



Public Distribution System of Bihar: An Analytical Study of Dissemination and Sale Pattern under Antyodaya Anna Yojana (AAH) And Priority Householders (PHH)

Sweta Kumari*, Ravi Kumar**, Shweta Kumari***

* Research Scholar, Department of Commerce, Patliputra University, Patna, Bihar, India

** Professor, University Department of Commerce, B.R.A. Bihar University, Muzaffarpur, Bihar, India

*** Assistant Professor, Department of Commerce, R.K. College, Madhubani, LNMU, Darbhanga, Bihar, India

Corresponding Author: shwetainsa.kumari@gmail.com

Received: 18th February, 2023 **Accepted:** 4th March, 2023, **Published:** 13th March, 2023

ABSTRACT: The Public Distribution System (PDS) in Bihar has been one of the main interventions for poverty alleviation and food security. The system is an important component of the National Food Security Act, 2013. It is a government-run system which distributes food grains and other essential commodities at subsidized prices among the poor households. The present study is based on identifying the distribution pattern of Antyodaya Anna Yojana (AAH) and Priority House Holders (PHH) Cards and its members among different districts of Bihar, where it has been found that, the use of different types of cards were more in rural areas under PHH scheme of public distribution system and the secondary objective of the study is to analyse the sales pattern of wheat and Rice under Antyodaya Anna Yojana (AAH) and Priority House Holders (PHH) schemes among different districts of Bihar where it has been found that it is the wheat which has been sold more under PHH scheme of the Public Distribution System.

KEYWORDS: AAH, PPH, Rural, Urban, Wheat and Rice

1. INTRODUCTION

Nowadays, those who are too busy to go to the store may simply do their shopping online. There has been a dramatic shift in consumers' buying habits over the previous decade. Even while shoppers still frequent traditional stores, many prefer the ease of purchasing online. People nowadays are so pressed for time that they either can't or don't want to go to the mall, making the time savings offered by online shopping invaluable (Rahman et al., 2018, Mehta et al., 2022).

The concept "Public Distribution System" is used to refer to the system through which the government or other public agency disseminates different products and services, especially those vital to human survival. Public distribution system (PDS) is "a system of selling of specified goods via institutions such as Fair Price stores or Cooperatives. Essential goods are distributed via the Public Distribution System at heavily subsidised prices, which is a great relief

to the poor and disadvantaged (Mandal et. al., 2022, Verma et. al., 2020).

PDS has been practised in India for centuries, but its history there goes back far further. However, it was only under the Khilji era that regulated distribution was implemented successfully. By taking decisive measures, Ala-ud-din Khilji ensured that food supplies would not run out and that prices would remain stable. When Professor Kirely, in his capacity as the alien government's Economic Adviser, instituted rationing during World War II (1930–45) to ensure that essential commodities were made available to the public on an equitable basis despite widespread shortages brought on by the conflict, he was laying the groundwork for what would become PDS on a scientific and methodical basis.

After World War Second ended in 1939, India became the first country to implement a public distribution system (PDS) based on fair price shops (FPS). To regulate the



delivery of food, the Indian government passed the Essential commodities (temporary powers) Supplies Act in 1946. The government established a strategy of control after gaining independence at the end of 1947, but it ultimately failed to achieve its goals. Wheat, sugar, kerosene, gur, etc., all had their markets thrown off by the inflationary pressures. The experiment in loosening controls was a colossal failure. This led to the reinstatement of "controls" in 1948, which were not lifted again until the situation had significantly improved by 1952. The prices of all basic goods increased throughout these three years. In 1950, a group called the "Food grains Procurement committee" was established by the Indian government to assess the situation from 1947 to 1950. In the fourth five-year plan document, it was announced that PDS would be entering a new phase. The PDS was deemed necessary on a regular basis in order to aid rural residents and, to a lesser degree, put downward pressure on prices in the free market. PDS needs should be supplied primarily by internal procurement, and buffer stocks must be built up as per original expectations.

The concept of dual pricing with regards to selected mass consumption items such as food grains, sugar, textiles, edible oils, etc. was integrated by the planning commission into the draught of the Fifth Five Year Plan. The idea of the two-tiered pricing system was to cushion the blow of inflation on more vulnerable groups in society (Mittal, 2020). The PDS played a significant role in the implementation of the 20-point plan in July 1975, which necessitated a large number of procurement and distribution activities for critical goods. As a result, PDS served primarily as a means of providing immediate assistance until 1979.

In India, the majority of people get their food at no cost thanks to the Public Distribution System (PDS). Nearly 11 crore families may get the subsidised food grains under this programme. The British "rationing" system of World War II (1939–1955) served as the inspiration for PDS, which was kept as an important part of social policy throughout the process of planned economic growth begun in 1951. It was the foundation of the fair-growth policy. With the help of the First Five-Year Plan (1951–1956), the system was expanded to reach all of the country's rural regions that had been experiencing severe food shortages. It was in 1965 that India established both the Food Corporation of India (FCI) and the Agricultural Prices Commission (APC). This policy of subsidising the cost of food and other necessities for the most marginalised members of society has been maintained throughout the years under the PDS. Prior to 1997, the PDS did not discriminate in who it offered food subsidies to. Despite helping millions of people in need, the programme has been heavily criticised for a number of reasons, including its urban bias, limited coverage, and lack of openness and accountability (Sawant and Jadhav, 2013). About half of those who get benefits from the distribution system are not poor, as stated by Jha (1992), suggesting that the PDS has not significantly improved the nutritional condition of the intended population. Thus, it was decided that directing the PDS toward the poor is a necessary and urgent change. As of the 31st of December 2022, the Public Distribution System in Bihar expanded to 51188 Fair Price Shops across the state.

There are two types of ration card which is provided under NFSA in Bihar and these are as follow:

Priority Household (PHH) Ration Card - Members of families that satisfy the requirements set out by the state governments are issued this card. 5 kg. of grains per person per month will be provided to each family.

Antyodaya Anna Yojana (AAY) Ration Card - State governments offer these cards to verified residents. Normally, each family is allotted 35 kg of grains each month.

2. REVIEW OF LITERATURE

Bhat & Hussain (2012), Claimed that the Public Distribution System is the biggest food subsidy scheme in India, and perhaps the world. Through its network of Fair Price Shops (FPS), it distributes subsidised food grains to almost 10.5 crore families throughout the nation.

Ray and Ray (2013), "food security" refers to the assurance that nutritious food will always be readily available, easily accessible, and within everyone's financial means. When there is an issue with the production or distribution of food crops, low-income families are hit most. The Public Distribution System (PDS) and government monitoring and action are crucial to ensuring the safety of the nation's food supply.

Gairola's (2014), In his research, found out that the Public Distribution System in the nation helps provide cheap grains to the needy. The purpose of a well-functioning Public Distribution System is to provide cardholders with essential commodities such as selected grains, sugar, and kerosene at discounted rates. In addition to facilitating the distribution of goods, the PDS aids in the regulation of their open-market pricing.

Gundegowda and Nagaraj's (2014), They found out that the Public Distribution is crucial for low-income nations like India. However, there are a number of reasons why this system is not as strong as it once was, and proposals are needed to make its implementation more efficient and open to public scrutiny. Almost none of FDD's margin profit is kept. As a result, this might inspire fraud and derail progress. The current margin amount should be increased by the government. There is potential for legislation to be implemented that would lead to swift and severe punishment of misconduct. One of the problems with inappropriate execution of this method is the establishment of godown in a highly visible location.

Kumar, Babu, & Betne (2016), The purpose of this research was to evaluate the efficacy of India's Public Distribution System (PDS) in the state of Bihar, which is plagued by poverty, malnutrition, and hunger and is notorious for its PDS's widespread inefficiencies. Based on an examination of NSSO data and the micro level evidences gleaned from the Village Level Studies, the findings point to a promising improvement in the efficiency of PDS throughout the state. The reach of PDS grew, with noticeably enhanced involvement by the poorer sectors of society, and this resulted in a notable improvement in grain intake and calorie gains throughout rural and urban regions.

Gupta & Mishra (2018), The primary results demonstrate that people from lower socioeconomic groups and localities have more access to PDS rations and, as a result, consume more PDS items and get more calories per day than those from higher socioeconomic groups and locations. When it comes to helping low-income families get access to nutritious food, PDS has also had a notable and beneficial impact. Most non-poor people don't buy groceries, so they don't count on their entitlement for food. Instead, they use it to buy "kerosene only," a cheaper alternative to regular gasoline. Ration sellers, facing poor profit margins and significant levels of corruption, either divert some of the PDS quota to the open market or raise prices to make up for their shortfalls.

George & McKay (2019), This study aims to examine how well the PDS operates and how effective it is in helping India achieve food and nutritional security. The paper's results underline the importance of PDS in combating hunger and malnutrition, but also show its limited effect in enhancing food security and reducing childhood mortality owing to operational inefficiencies. If significant legislative changes are made to address operational inefficiencies and environmental effects, the PDS might serve as a solution to food hunger in India.

Chakraborty & Sarmah (2019), This article's goal is to provide an estimate of the size of the PDS network expansion, the extra food grain demand, and the enhanced storage facilities needed to feed India's expanding population until the year 2025. This statistical research shows that the PDS must be substantially revised in order to conform to NFSA, and the results may help policymakers design a more sound PDS.

Thomas & Chittedi (2021), The goal of this research is to examine how PDS affects rural and urban poverty. It also evaluates the differences in subsidy transfers between low- and high-income families. The information used to achieve this goal comes from the 68th round report on PDS and other sources of household consumption compiled by the National Sample Survey Organization (NSSO) (2011–2012). According to the NSSO study, the monthly per capita consumption expenditure (MPCE) of the main 17 states is divided into deciles, and the effect of PDS on poverty is calculated using the income transfer technique. Subsidy or implicit income transfer is used to calculate the potential effect of PDS on poverty. The analysis found that the lowest spending class in the highest MPCE deciles for all the states saw the greatest effect in terms of percentage rise in real MPCE.

3. RESEARCH METHODOLOGY

Various studies revealed that Public Distribution System plays a very important role in the economic development of the poor people and try to reach to the masses. In this paper an attempt has been made to identify the dissemination arrangement of cards and their members under different schemes of the PDS system and to a what extent the sales of wheat and rice are complete under different schemes of PDS System.

METHODOLOGY STRUCTURE

Objectives	<ul style="list-style-type: none"> To identify the trend of distribution of Antyodaya Anna Yojana (AAH) and Priority House Holders (PHH) Cards and its members among different districts of Bihar. To analyses the sales pattern of wheat and Rice under Antyodaya Anna Yojana (AAH) and Priority House Holders (PHH) schemes among different districts of Bihar.
Data	The study is based on secondary data and data had been collected from the monthly report of Food And Consumer Protection Department, Govt. of Bihar(https://epos.bihar.gov.in)
Period	January 2023 Monthly Report of Food and Consumer Protection Department, Govt. of Bihar of Public Distribution System.
Variables	PHH Cards, AAY Cards, PHH Members, AAY Members, Rural, Urban, Rice and Wheat.
Methodology and Tools	Trend Line, Bar Diagram, Pie-Chart, Standard Deviation (SD), Coefficient of Variation (CV), Maximum (Max), Minimum(Min) and Range

4. RESULTS AND DISCUSSION

Table:1 Descriptive Statistics (Distribution of Cards among Rural & Urban Areas, among different schemes (PHH & AAY) And between its members among all districts of Bihar)						
Statistics	Rural	Urban	PHH Cards	AAY Cards	PHH Members	AAY Members
Mean	4319 43	3912 3	410715	60352	1991379	302062
SD	2,20, 119	46,5 06	2,08,74 2	33,534	9,57,268	1,66,024
CV	51	119	51	56	48	55
MAX	8,73, 951	2,89, 939	8,03,16 6	1,46,27 1	38,82,81 8	7,10,192
MIN	75,7 46	5,00 6	82,081	10,231	4,22,785	53,257
Range	7,98, 205	2,84, 933	7,21,08 5	1,36,04 0	34,60,03 3	6,56,935

Source: Own Calculation (<https://epos.bihar.gov.in>)

Table 1 represents the descriptive statistics of distribution of cards among rural & urban areas, among different schemes (PHH & AAY) and in between its members among all districts of Bihar. On an average in rural areas the total numbers of cards members were found more and found very less in urban areas. The Priority House Holders (PHH) are more in number as compared to Antyodaya Anna Yojana (AAH) cards holders. A high degree of disparity has been found among number of card holders in all the districts of urban areas.

Table:2 Descriptive Statistics (Sale of Rice and Wheat between AAY and PHH schemes among all districts of Bihar)				
Statistics	Rice		Wheat	
	AAY	PHH	AAY	PHH
Mean	112460	555581.3	235764.3	1066449
SD	200656.4	1063995	136327.2	556892.1
CV	178.4248	191.5102	57.82351	52.2193
MAX	891897	4990555	534037	2390801
MIN	140	636	46662	183821
Range	891757	4989919	487375	2206980

Source: Own Calculation (<https://epos.bihar.gov.in>)

Table 2 represents the descriptive statistics of sale of Rice and Wheat between AAY and PHH schemes among all districts of Bihar. On an average it is the wheat which has been sold more under PHH scheme as compared to rice. A high degree of dissimilarity has been recorded among the sales figures of rice under PHH scheme among all the districts of Bihar. It is the rice which has been sold more in maximum size (kgs) as compared to wheat under PHH scheme.

Figure 1 represents the total number of cards distributed among all districts of Bihar under PHH and AAY scheme of Public Distribution System. As compared to AAY members it is the PHH card holders who are more in number and they were also found more in Purbi Champaran district of Bihar.

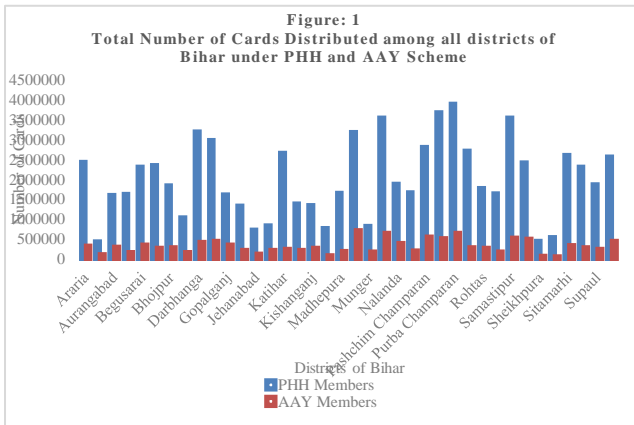


Figure 2 represents total number of PHH and AAY Cards members among all districts of Bihar. From the figure it can be observed that it is again the PHH members who were more in numbers as compared to AAY card members and there were found more in Purbi Champaran again low in Sheikhpura district of Bihar. But, in case of AAY members it is the Sheohar district of Bihar were members found very less.

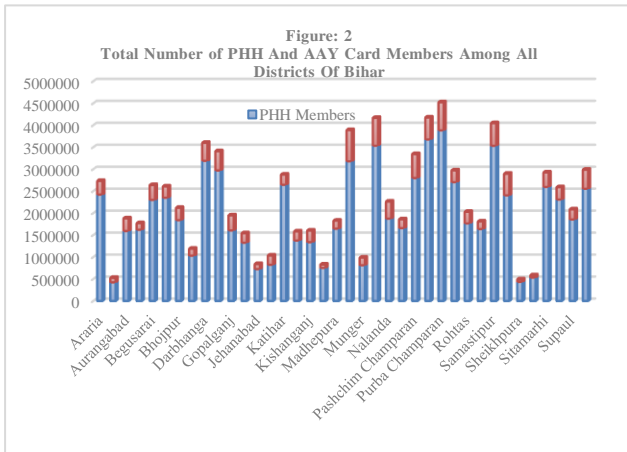
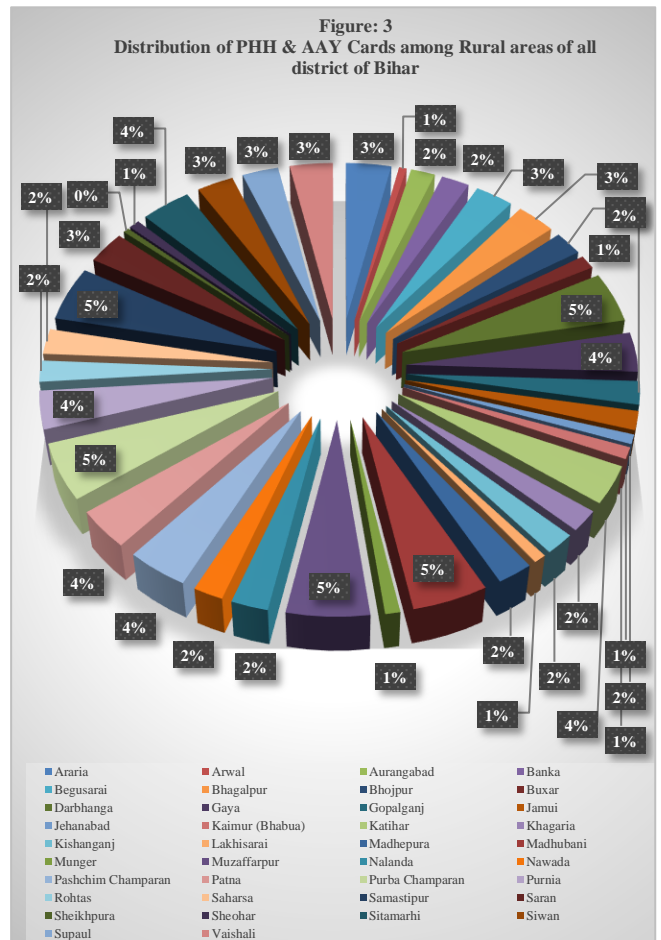
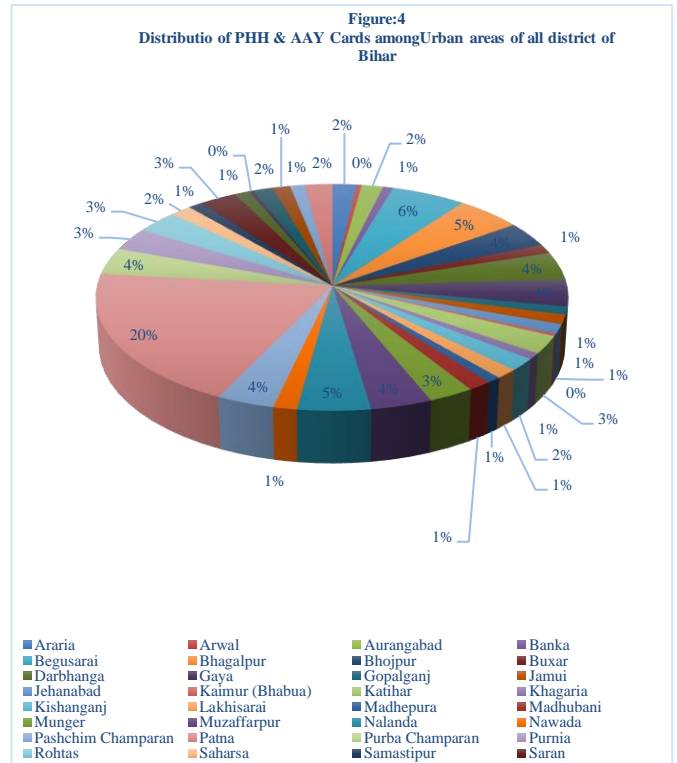


Figure 3 represents the distribution of PHH & AAY cards among rural areas of all district of Bihar and it is the Muzaffarpur among all districts of Bihar under rural areas were cards were distributed more in numbers.

Figure 4 represents the distribution of PHH & AAY cards among the urban areas of all district of Bihar and it is the Begusarai district of Bihar among all district under urban areas were cards were distributed more in numbers



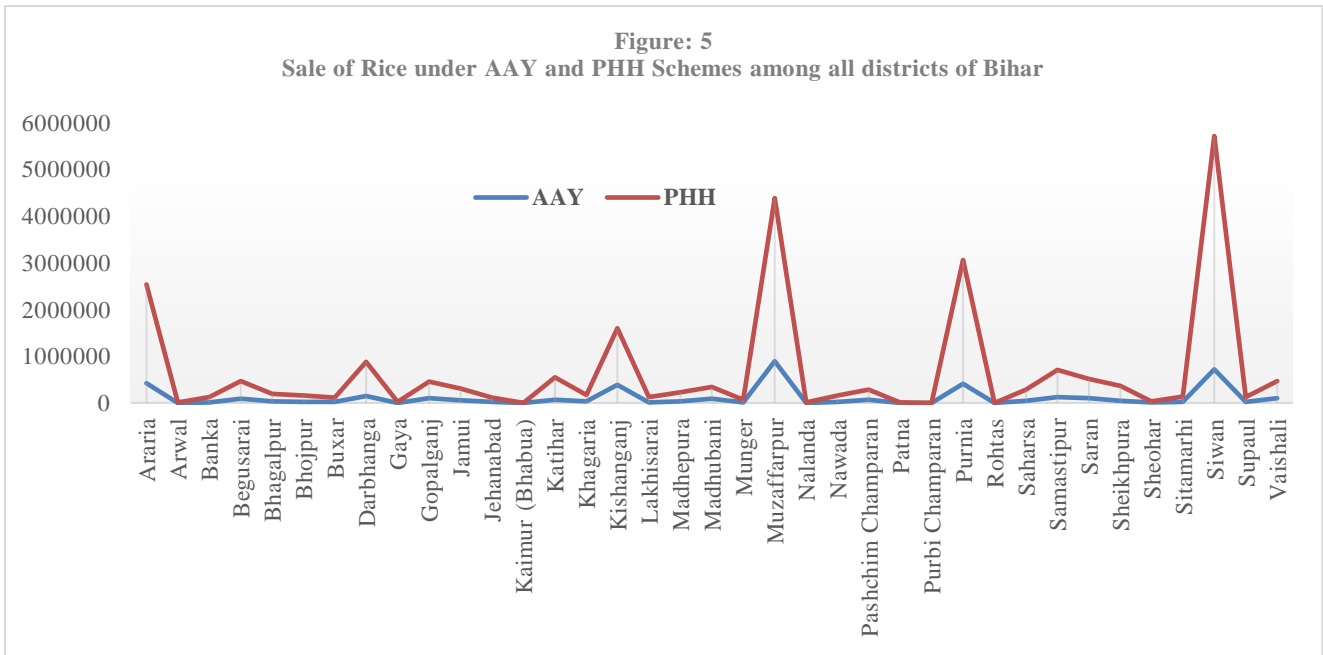
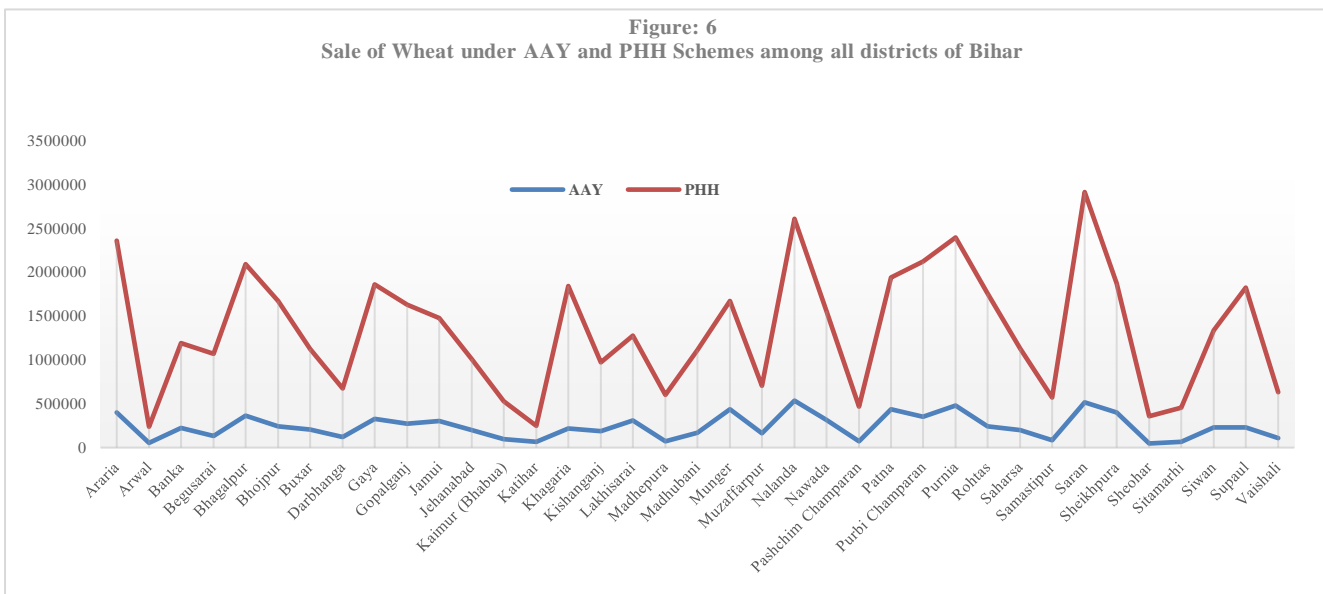


Figure 5 & 6 Represents the sale of Rice and Wheat Rice under AAY and PHH Schemes among all districts of Bihar. Under AAY scheme rice had been sold more in Muzaffarpur district of Bihar and under PHH scheme it is the Siwan in which rice has been sold more. Wheat under AAY scheme had been sold more in Muzaffarpur district of Bihar and under PHH scheme it is the Samastipur in which wheat had been sold more.

5. KEY FINDINGS

- On an average in rural areas the total numbers of cards members were found more and the Priority House Holders (PHH) are more in number as compared to Antyodaya Anna Yojana (AAH) cards holders.
- It is the wheat which has been sold more under PHH scheme as compared to rice under the same scheme.

- The PHH card holders who are more in number and they were also found more in Purbi Champaran district of Bihar.
- PHH card members found more in numbers as compared to AAY card members and there were found again found more in Purbi Champaran district of Bihar but low in Sheikhpura district of Bihar.
- It is the Muzaffarpur among all districts of Bihar under rural areas were cards were distributed more in numbers and it is the Begusarai among all districts of Bihar under urban areas were cards were distributed more in numbers.
- Under AAY scheme rice had been sold more in Muzaffarpur district of Bihar and under PHH scheme it is the Siwan in which rice has been sold more.



- Wheat under AAY scheme had been sold more in Muzaffarpur district of Bihar and under PHH scheme it is the Samastipur in which wheat had been sold more

6. CONCLUSION

The present study is based on identifying the distribution pattern of Antyodaya Anna Yojana (AAH) and Priority House Holders (PHH) Cards and its members among different districts of Bihar where it has been found that on an average in the rural areas the total numbers of cards members were found more and it was the Priority House Holders (PHH) who were found more in number as compared to Antyodaya Anna Yojana (AAH) cards holders. The PHH card holders were found more in Purbi Champaran district of Bihar among all and they were also found more in number as compared to AAY card members. The use of different types of cards were found more in rural areas and under PHH scheme of public distribution system and the statistical outcomes also showed the same results. The second objective of the study was to analyse the sales pattern of wheat and Rice under Antyodaya Anna Yojana (AAH) and Priority House Holders (PHH) schemes among different districts of Bihar where it has been found that it is the wheat which has been sold more under PHH scheme of the Public Distribution System

REFERENCES

- Bhat, G. M., & Hussain, B. A. (2012). Efficiency of public distribution system in Kashmir: A micro economic analysis. *International Research Journal of Social Sciences*, 1(4), 24-27.
- Chakraborty, S., & Sarmah, S. P. (2019). India 2025: the public distribution system and national food security act 2013. *Development in Practice*, 29(2), 230-249.
- Gairola, B.K., (2014). *Public Distribution System, Informatics, An e – governance publication from informatics centre, Vol. 19 (3), ISSN: 0971- 3409. 106*
- George, N. A., & McKay, F. H. (2019). The public distribution system and food security in India. *International journal of environmental research and public health*, 16(17), 3221.
- Gundegowda and Nagaraj, G. H., (2014). Public distribution system in Karnataka, S.E. Golden Jubilee Year, September 2011, pp.25 – 28. 107.
- Gupta, A., & Mishra, D. K. (2018). Public distribution system in Uttar Pradesh: access, utilization and impact. *Indian Journal of Human Development*, 12(1), 20-36.
- Gupta, P. K., & Mittal, P. (2020). Corporate Governance and Risk Bundling: Evidence from Indian Companies. *European Journal of Business Science and Technology*, 6(1), 37–52. <https://doi.org/10.11118/ejobsat.2020.004>
- Jha, S. (1992). Consumer subsidies in India: Is targeting effective? *Development and Change*, 23, 4, 101–28.
- Jora, R. B., Sodhi, K. K., Mittal, P., & Saxena, P. (2022). Role of Artificial Intelligence (AI) In meeting Diversity, Equality and Inclusion (DEI) Goals. In 2022 8th International Conference on Advanced Computing and Communication Systems (ICACCS) (pp. 1687–1690). IEEE. <https://doi.org/10.1109/icaccs54159.2022.9785266>
- Kumar, A., Parappurathu, S., Babu, S., & Betne, R. (2016). Public distribution system in Bihar, India: implications for food security. *Journal of Agricultural & Food Information*, 17(4), 300-315.
- Mandal, A., Saxena, A., & Mittal, P. (2022). Financial literacy and digital product use for financial inclusion: A GETU model to develop financial literacy. In 2022 8th International Conference on Advanced Computing and Communication Systems (ICACCS) (pp. 1614–1619). IEEE.
- Mehta, K., Mittal, P., Gupta, P. K., & Tandon, J. K. (2022). Analyzing the Impact of Forensic Accounting in the Detection of Financial Fraud: The Mediating Role of Artificial Intelligence (pp. 585–592).
- Mittal, P. (2020). Big data and analytics: a data management perspective in public administration. *International Journal of Big Data Management*, 1(2), 152. <https://doi.org/10.1504/ijbdm.2020.112415>
- Sarbapriya Ray and Ishita Aditya Ray (2013). Role and Effectiveness of Public Distribution System in Assuring Food Security in India: An Appraisal, *Journal of Economics and Sustainable Development*, Vol.2, (4).
- Sawant, B.S.&Jadhav, R.J. (2013).Public distribution system of essential commodities as a social security- A study of Satara district, Maharashtra.*International Journal of Management and Business Studies*, 3, 1, 31–33.
- Thomas, S., & Chittedi, K. R. (2021). The impact of public distribution system on poverty in India. *Journal of Public Affairs*, 21(1), e2048.
- Verma, C. P., Bansal, R., & Mittal, P. (2020). Control of COVID-19: A Counter Factual Analysis. *Administrative Development, Journal of HIPA, Shimla*, 7(1), 1–24.