

Implications of the COVID-19 Pandemic for Food Security in India: A Case Study of Telangana

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ABSTRACT

Food security is still a major concern in many places of India as hunger and malnutrition still exist. As one of the key aspects for Human Development, Food security is considered a basic necessity in India. The COVID-19 pandemic is currently posing a world-wide danger. The COVID pandemic isn't just a health emergency; it's also a socioeconomic disaster. At different spatial and temporal dimensions, the COVID pandemic lockdown impacted food security and the food system (production and non-production qualities). This paper focuses on implication of COVID-19 pandemic on food security. The paper analyses the administrative efficiency of management PDS in selected districts. The trends of pre and post covid pandemic era for consumption and dependence of PDS is analysed. The impact of pandemic on supply chain mechanism of PDS, challenges faced by public like health and financial concerns are also studied. The opinion regarding the existing PDS and changes need to be made like induction of DBT is also collected. The response of government in protecting the food security during covid pandemic is also analysed.

INTRODUCTION

The COVID-19 pandemic is currently posing a world-wide danger. The COVID pandemic isn't just a health emergency; it's also a socioeconomic disaster. At different spatial and temporal dimensions, the COVID pandemic lockdown impacted food security and the food system (production and non-production qualities). The pandemic of COVID-19 has already had a detrimental impact on four elements of food security defined by the Food and Agriculture Organization of UN. The Lockdown imposed in India to prevent COVID transmission has hampered economic activity and resulted in massive unemployment in the informal sector. It is expected that the most vulnerable will adopt coping mechanisms, which will likely be followed by a drop in nutritional status. Household food insecurity has grown (access, usage), and food production has been disrupted (availability) as a result of households' continuously low income and lack of savings. Because these families couldn't afford the same quality and quantity of food, a demand gap arose on the producer side. Producers had to face not only with the immediate results of government actions (disruption in labour flow, loss of catering demand, etc.), but also with a drop in consumption from low-income households. However, central government providing free ration for 2 years through PDS system, migrant people from other states faced some hurdles initially. To summarise, the factor that has the greatest negative impact on food security during the COVID-19 pandemic is the most fundamental structural problem of global food security: low income—furthermore, migrant labourers who are separated from their families face difficulties in receiving benefits from the Public Distribution System (PDS). As a result, we believe that a greater emphasis on poverty reduction and improving the incomes of low-income households is required. Furthermore, the problem is addressed by the mobility of ration cards, which may be used anywhere in the country. The most important step in recovering from the COVID-19 food crisis and avoiding future food security crises is to make structural changes.

The proposed suggestion seeks to examine the many facets of the operation of Telangana's Public Distribution System (PDS). The paper includes a comprehensive analysis and survey done in six Telangana districts. The primary goal of the project is to conduct research on customer reliance on the Public Distribution System before and during the pandemic. To examine how portability has aided consumers in obtaining rations at Fair Price stores. Government responses to the food security crises during COVID as well as the migrant labour problem. To learn what consumers think about the current public distribution system and an alternative system in which

they can get financial transfers from the government via DBT into their accounts in order to buy food. Consumers perspectives on the present PDS plan have been recorded, and its successful approach to poverty reduction and social equality inside the individual state has been thoroughly examined. Several studies on PDS were undertaken in recent years, but those pertaining to Telangana were very limited, therefore no concerted attempts have been made in this area. As a result, the current approach focuses on both qualitative and quantitative components of the PDS process in the six districts stated. The conclusions are limited to defining the consumer's degree of satisfaction, services supplied through FPS, assessing the PDS performance and identifying the limitations encountered, and offering proposed solutions to enhance the distribution functionality and effect of COVID-19.

METHODOLOGY

The current study was confined to the state of Telangana. Telangana is an agricultural friendly state, scientifically an agrarian state with increasing jobs in service sector mainly due to Hyderabad being an aspirational IT- Hub. Telangana is self- sufficient in food production. At present it holds seventh position in the all India ranking, thus provides heavy reserves of food grains to the nation. The study has been done in Hyderabad, Ranga Reddy, Mahbubnagar, Vikarabad, Medchal- Malkajgiri and Nagar Kurnool. As part of study the Telangana region is being classified as following:

1. Urban Slum
2. Town Headquarter
3. Rural

The present approach covers the consumers and their viewpoints. Thus, three different mechanisms have been appointed to survey the three classes of respondents. The population of study consists of :

1. All local consumers or households owing a valid Ration card.
2. All migrant consumers or households within the state owing a valid Ration card.
3. All migrant consumers or households from other state owing a valid Ration card.

Multistage cluster sampling technique was used to select the respondents for the study.

The selected districts has been classified into three categories which are tabulated as follows:

Table No. 2.1 Categorization of selected districts

Urban- Slum	Town- Headquarter	Rural
Hyderabad	Mahbubnagar	Nagar Kurnool
Ranga Reddy	Medchal- Malkajgiri	Mahbubnagar
	Ranga Reddy	Vikarabad
	Vikarabad	

Once districts were selected, district wise fair price shop list was obtained from Department of Food & Civil Supplies, Telangana. Also, FPS dealer wise list of households possessing ration card was obtained from Department of Food & Civil Supplies, Telangana. In six districts, in total, 21,63,204 households were issued ration cards. Out of these 320 households were selected randomly for collection of data. Therefore the sample size of consumers is 320.A structured questionnaire was prepared for consumers. The data was collected by personally contacting each and every respondent. The questionnaire was not standardized and customized as per need of the study. To achieve the objectives of the study both primary and secondary data has been used.

Secondary Data:

As the study is based on the government policies and budgets, the secondary data was required in this concern. The data was collected from the following sources:

1. Annual reports of Telangana Civil Supply Department (Department, 2020)

2. Annual reports of Food and Public Distribution System and Food Corporation of India (Distribution, Annual Report of Food and Public Distribution System of Telangana, 2022).
3. Publications of Ministry of Food, Government of India, New Delhi (Distribution, Publications).
4. Other Centre and State level publications

Administrative Efficiency for Management of PDS

Table No. 3.1 Telangana Profile

Description	Data
Geographical Area	1,12,077 Sq. Km
Population (Census - 2011)	
Population	3,50,03,674
Male	1,76,11,633
Female	1,73,92,041
Sex Ratio	988
Rural Population	2,15,85,313
Urban Population	1,36,08,665
Literacy Rate	74.83%
Administrative Set Up	
Number of Districts	33
Number of Mandals	594
Number of Municipal Corporations	13
Number of Municipalities	129
Number of Gram Panchayats	12,769

Source: Census 2011, Government of India and State portal Government of Telangana.

Telangana lies in the southern part of India covering an area of 1,12,077 Sq. Km bordered by the Chhattisgarh to the East, Andhra Pradesh towards the South- East, Maharashtra to North- West, and Karnataka to the west respectively. The statistical data of Census 2011 reported 3,50,03,674 as the total count of Punjab's population among which 1,76,11,633 were males whereas the remaining 1,73,92,041 were the total female. It stands at rank 12th in reference to both area and population. The capital of Telangana is Hyderabad, statured as a common capital until 2024 for both Telangana and Andhra Pradesh according to Andhra Pradesh State Reorganisation Act 2014.

District wise fair price shop list for selected districts was obtained from Department of Food & Civil Supplies, Telangana. Also, FPS dealer wise list of households possessing ration card was obtained from Department of Food & Civil Supplies, Telangana. The data has been tabulated as follows:

Table No. 3.2 District- wise Fair Price Shops and Beneficiaries

S. No	District	No. of FPS	Beneficiaries
1	Hyderabad	684	587764
2	Ranga Reddy	919	516004
3	Medchal- Malkajgiri	636	470410
4	Nagar Kurnool	558	194431
5	Mahbubnagar	506	187489
6	Vikarabad	588	207106

Source: Department of Food, Civil Supplies & Consumer Protection Department, Telangana.

In six districts, in total, 21,63,204 households were issued ration cards. Out of these 320 households were selected randomly for collection of data. Therefore, the sample size of consumers is 320. The district wise and card wise contingency table of respondents is shown in table.

Table No. 3.3 District and Card wise contingency table of respondents.

S. No	District	No. of FPS	Surveyed	Beneficiaries
1	Hyderabad	684	70	587764
2	Ranga Reddy	919	50	516004
3	Medchal- Malkajgiri	636	50	470410
4	Nagar Kurnool	558	50	194431
5	Mahbubnagar	506	50	187489
6	Vikarabad	588	50	207106

Source: Department of Food, Civil Supplies & Consumer Protection Department, Telangana.

The FPSs play an important role in the retail distribution of essential commodities under PDS. Thus, access to the PDS facilities depends on a variety of factors. Fair Price Shop is a medium of making PDS items available to the ultimate needy consumers. This medium has great relevance in making this system a real success. To study the views and the opinions of consumers regarding the feasibility of FPS, it is of utmost importance to examine the effectiveness of PDS.

Table No. 3.4 Delivery Management of PDS

	Rural	Urban- Slum	Town	Total
< 10 days	0	0	0	0
10 to 15 days	32	0	12	44
15 days	80	38	70	188
> 15 days	18	32	38	88

Source: Sample data collected.

It is clear from the above table that the according to respondents, majority of FPS were open for 15 days a month. The responses were 188 (58.75%) in rural, urban- slum as well as town areas FPS were open for 15 days. Followed by 88 (27.5%) respondents who said the FPS was opened for more than 15 days. Which means a majority respondents, i.e., 86.25%, said that the FPS was open for 15 or more days. Whereas 44 (13.75%) respondents said that FPS was opened for less than 15 days, all these were from the rural (32) and town (12) areas. By the above data we can conclude that the FPS was opened for a good number of days, and the consumers were also feeling relaxed from this. Otherwise, there was huge rush at FPS and the time was wasted in huge lines.

The distribution of food grains through FPS is a difficult thing and it need a great management system. Despite the all efforts put in by governments, the consumers still face difficulties. As part of this study, respondents were asked regarding the difficulties faced by them at Fair Price Shops. It was found that the major concern, 41.87% of respondents facing was of grain supplies running out of stock at Fair price shops. Because of which consumers were asked to comeback other day for collecting food grains. This problem was seen most in rural area. Apart from the above concern, other difficulties faced by consumers are stated below.

Table No. 3.5 Difficulties faced by Consumer

	Rural	Urban- Slum	Town	Total
Grain supplies did not reach the PDS outlet	5	2	1	8
Lack of information about opening times	32	24	8	64
Grain supplies "ran out"	64	28	42	134
Technical problem of Biometric Machine	22	8	12	42
Heavy rush	7	6	56	69
Under weighing	0	2	1	3

Source: Sample data collected.

21.5% of respondents expressed that heavy rush at Fair Price Shop as a difficulty. This was seen more in town area. 20% of the respondents said that, they didn't know when the ration shop will be open. Most of the people facing this problem are from rural area. 13.12% of respondents said they faced technical problem regarding improper functioning of biometric machine. But the other mode of verification using iris and mobile OTP helped them through. 2.5% respondents said that when they visited Fair Price Shop, the dealer said the food grains did not reach the PDS outlet. By this information collected we can conclude that despite efforts made by governments, consumers are still facing difficulties as mentioned above.

PDS Consumption& Dependence Pre & Post COVID-19 Pandemic

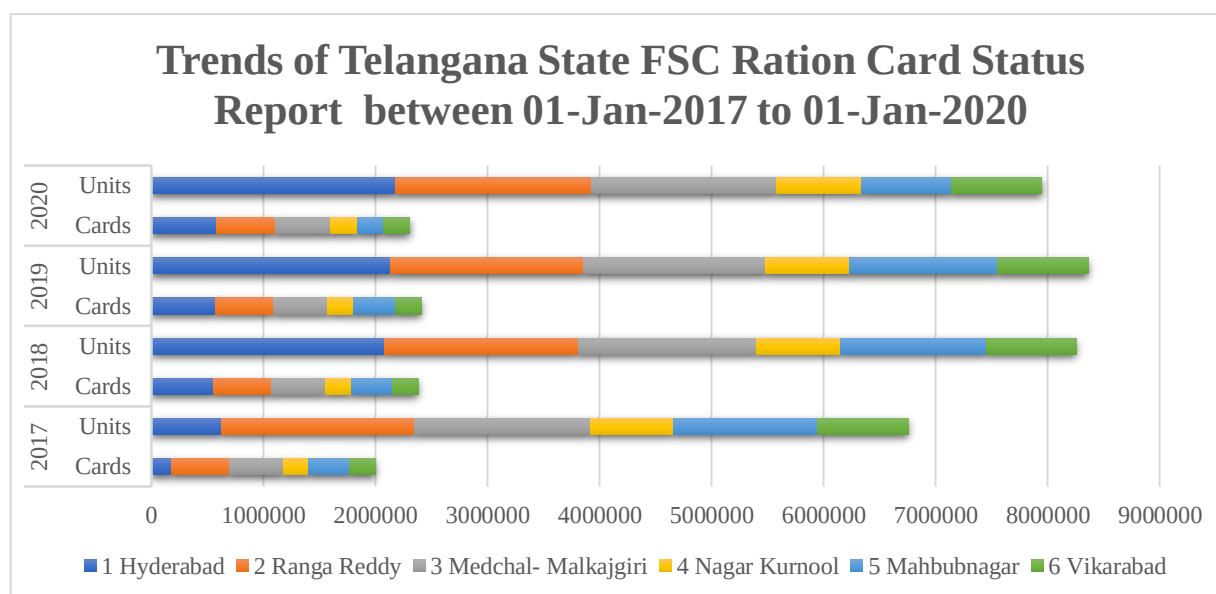
As we are analyzing the trends of PDS consumption and dependence pre and post COVID-19. It is to be kept in mind that the pre covid era, we have Aadhar seeding with ration cards, which made many bogus ration cards deleted. Thus, we can see a steady or low increase in new cards. By coming to 2020 Jan when Aadhar seeding with ration cards were almost done, we had a massive decrease in ration cards. The below table displays the trends of Telangana State FSC Ration Card Status report between 01-Jan-2017 to 01-Jan-2020.

Table No. 4.1 Telangana State FSC Ration Card Status Report as on 01-Jan-2017

Trends of Telangana State FSC Ration Card Status Report between 01-Jan-2017 to 01-Jan-2020									
Sl. No	District Name	2017		2018		2019		2020	
		Cards	Units	Cards	Units	Cards	Units	Cards	Units
1	Hyderabad	181610	628416	556211	2084484	569936	2133155	580925	2178822
2	Ranga Reddy	516992	1720697	518017	1725672	518932	1727008	524956	1749563
3	Medchal-Malkajgiri	476576	1566916	479697	1590181	487500	1618540	495523	1650886
4	Nagar Kurnool	227365	744027	228624	748752	230342	753615	234012	757589
5	Mahbubnagar	365969	1285356	370043	1301863	372964	1321266	237014	804637
6	Vikarabad	233105	811054	231257	804585	232773	807954	235001	808202
	Total	2001617	6756466	2383849	8255537	2412447	8361538	2307431	7949699

Source: Department of Food, Civil Supplies & Consumer Protection Department, Telangana.

When we keenly observe the trends, we can sense a commonality between increase in ration cards in Hyderabad and decrease in rural area, especially Mahbubnagar. Mahbubnagar is known for the mass migration of labor in search of jobs, and Hyderabad as the capital most people settle here for livelihood. It can be speculated that, most of consumers preferred to link their ration card in Hyderabad, causing a fall in count of cards in rural areas.



Source: Figure generated using data in Table 4.1.

Table No. 4.2Telangana State FSC Ration Card Status Report during 2020 to 2022

Telangana State FSC Ration Card Status Report during 2020 to 2022									
Sl. No	District Name	AAP		AFSC		FSC		Total	
		Cards	Units	Cards	Units	Cards	Units	Cards	Units
1	Hyderabad	-5	-11	123	270	55538	192099	55656	192358
2	Ranga Reddy	1	4	90	194	34853	100383	34944	100581
3	Medchal-Malkajgiri	0	0	75	136	28851	81952	28926	82088
4	Nagar Kurnool	0	0	245	681	4668	9204	4913	9885
5	Mahbubnagar	-4	-4	150	562	3466	4349	3612	4907
6	Vikarabad	-1	-2	222	690	6375	14124	6596	14812
	Total	-9	-13	905	2533	133751	402111	134647	404631

Source: Department of Food, Civil Supplies & Consumer Protection Department, Telangana.

The above table gives us the data of the new cards added after the 2020, which we can say that during and post pandemic period. By this we can conclude the dependency of consumer on PDS post pandemic. we can see there was an increase of 134647 cards benefitting 404631 beneficiaries. We can see a decrease in AAP cards for Hyderabad, Mahbubnagar and Vikarabad with 5, 4 and 1 respectively, whereas Ranga Reddy has an increase of 1 card and Medchal- Malkajgiri and Nagar Kurnool remained unchanged as there was no addition or deletion from the list. AFSC and FSC cards have seen an 905 and 133751 cards rise. Hyderabad Ranga Reddy, Medchal-Malkajgiri, Nagar Kurnool, Mahbubnagar and Vikarabad has an increase of AFSC cards as 123, 90, 75, 245, 150, 222 respectively. And FSC cards were also increase by 55538, 34853, 28851, 4668, 3446 and 6375 respectively.

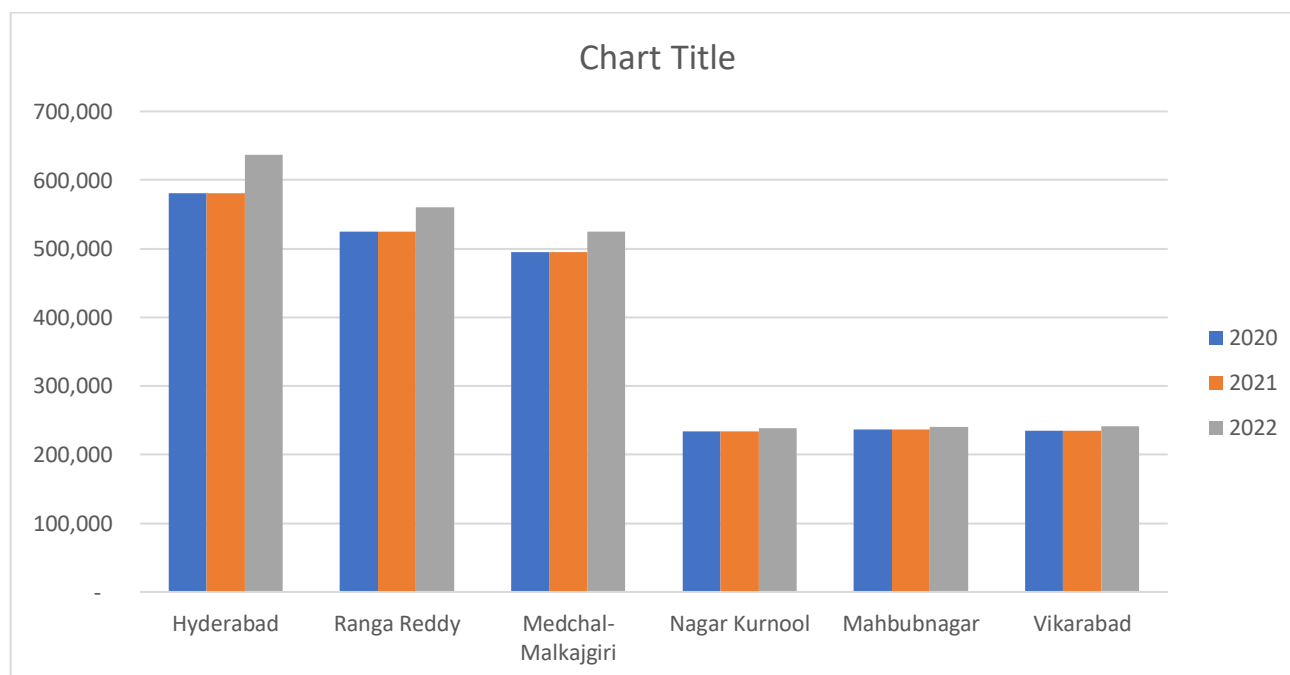


Figure:4.2 PDS dependency during and Post Pandemics

The above bar diagram shows the district wise trends for dependency on Public Distribution System during and post COVID, between 2020 and 2022. After the decline in PDS dependency between 2019 and 2020, we can see not that change during the pandemic years, i.e., during 2020 and 2021. The post pandemic surge can be seen in the year 2022.

The below chart shows the trends of dependency on Public Distribution System for last five years, from 2017 to 2022. After the decline in PDS dependency between 2019 and 2020, we can see a sharp rise post pandemic year 2021.

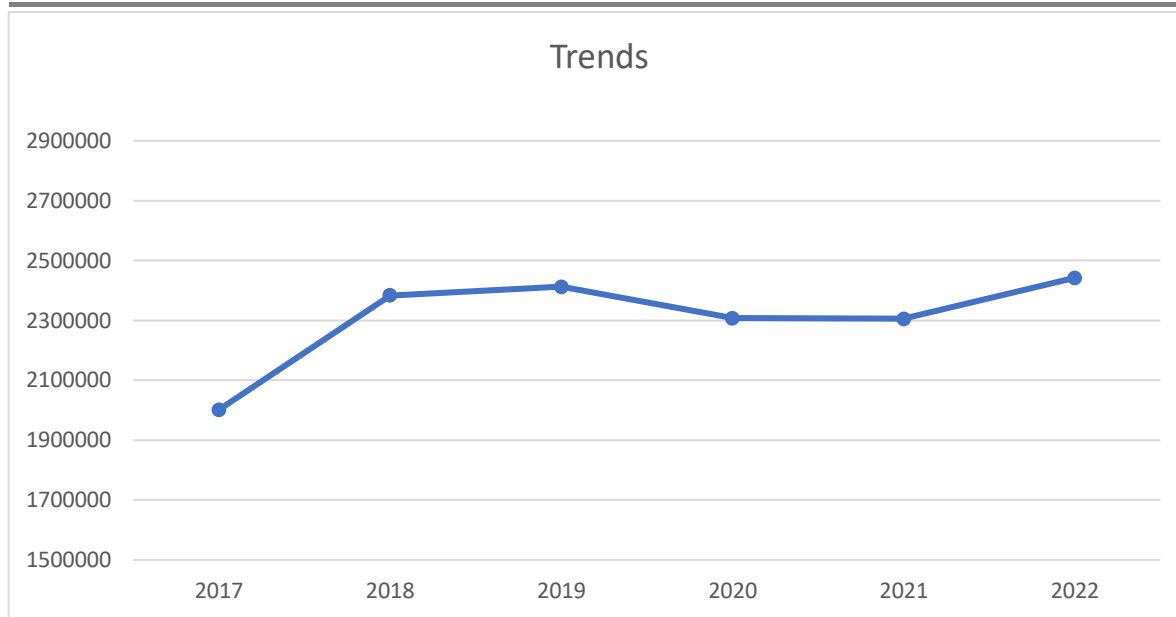


Figure: PDS dependency for last five years

CONCLUSION

The Governments in India, both central, state and local bodies played a crucial role in handling the pandemic situation. Despite of several hindrances in supply chain mechanism due to lockdown government successfully implemented PDS. The Pradhan Mantri Garib Kalyan Anna Yojana served 80 crore population of India ration for two consecutive years. The migrant labor community were the most effected due to pandemic, the governments facilitated them with transport, food and in Telangana government even gave a sum of Rupees 500 each for migrant workers. The quarantine facilitation as well as testing was also taken care. The government implemented the One Nation One Ration scheme where migrant workers were allowed to collect food grain across the nation. But very few states were part of this scheme at that time. Relief camps were setup at place to place for facilitating the migrant workers who left by foot. Government of India started Shramik Special Trains to facilitate the migrant workers stranded in across country to reach their home. The supply of food grains through PDS to such a large population is commendable. And governments tap their shoulders showing they supplied food grains to the masses and we distributed new ration cards, notwithstanding with the fact that issuing of ration card means the family newly came under below poverty line, but the poverty rate in India is also decreased comparatively. This dichotomy or inverse nature of decrease in poverty and increase in ration cards which tends to be a sign of poverty is a matter of debate. While in survey conducted, it was found that split of joint family and new couples getting registered as separate families can be one of the reasons. And the web of schemes or welfare facilities attached with ration cards is also making people to get ration. The main intention of these people is not to get ration, but the schemes and welfare facilities. The ration procured by these people from FPS is sold to breakfast tiffin centers. The distribution of food grains through FPS is a difficult thing and it need a great management system. Despite the all efforts put in by governments, the consumers still face difficulties.

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