficiaries, we have observed that this section of people is certainly vulnerable section. While investigating income of the households, we have unearthed inclusion error too. When we set the parameter for exclusion as the households having income above Rs. 10000 per month must be excluded from beneficiaries' list, we observe 29.35% of PHH and 28.93% of AAY households, i.e., altogether 29.24% beneficiaries are found to be ineligible.

Price, Quantity and Ration Items

None of the beneficiary households are getting foodgrains according to norms of NFSA, 2013 or TPDS prior to NFSA with regard to price, quantity allocation, and kinds of ration items. Exhaustive information on price, quantity and kinds of ration items from the sample households of sample villages are given as follows:

According to the respondents of Teichuma village of Botsa block of Kohima district, the beneficiaries are getting ration items 25 kg of rice, 3 kg of sugar and 3 kg of dal for every family in every month. They pay Rs. 3 per kg of rice, Rs. 25 per kg of sugar and Rs. 46 per kg of dal. In the Chiephobozou block, a total of 51 households are selected from four sample villages viz., Nachama, Rusoma, Viphoma and Ziezou. In Nachama village, villagers are getting ration items 25 kg of rice, 3 kg of sugar, 3 litres of kerosene oil and 3 kg of dal per family every month. The prices they pay for the ration items are Rs. 3 per kg for rice, Rs. 25 per kg for sugar, Rs. 40 per litre for kerosene oil and Rs. 45 per kg for dal. In Rusoma village, beneficiaries are getting ration items 5 kg rice per family member, 2 kg sugar, 2 kg dal and 2 litres kerosene oil per household in every month. In this village, the price they pay for ration items are Rs. 6 per kg for rice, Rs. 35 per kg for sugar, Rs. 40 per litre for kerosene oil and Rs. 60 per kg for dal. In Viphoma village, beneficiaies are getting ration items 20 kg of rice, 3 kg of sugar, 5 litres of kerosene oil and 3kg of dal per family in every month. The prices the villagers pay for ration items are: Rs. 4 per kg for rice, Rs. 30 per kg for sugar, Rs. 40 per litre for kerosene oil and Rs. 50 per kg for dal. In Ziezou village, beneficiaries are getting ration items 16 kg of rice, 2 kg of sugar, and 2 kg of dal per family in every month. The prices they pay for ration items are Rs. 8 per kg for rice, Rs. 40 per kg for sugar, Rs. 45 per litre for kerosene oil and Rs. 70 per kg for dal.

From the Chunlikha block, 112 households are selected from three sample villages viz., Ehunnu, Sishunu and Tesophenyu. In Ehunnu and Sishunu villages, quantity of distribution of ration items is not uniform in terms of per household or per person, some people get more quantity per household or per person and some other people get less quantity. Although they are collecting ration items every month, the distribution process is done neither on the basis of per household nor per family member. Secondly, both the Ehunnu and Sishunu village people pay Rs. 5 per kg for rice, Rs. 25 per kg for sugar, Rs. 35 per litre for kerosene oil and Rs. 50 per kg for dal. In Tesophenyu village, people are getting ration items 25 kg of rice per family, 2 litre of kerosene oil and 2 kg of dal per family, no sugar is supplied in this village. In Tesophenyu village, people are collecting ration items in every month. They pay the prices as Rs. 4 per kg for rice, Rs. 50 per litre for kerosene oil and Rs. 50 per kg for dal.

From the Jakhama block, six villages are selected, they are Khuzama, Phesama, Viswema, Kezoma, Kidima, and Kigwema. In Khuzama village, beneficiaries are not getting ration items in uniform quantity, they are getting only rice and sugar, no dal and kerosene are supplied to them. The ration items are supplied irregularly, so periods of distribution are not mentioned clearly. The prices they pay are Rs. 5 per kg for rice and Rs 25 per kg for sugar. In Phesama village beneficiaries are getting ration items - 4 kg of rice per family member, 1.5 kg sugar per household and 2.5 litres kerosene oil per household. The ration items are collected by the beneficiaries in every month. They pay prices - Rs. 5 per kg for rice, Rs. 40 per kg for sugar, and Rs. 50 per litre for kerosene oil. In Viswema village, beneficiaries are getting quantity of ration items as 25 kg of rice per family, 2 kg of sugar per family and 1 litre of kerosene oil and 2 kg of dal per family. The ration items are collected by the beneficiaries every month. They pay the prices as Rs. 5 per kg for rice, Rs. 30 per kg for sugar, Rs. 40 per litre for kerosene oil and Rs. 50 per kg for dal. In Kezoma village, beneficiaries are getting quantity of ration items as 20 kg of rice per family and 3 kg sugar to per family. The ration items are collected by the beneficiaries every month. They pay the prices - Rs. 5 per kg for rice, and Rs. 30 per kg for sugar. In Kidima village, beneficiaries are getting quantity of ration items as 4 kg of rice per family member, 1 kg of sugar per family and 4 litres of kerosene oil per family. The ration items are collected by the beneficiaries every month. The prices they pay are: Rs. 5 per kg for rice, Rs. 28 per kg for sugar, and Rs. 40 per litre for kerosene oil. In Kigewma village, beneficiaries are getting quantity of ration items as 5 kg of rice per family member, 1 kg of sugar per family and 1 litre of kerosene oil per family. The ration items are collected by the beneficiaries every month. They pay the prices as Rs. 6 per kg for rice, Rs. 35 per kg for sugar, and Rs. 40 per litre for kerosene oil. From Kohima block, one village viz., Kohima village is selected from which a sample of 215 households is selected. In this

village, beneficiaries are getting quantity of ration items as 5 kg of rice per family member, 2 kg dal, 3 kg sugar and 1 litre of kerosene per family. They pay the prices of ration items as Rs. 3 per kg for rice, Rs. 30 per kg for sugar, Rs. 50 per kg for dal and Rs 50 per litre of kerosene. beneficiaries of this village are collecting ration items every month.

From the Sechu/Zubza block, one village named Menguzuma is selected from which a sample of 9 households is taken, beneficiaries of this village are getting quantity of ration items as 5 kg of rice per family member, 3 kg of sugar, 1.5 litres of Kerosene oil and 3 kg of dal per family in every month. In Menguzuma village, beneficiaries pay the prices of ration items as, Rs. 3 per kg for rice, Rs. 25 per kg for sugar, Rs. 40 per litre for kerosene oil and Rs. 50 per kg for dal.

From the Tseminyu block, three villages are selected viz., Tseminyu, Ngvuphen and Zisunyu from which 52 households are selected. In Tseminyu village, beneficiaries are getting quantity of ration items as 25 kg of rice per family and 3 kg of sugar per family every month. In Tseminyu village, the beneficiaries pay the prices of ration items as Rs. 4 per kg for rice and Rs. 55 per kg for sugar. In Ngvuphen village, beneficiaries are getting quantity of ration items as 5 kg of rice per family member, 3 kg of sugar and 3 kg of dal per family every month. In Ngvuphen village, the prices they pay for ration items are: Rs. 5 per kg for rice, Rs. 25 per kg for sugar, and Rs. 50 per kg for dal. In Zisunyu village, beneficiaries are getting quantity of ration items as 4 kg of rice per family member, 2 kg of sugar, 2 litres of kerosene oil and 2 kg of dal per family every month. In Zisunyu village, the prices for ration items are: Rs. 3 per kg for rice, Rs. 45 per kg for sugar and Rs. 55 per kg for dal. Thus, we have seen that in matters of price, quantity allocation, kinds of items, no uniform pattern is followed. Every FPS has its own arbitrary price, allocation and kinds of ration items. Regarding gap between required quantity and obtained quantity, Table 1(a) provides the detail.

Table 1: Average required quantity and obtained quantity from ration shop and gap between them (calculated for monthly basis), Kohima district

Blocks	Villages	Village-wise Average Quantity Obtained from FPS (Monthly)				Village-wise Average Quantity Required from FPS (Monthly)				Gap between Required and Obtained Quantity (Monthly)			
		Rice	Sugar	Dal	Kerosene	Rice	Sugar	Dal	Kerosene	Rice	Sugar	Dal	Kerosene
Botsa	Teichuma	25	3	3	0	48	4	5.18	3	23	1	2.18	3
Chiephobozou	Nachama	25	3	3	3	42	3.5	6.15	3.75	17	0.5	3.15	0.75
	Rusoma	25	2	2	2	49.43	4.9	7.68	4	24.43	2.9	5.68	2
	Viphoma	20	3	3	5	42.28	5.28	6.63	3.96	22.28	2.28	3.63	-1.04
	Ziezou	16	2	2	0	40	3.5	4.51	5.33	24	1.5	2.51	5.33
Chunlika	Ehunnu	35	4	3	0	51.2	6.4	7.07	4.7	16.2	2.4	4.07	4.7
	Sishunu	25	4	3	1	47.69	5.07	5.82	4.46	22.69	1.07	2.82	3.46
	Tesophenyu	25	0	2	2	55.28	4.6	5.64	4.1	30.28	4.6	3.64	2.1
Jakhama	Khuzama	21	3	0	0	47.75	4.72	7	3.76	26.75	1.72	7	3.76
	Phesama	20	1.5	0	2.5	53.52	4.46	6.79	3.58	33.52	2.96	6.79	1.08
	Viswema	25	2	2	1	49.76	5.01	6.24	3.82	24.76	3.01	4.24	2.82
	Kezoma	20	3	0	0	58.92	5.45	6.99	3.63	38.92	2.45	6.99	3.63
	Kidima	16	1	0	4	43.12	3.66	5.57	3.56	27.12	2.66	5.57	-0.44
	Kigwema	30	1	0	1	56.96	5.82	6.88	3.92	26.96	4.82	6.88	2.92
Kohima	Kohima village	20	3	2	1	51.92	4.32	6.07	3.66	31.92	1.32	4.07	2.66
Sechu/Zubza	Menguzuma	25	3	3	1.5	50.11	4.55	6.21	3.33	25.11	1.55	3.21	1.83
Tseminyu	Tseminyu	25	3	0	0	48.26	4.83	7.39	3.78	23.26	1.83	7.39	3.78
	Ngvuphen	25	3	3	0	53.33	5.34	6.06	3.84	28.33	2.34	3.06	3.84
	Zisunu	24	2	2	2	55.82	5.86	7.32	4.43	31.82	3.86	5.32	2.43

50% of requirement of rice of the beneficiaries is obtained from PDS which is supported by t-test as indicated below in Table 3.2(b):

Table 2: One-Sample t-test Statistics for rice gap

Rice Gap	N	Mean	Std. Deviation		Std. Error Mean	
	19	52.58	8.37423		1.92118	
	Test Value = 50					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval		
				Lower	Upper	
1.345	18	0.195	2.5848379	-1.4514	6.62108	

Calculated t-value = 1.345 < tabulated t-value = 2.10 50% of requirement of sugar of the beneficiaries is also obtained from PDS which is supported by t-test as indicated below in Table 3.2(c):

Table 3: One-Sample t-test Statistics for sugar gap

Sugar Gap	N	Mean	Std. Deviation		Std. Error Mean	
	19	48.35	22.0613683		5.0612250	
	Test Value = 50					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval		
				Lower	Upper	
-0.326	18	0.748	-1.64995	-12.283	8.983288	

Calculated t-value = -0.326 < tabulated t-value = 2.10 70% of requirement of dal of the beneficiaries is also obtained from PDS which is supported by t-test as indicated below in Table 3.2(d):

Table 4: One-Sample t-test Statistics for dal gap

Dal Gap	N	Mean	Std. Deviation		Std. Error Mean	
	19	71.47848	21.5107379		4.9349017	
	Test Value = 70					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval		
				Lower	Upper	
0.300	18	0.768	1.478477	-8.8894	11.8463	

Calculated t-value = 0.300 < tabulated t-value = 2.10 50% of requirement of kerosene of the beneficiaries is also obtained from PDS which is supported by t-test as indicated below in Table 3.2(e):

Table 5: One-Sample t-test Statistics for kerosene gap

Kerosene Gap	N	Mean	Std. Deviation		Std. Error Mean	
	19	64.27	38.81606		8.90502	
	Test Value = 50					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval		
				Lower	Upper	
1.603	18	0.126	14.27058	-4.4382	32.9793	

Calculated t-value = 1.603 < tabulated t-value = 2.10

Subsidy Transfer of PDS to the Beneficiaries

In this investigation, we examine how much subsidy transfer is received by a beneficiary/household due to subsidized supply of the ration items by PDS. The subsidy transfer or income gain due to PDS is the estimated additional expenditure that the household would have incurred in the absence of PDS. It is calculated as the sum of products of quantities of items purchased from PDS and the differences between their market prices and PDS prices. In the case of Nagaland, there are only four items - rice, sugar, dal and kerosene which are distributed to the beneficiaries.

Monthly subsidy transfer or income gain due to PDS per beneficiary/household

$$= \sum_{r=1}^4 (M_r - P_r) Q_r$$

Where M_r is the market price per unit of item r , P_r is m r in terms of number of units purchased from PDS. Table 3.3(a) shows subsidy transfer to per beneficiary/house block wise.

Table 6: Subsidy transfer

Name of District	Blocks	Block-wise Contribution due to PDS Consumption Expenditure (%) (per household)	Average Contribution due to PDS in Consumption Expenditure (%) (per household)
Kohima	Botsa	40.34	28.21
	Chiephobozou	32.37	
	Chunlika	30.74	
	Jakhama	25.85	
	Kohima	28.51	
	Sechu/Zubza	47.42	
	Tseminyu	29.15	

From t-test, it is confirmed that 35% of income transfer due to PDS is given to each of the beneficiaries, which is shown as follows in Table 3.3(b):

Table 7: One-Sample t-test Statistics for income transfer

Income Transfer	N	Mean	Std. Deviation	Std. Error Mean	
	7	33.4829	7.65713	2.89412	
	Test Value = 35				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval Lower Upper
	-0.524	6	0.619	-1.51714	-8.5988 5.5645

Calculated t-value = -0.524 < tabulated t-value = 2.45

Analysis of satisfaction/dissatisfaction of beneficiaries on ration items - rice, dal, sugar and kerosene obtained from FPS:

In Kohima district, it has been reported that only 19.80 percent of households are satisfied with the rice obtained from FPSs whereas 80.20 percent of households are not satisfied. The maximum percentage of respondents has been found to give the reason insufficient quantity, which is responded by 53.99 percent of beneficiaries, followed by 15.49 percent of beneficiaries stating the reason combination of insufficient quantity and irregularity, 9.97 percent of households stating the reason irregularity, 6.90 percent of households stating the reason combination of insufficient quantity and poor quality, 5.52 percent of households stating the reason combination of poor quality and irregularity, 4.29 percent of households stating the reason combination of the three factors insufficient quantity, poor quality and irregularity and 3.83 percent of households stating the reason poor quality.

In case of ration item dal, it has been found that only 14.51 percent of households are satisfied with dal obtained from FPS whereas 85.49 percent of households are not satisfied. The maximum percentage of beneficiaries has been found stating the reason non-availability as 41.52 percent of households have responded so, followed by 18.68 percent of households stating the reason combination of insufficient quantity and irregularity, 10.92 percent of households stating the reason irregularity, 9.05 percent of households stating the reason combination of insufficient quantity and poor quality, 6.99 percent of households stating the reason combination of all the three factors, i.e., insufficient quantity, poor quality and irregularity, 3.83 percent of households stating the reason poor quality, 5.60 percent of households stating the reason insufficient quantity, and 3.59 percent of households stating the reason combination of poor quality and irregularity.

In the case of ration item sugar, it has been found that only 14.64 percent of households are satisfied with the sugar quantity

whereas 85.36 percent of households are not satisfied with the sugar received from FPS. The maximum percentage of households has been found stating the reason insufficient quantity, which is responded by 42.36 percent of households, followed by 17.58 percent of households stating the reason combination insufficient quantity and irregularity, 12.82 percent of households stating the reason unavailability of sugar at all, 7.20 percent of households stating the reason combination of insufficient quantity and poor quality, 1.59 percent of households stating the reason poor quality, 1.01 percent of households stating the reason combination of poor quality and irregularity, 0.29 percent of households stating the reason the combination of three factors, i.e., insufficient quantity, poor quality and irregularity.

In the case of ration item kerosene, it has been found that only 24.11 percent of households are satisfied with the quantity of kerosene obtained from FPS whereas 75.89 percent of households are not satisfied with quantity of kerosene obtained. The maximum percentage of beneficiaries are stating the reason of dissatisfaction as combination of insufficient quantity and irregularity as 57.37 percent of households have responded so, followed by 21.72 percent of households stating the reason unavailability of kerosene, 12.15 percent of households stating the reason insufficient quantity, 8.75 percent of households stating the reason irregularity.

Regarding the service provided by FPSs, 76.26% of households have responded they are satisfied with the service, whereas the rest have responded the otherwise. 74.90% of the households have responded ration commodities are distributed in time from FPSs. 53.99% of households have reported that FPSs' owners inform timely about the arrival of foodgrains, the rest have reported the otherwise.

Investigation into the problems faced by FPSs' dealers

Information are collected from FPSs' dealers about the major problems faced by them in effective functioning of FPSs.

We analyse various problems faced by FPSs dealers in the effective functioning of fair price shops in the district. Choosing and filling up the options provided in the questionnaire is done by the dealers from the perspective of their experiences in the functioning of FPSs. In the investigation, we have given 11 pertinent options, shown in Table 3.5(a). These options are considered to be most probable problems facing them. The respondents are given the choices to remark against each of the eleven options as some problem, significant problem and no problem at all. In the table, the percentages of FPSs responding to each query/option with the choice of remark are given for all the FPSs in Kohima district.

Table 8: Probable problems faced in the functioning of FPSs in Kohima

Causes	Kohima		
	Some problem	Significant problem	No problem at all
Availability of food grains	61.90	19.05	19.05
Location of the FPS outlets	19.05	0.00	80.95
Awareness among beneficiaries about the availability of the stocks	28.57	4.76	66.67
Regular supplies of the stock to the FPS outlets	57.14	4.76	38.10
Price information to the consumers	33.33	0.00	66.67
Quality of food grains (complaints from consumers)	33.33	0.00	66.67
Profit margin of the shop owners	4.76	33.33	61.90
Cost of transportation & handling of food grains	47.62	19.05	33.33

Storage & quality control facilities with FPS/ State Government godowns for storing the foodgrains for at least 3 months	33.33	14.29	52.38
Delivery of food grains to consumer in bulk (loose grain)	66.67	0.00	33.33
Availability of funds with consumers & effect of the same on the arrangement of funds for lifting the stocks from government godowns for FPS outlets	42.86	14.29	42.86

The main problems faced by FPSs dealers are

Availability problem: Unavailability of food grains timely in the public distribution centres is a major hindrance in the effective functioning of PDS.

Insufficient quota

The quantity of stocks available to FPSs is not sufficient to distribute to all the beneficiaries in the list of every FPS. Demand always outmatches supply. The supply quantity is not compatible with the number of beneficiaries in the list in most cases.

Transportation cost, handling charges and profit margin of FPSs: Due to non-payment transportation cost and handling charges as well as not ensuring minimum profit margin for FPSs dealers by the government, it is found in the investigation that most of FPSs are incurring loss. In order to recover the losses, the dealers earn commission while selling ration items to beneficiaries. For mobilizing fund to bear transportation cost, the dealers collect money from beneficiaries in advance and deposit it in the village development bank. In most cases, the FPSs dealers or village development bank bear the cost of transportation. Ultimately, it leads to increase extra burden to beneficiaries and, at the same time, affects the viability of business of FPSs owners. This flaw is also due to government's failure to discharge its due obligation. As a result, FPSs are unable to distribute ration items at the prescribed prices and allocation under NFSA, 2013.

Conclusion and Recommendation

The paper has identified inclusion error although exclusion error investigation is beyond the scope of this paper. It is seriously called-for action on the part of state department to conduct a baseline for rectification of beneficiaries' list else many deserving ones will continue to be deprived of and many ineligible ones will continue to enjoy benefits for years. The state food department needs to allocate adequate quantity of food in accordance with exact number of beneficiaries in the list of every FPS jurisdiction. There are a lot of defects in matters of price, quantity allocation and regularity in distribution of food-grains when seen from the perspective of norms and guidelines provided by NFSA, 2013 or TPDS before NFSA. The onus is lying on the state government to activate the state food department to effectively address these issues for the greater cause of improving livelihood condition of economically weaker section of the state. The roles of civil organisations are also called for mobilizing mass awareness and conducting social audit in the functioning of this scheme. In spite of all these flaws, PDS is still contributing a lot in providing food security; approximately 50% of beneficiaries' requirement of rice, sugar and kerosene are coming from PDS and 70% requirement of dal is also obtained from PDS. 35% of subsidy transfer/income transfer of total expenditure on foodgrains of a beneficiary has been availed by the beneficiary. This contribution of PDS to the weaker section is also a significant contribution. It is also found that most of tribal families are big joint families, so distribution of fixed ration quantity per household happens to be extremely insufficient

quantity for the family, distribution quantity must be made per family member. If the defects in the implementation are corrected, huge increase in proportion of contribution of PDS is inevitable. Government must address the grievances of FPS dealers too. Provided the functioning of PDS is effective, it will give a huge positive impact in the state's food economy.

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