

AADHAAR- A TRANSPARENCY MECHANISM FOR FOOD SECURITY IN INDIA: AN ANALYSIS USING THE FAIR PRICE SHOP SALE TRANSACTIONS

¹Tanvi Kiran

Abstract

The present study has attempted to assess and compare the amount of Aadhaar and non-Aadhaar based sale transactions of foodgrains through Fair Price Shops (FPS) since the inception of the “Annavitran” web portal across comparable Indian states in order to study the transparency in the accessibility of foodgrains to the ration card holders under the Public Distribution System (PDS) in India. The data under the present study pertains to FPS sale transactions from October, 2017 to April, 2018 on sixteen comparable Indian states that is available on the “Annavitran” website, which is a national level FPS sale transaction portal maintained by Indian Ministry of Consumer Affairs, Food and Public Distribution. The results indicated that out of the sixteen Indian states, eight states, namely Andhra Pradesh, Delhi, Haryana, Jharkhand, Karnataka, Rajasthan, Telangana and Uttar Pradesh recorded more than 50 per cent FPS Aadhaar based transactions on an average. Further, the state of Andhra Pradesh, Delhi, Haryana and Telangana have recorded 100 per cent Aadhaar based distribution of foodgrains, thereby indicating that these states have achieved full transparency in foodgrains sale transactions, which has been facilitated by automation of fair price shops through mechanization (Electronic Point of Sale machines) and computerization. Therefore, it can be deduced that the automated FPS sale transactions through Aadhaar route results in transparency in the food distribution chain, which ensures that the foodgrains reaches the intended beneficiary in the context of attaining food security in India.

Keywords: Aadhaar, Annavitran, Automated FPS Sale Transactions, Food Security

Subject Category under which the research article is included: **Social Sciences**

¹ Corresponding Author is a UGC Post Doctoral Research Fellow, Department of Economics, Panjab University, Chandigarh, India.

1. Introduction

India is a nation of nearly 1.3 billion people and its population is increasing at a rate of 1.11% and therefore there is a growing concern to address the issue of food security so as to make accessible the requirement of food to its people (Ittyerah, 2013). Any household would deem to be considered food-secure when its family members do not have to face the onslaught of hunger or any kind of fear of impending starvation. Further, shortcomings in the dimensions of food availability and utilization may lead to a situation, where households could experience a situation of food shortage and hunger. However, the government of the day has an obligation to provide food to all its citizens and in the same backdrop India adopted a policy to provide food to all its citizens through a Public Distribution System (PDS) where Fair Price Shops (FPS) are required to distribute rations at a subsidized price to the poor (Dev and Sharma, 2010). PDS is a joint venture of both central and state governments, whereby the central government procures, stores and distribute food to the governments of different states, which further identify the eligible beneficiaries and then allocate the due entitlements. However, owing to inherent problems of PDS that included bogus ration cards, ineligible beneficiaries and unsatisfactory functioning of the FPS, the Government of India, in the year 2013 brought in the National Food Security Act (NFSA) to provide food grains through Targeted Public Distribution System (TPDS) at subsidized rates (Balani, 2013). This act mandates legal entitlements for food security programmes and ensures to provide essential food items such as rice, wheat and coarse grains to two -thirds of Indian population including 75 per cent rural and 50 per cent urban areas, at a subsidized price through TPDS in a transparent manner. Further, under this act, the food grains are procured from farmers at minimum support price (MSP) for onward distribution to the identified beneficiaries under TPDS. In order to ensure transparency and receipt of entitlements to the intended beneficiaries, major reforms have been proposed to make TPDS eloquently effective that include use of Aadhaar and information technology based tools such as Global Positioning System (GPS) to track movement of vehicles carrying food grains as well as Electronic- Point of Sale (E-PoS) machines to monitor and automate the foodgrains sale transactions (Ministry of Consumer Affairs, Food and Public Distribution, Government of India, 2017). Therefore, by using end to end computerized technology, the ultimate benefit to house hold occupants can be assessed, pilferage can be contained and transparency in the distribution of foodgrains can be achieved. Since, many state governments are distributing food grains to

legitimate beneficiaries by using Aadhaar and information technology, this study is an attempt to assess and compare Aadhaar and non-Aadhaar based sale transactions of food grains through Fair Price Shops (FPS) after the commencement of the national level FPS sale transaction portal, i.e. “Annavitran” by the Ministry of Consumer Affairs, Food and Public Distribution, Government of India in the year 2017.

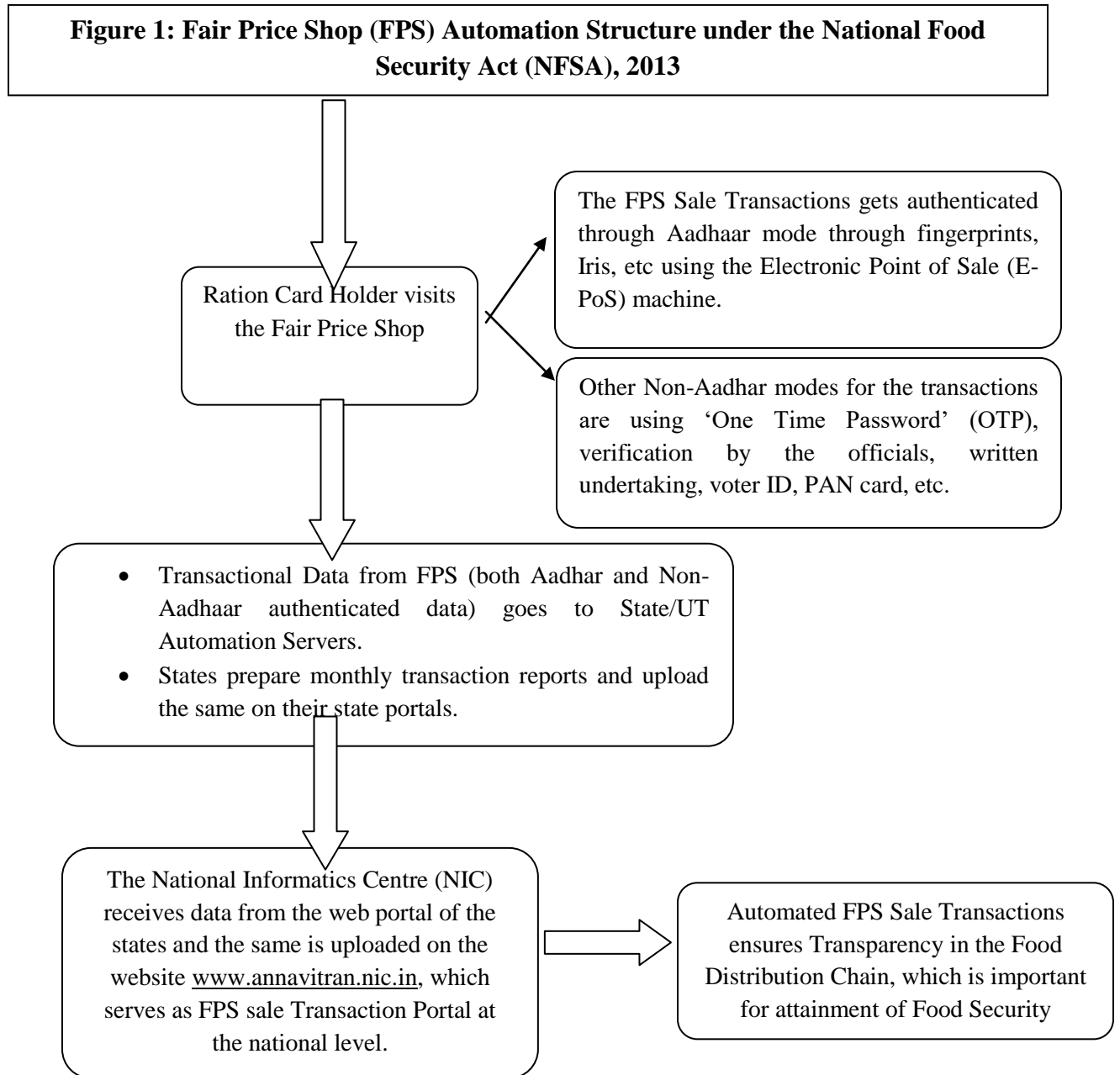
2. Objectives of the Study

The launch of National portal “Annavitran.nic.in” has facilitated the automation of distribution of foodgrains entitled under the NFSA, 2013. The main objective of the present study is therefore; to assess and compare the amount of Aadhaar and non-Aadhaar based sale transactions of foodgrains through Fair Price Shops (FPS) since the inception of the “Annavitran” portal across selected Indian states. The present study further intends to identify the extent of transparency through Aadhaar based automation of FPS sale transactions under the Public Distribution System (PDS) across comparable Indian states.

3. Data and Methodology

The national level FPS sale transaction portal, i.e. “Annavitran” was launched in the year 2017, subsequently the state government web portals displaying food distribution data were also digitally linked with the national portal. The distribution of foodgrains through FPS (using Aadhaar and Non- Aadhaar routes) and its automation structure under the NFSA, 2013 has been depicted in Figure 1. The FPS sale transactions are primarily carried out by Aadhaar seeding (fingerprints, Iris scanner, etc) and by non-Aadhaar routes (verification by the officials, written undertaking, voter ID, PAN card, etc.) Data pertaining to the distribution of foodgrains through both Aadhaar and non-Aadhaar routes is linked to the state/UT automation servers, which is subsequently uploaded on the respective web portals of the state/UT governments. This transactional data is received by the National Informatics Centre (NIC) and the same is uploaded on the “Annavitran” website (www.annavitran.nic.in). With regard to the present research work, the comparable data on FPS sale transactions of selected states under the Public Distribution System is available from October, 2017 to April, 2018 on the “Annavitran” web portal. Therefore, the data under present study pertains to foodgrains transactions through Fair Price Shops which are facilitated through Aadhaar cards and non-Aadhaar routes during the

aforementioned time period for selected sixteen Indian states on which the comparable data was available. Simple averages have been calculated to study the extent of transparency through Aadhaar based automated FPS sale transactions across comparable Indian states.



4. Analysis and Discussion

Table 1 shows the count of NFSA ration cards under PDS across the Indian states selected under the present study.

Table 1: NFSA Ration Cards count under the PDS across Comparable Indian States

(Percentage Count from October, 2017 to

April, 2018)

States	October	November	December	January	February	March	April	Average
Andhra Pradesh	6.99	6.99	7.02	6.83	6.92	6.76	7.02	6.93
Chhattisgarh	3.86	3.86	3.93	3.83	3.87	3.79	3.99	3.88
Delhi	1.41	1.41	1.41	1.39	1.41	1.37	1.45	1.41
Goa	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Gujarat	5.22	5.23	5.29	5.16	5.23	5.03	5.25	5.20
Haryana	2.15	2.15	2.17	2.12	2.15	2.10	2.20	2.15
Himachal Pradesh	0.50	0.50	0.50	0.49	0.50	0.49	0.51	0.50
Jharkhand	4.09	4.10	4.14	4.04	4.09	4.01	4.21	4.10
Karnataka	7.91	8.21	8.48	8.29	8.48	8.58	9.00	8.42
Madhya Pradesh	8.29	8.28	8.38	8.39	8.47	8.24	8.76	8.40
Maharashtra	10.60	10.60	10.73	10.45	8.91	6.48	3.01	8.68
Odisha	6.27	6.28	6.35	6.18	6.26	6.13	6.44	6.27
Rajasthan	7.23	7.23	7.26	7.08	7.20	7.09	7.47	7.22
Tamil Nadu	7.23	6.92	6.99	6.82	7.22	7.07	7.42	7.10
Telangana	3.65	3.65	3.69	3.60	3.64	3.56	3.73	3.65
Uttar Pradesh	24.47	24.32	24.57	23.85	24.20	23.80	25.03	24.32

Source: Author's calculations on the basis of data procured from 'Annavitran' website.

As observed from the table 1, on an average, the state of Uttar Pradesh has recorded maximum number of ration card holders (24.32 per cent) followed by Maharashtra (8.68 per cent), Karnataka (8.42 per cent) and Madhya Pradesh (8.40 per cent). On the other hand, Goa has recorded lowest average ration card count (0.10 per cent), which is followed by Himachal Pradesh (0.50 per cent) and Delhi (1.41 per cent). The low percentage of ration card holders might have been due to the less amount of population who has been entitled foodgrains under the NFSA, 2013. Nevertheless, the data pertaining to the ration cards count is a sign of automation, which has facilitated transparency in the transaction of the foodgrains under the PDS.

Table 2: Pattern of Aadhaar and Non-Aadhaar Based FPS Sale Transactions across Comparable Indian States

States	October		November		December		January		February		March		April	
	Aadhaar Based	Non Aadhaar Based	Aadhaar Based	Non Aadhaar Based	Aadhaar Based	Non Aadhaar Based	Aadhaar Based	Non Aadhaar Based	Aadhaar Based	Non Aadhaar Based	Aadhaar Based	Non Aadhaar Based	Aadhaar Based	Non Aadhaar Based
Andhra Pradesh	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Chhattisgarh	8	92	9	91	8	92	8	92	8	92	9	91	12	88
Delhi	100	0	100	0	45	55	100	0	100	0	100	0	100	0
Goa	69	31	58	42	0	100	63	37	70	30	63	37	26	74
Gujarat	0	100	0	100	100	0	0	100	24	76	70	30	67	33
Haryana	100	0	100	0	0	100	100	0	100	0	100	0	100	0
Himachal Pradesh	1	99	0	100	0	100	0	100	1	99	20	80	1	99
Jharkhand	89	11	84	16	84	16	84	16	91	9	91	9	86	14
Karnataka	79	21	87	13	95	5	97	3	98	2	98	2	99	1
Madhya Pradesh	15	85	14	86	12	88	17	83	19	81	19	81	23	77
Maharashtra	33	67	35	65	41	59	44	56	53	47	48	52	50	50
Odisha	29	71	28	72	24	76	25	75	39	61	47	53	53	47
Rajasthan	100	0	100	0	99	1	99	1	99	1	99	1	99	1
Tamil Nadu	0	100	0	100	0	100	0	100	0	100	0	100	0	100
Telangana	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Uttar Pradesh	74	26	80	20	70	30	74	26	0	100	72	28	88	12

(Percentage count from October, 2017 to April, 2018)

Note: FPS indicate Fair Price Shop

Source: Data procured from the 'Annavitran' website

Table 2, shows the pattern of Aadhaar and non-Aadhaar based sale of foodgrains from the fair price shops across the comparable Indian states. Aadhaar automated fair price shops authenticate the sale of foodgrains through the biometric information of the ration card holder, while the non-Aadhaar modes use the other methods such as written undertaking, use of voter ID, etc to facilitate the sale transactions. As clearly observed from the table that Andhra Pradesh, Delhi, Haryana and Telangana have recorded 100 per cent Aadhaar facilitated sale transactions during the time period under study, whereas the state of Himachal Pradesh has registered negligible amount of Aadhaar based foodgrains transactions.

Table 3: Extent of Transparency through Aadhaar Based Automated FPS Sale Transactions across Comparable Indian States

States	Average of Aadhaar Based Automated FPS Sale Transactions (per cent)	Average of Non-Aadhaar Based FPS Sale Transactions (per cent)	Extent of Transparency through Aadhaar Based Automated FPS Sale Transactions	
			Whether the Majority FPS Sale Transactions (> 50 per cent) are Aadhaar Based?	Whether the FPS Sales are completely (100 per cent) Aadhaar Based?
Andhra Pradesh	100.00	0.00	Yes	Yes
Chhattisgarh	8.86	91.14	No	No
Delhi	100.00	0.00	Yes	Yes
Goa	49.86	50.14	No	No
Gujarat	37.29	62.71	No	No
Haryana	100.00	0.00	Yes	Yes
Himachal Pradesh	3.29	96.71	No	No
Jharkhand	87.00	13.00	Yes	No
Karnataka	93.29	6.71	Yes	No

Madhya Pradesh	17.00	83.00	No	No
Maharashtra	43.43	56.57	No	No
Odisha	35.00	65.00	No	No
Rajasthan	99.29	0.71	Yes	No
Tamil Nadu	0.00	100.00	No	No
Telangana	100.00	0.00	Yes	Yes
Uttar Pradesh	65.43	34.57	Yes	No

Note: FPS indicate Fair Price Shop

Source: Author's calculations based on the data procured from the 'Annavitran' website

The extent of transparency through the Aadhaar automated fair price shops across the sixteen Indian states has been depicted in table 3, which also shows the average of Aadhaar and non-Aadhaar based FPS sale transactions from October, 2017 to April, 2018. As shown in the table, none of the FPS sale transactions of foodgrains through the automated route of E-PoS (Electronic-Point of Sale machine) are Aadhaar based in the state of Tamil Nadu. Likewise, on an average, the state of Himachal Pradesh (3.29 per cent) and Chhattisgarh (8.86 per cent) have also recorded insignificant amount of Aadhaar based foodgrains transactions during the time period under study. Eight states, namely Andhra Pradesh, Delhi, Haryana, Jharkhand, Karnataka, Rajasthan, Telangana and Uttar Pradesh have been identified as the states where more than 50 per cent FPS transactions are Aadhaar based on an average. The four states of Andhra Pradesh, Delhi, Haryana and Telangana have recorded 100 per cent Aadhaar based distribution of foodgrains, thereby indicating that these states have achieved full transparency in foodgrains sale transactions, which has been facilitated by automation of fair price shops through mechanization (E-PoS machines) and computerization. Further, it can be observed that the states of Kanataka (93.29 per cent) and Rajasthan (99.29 per cent) have achieved significant amount of Aadhaar based automation and are moving in the direction of achieving full transparency with regard to the sale of foodgrains through FPS under the public distribution system in India.

5. Conclusion

The National Food Security Act (NFSA), 2013 envisages that all the people of India should have access to sufficient nutritional food. The present study has attempted to study the transparency in the accessibility of foodgrains to the ration card holders through the fair price shops under the public distribution system in India. In this light, the magnitude of Aadhaar and non-Aadhaar based sale transactions of foodgrains through fair price shops since the inception of the “Annavitran” portal across selected Indian states was assessed and compared. The results showed that out of the sixteen comparable Indian states, eight recorded more than 50 per cent FPS Aadhaar based transactions on an average. Full transparency in the FPS sale transactions was recorded by Andhra Pradesh, Delhi, Haryana and Telangana as these four states registered 100 per cent Aadhaar based distribution of foodgrains. By recording considerable amount of automated Aadhaar based transactions, the states of Rajasthan and Karnataka also witnessed substantial amount of transparent distribution of foodgrains. Thus, the automated FPS sale transactions through Aadhaar route leads to transparency in the food distribution chain, which ensures that the foodgrains reaches the intended beneficiary in the context of attaining food security in India.

References

- [1] Government of India, Ministry of Consumer Affairs, Food and Public Distribution, Government of India. (2017). *National Food Security Act 2013 and Reforms in Public Distribution System* (National Consultation on Sustainable Development Goals SDG 2-Zero Hunger). Retrieved from <http://ris.org.in/pdf/>
- [2] Government of India, Ministry of Consumer Affairs, Food and Public Distribution, Government of India. (2017). *FPS Automation ANNAVITRAN 2.1- All India Transactions Portal for Centre*. Retrieved from Department of Food and Public Distribution weblink https://epds.nic.in/documents/AnnavitranV2.1_12_Sep_2017.pdf
- [3] Government of India, Ministry of Consumer Affairs, Food and Public Distribution, Government of India. (2017). *POS Based FPS Sale Transactions with Aadhaar Authentication (NFSA)*. Retrieved from <https://annavitran.nic.in>
- [4] Balani, S. (2013). *Functioning of Public Distribution System: An Analytical Report*. New Delhi: PRS Legislative Research. Retrieved from <http://www.prsindia.org>

- [5] Ittyerah, A.C. (2013). *Food Security in India: Issues and Suggestions for Effectiveness* (Theme Paper for 57th Members' Annual Conference). New Delhi: Indian Institute of Public Administration. Retrieved from <http://www.iipa.org.in>
- [6] Dev, S.M., & Sharma, A.N. (2010). *Food Security in India: Performance, Challenges and Policies* (Oxfam India Working Paper Series, OIWPS-VII). New Delhi: Oxfam India. Retrieved from <http://re.indiaenvironmentportal.org.in>