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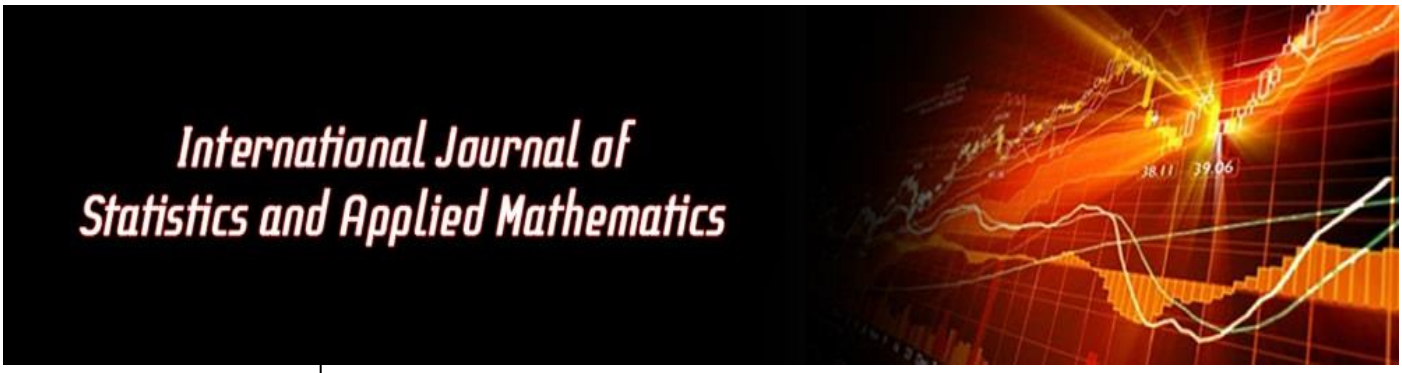

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An investigation into the socio-economic profile of Agri-Input Retailers in Ballia District of Uttar Pradesh

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Abstract
This section of the research study investigates the socio-economic status of retailers in the agri-input retail sector, providing a detailed analysis of various demographic and economic factors that shape this industry. The data was collected from a sample of 50 retailers, and the results were computed by the researcher. The analysis covers the age distribution of retailers, gender-wise distribution, literacy levels, year of establishment of stores, motives for starting the business, and store formats. Notable findings include variations in form of ownership and store format based on statistical tests, signifying the diversity within the retail landscape. These insights contribute to a more comprehensive understanding of the socio-economic characteristics of retailers and can be valuable for policymakers, researchers, and industry stakeholders in the agricultural retail sector.

Keywords: Retailer, demographic, stakeholder, store formats

Introduction
Agriculture has been the cornerstone of India's economy and a way of life for millions of its citizens for centuries. The agricultural landscape of this diverse nation is composed of a myriad of regions, each with its unique characteristics and challenges. Ballia, a district in the northern state of Uttar Pradesh, stands as a distinctive emblem of India's agricultural diversity, rich cultural heritage, and its complex socio-economic tapestry. This study embarks on an exploration of the socio-economic profiles of the retailers in Ballia District, Uttar Pradesh. Agriculture, as the primary occupation in Ballia, significantly defines the district's socio-economic landscape. This research is not merely an academic exploration; it is a pursuit of knowledge that holds the potential to inform policies, influence interventions, and shape the future of agriculture in Ballia. The socio-economic status of retailers is a critical aspect of the retail industry, affecting the demographics, motivations, and characteristics of individuals engaged in this sector. This section delves into an analysis of the socio-economic attributes of retailers, focusing on key factors such as age, gender, literacy level, year of establishment, motive for starting the business, and store format. Understanding these dimensions provides valuable insights into the diverse landscape of agri-input retail stores, shedding light on the factors that influence the composition and dynamics of this sector.

Methodology
Data Collection
The data for this study was gathered from both primary and secondary sources. Primary data was collected by distributing structured questionnaires and conducting interviews with executives and store managers in selected retail establishments in the research area.
Secondary data was sourced from various publications, including those from the Ministry of Commerce and Trade Policies, journals, working papers, committee reports related to organized retail, trade association publications, and the RBI's Handbook of Statistics on the Indian Economy.

Sampling methodology
For the sampling methodology, a combination of purposive and random sampling methods was employed. The sample included 50 retail centers and was selected from the Ballia district in Uttar Pradesh, a region known for its high agricultural activity.

Study Area
In the state of Uttar Pradesh, which has a massive population of around 200 million, agriculture is the primary source of revenue, with major crops being paddy, wheat, and sugarcane. Although advancements like high-yielding seed varieties, fertilizers, and irrigation have transformed the state into a significant food grain producer, farmers still face challenges due to small landholdings and limited financial resources for modernization. Additionally, dairy and livestock husbandry offer alternative income sources.

Selection of District and Blocks
The district of Ballia was purposefully chosen for the study due to its thriving agricultural activities and successful Agri-input retail centers. Within Ballia, the specific blocks of Rasra and Sohaon were selected for their bustling agri-retail operations.

Selection of Respondents
The retailers were selected randomly from the market place.

Statistical Tools
The analysis of data in this study was conducted to examine the socio-economic profile of retailers in the research area. To assess the socio-economic status of retaiers, a socio-economic scale was employed, which included a set of questions and parameters. These parameters encompassed various aspects, including age distribution, education, gender, Store format etc. These factors, collectively representing the socio-economic position of retailers, were considered in the evaluation.

The analysis of the data involved using simple descriptive statistical tools like averages and percentages. Other tool employed was the Chi-square Test, a statistical test used to assess how well a model aligns with actual observed data. It is applicable to data that is random, unprocessed, mutually exclusive, obtained from independent variables, and drawn from a sufficiently large sample.

Result
Retailers age distribution
The table 1 represent the chi-square test with a p-value of 0.044 suggests a statistically significant association between the age groups and the distribution of retailers in the agri-input retail sector. In other words, the age of retailers is not distributed uniformly or randomly; there is a meaningful relationship.

Retailers aged between 45 and 60 form the largest age group, accounting for 36% of the total sample. Retailers above the age of 60 are the second most significant group, constituting 32% of the total. Retailers in the age range of 30-45 make up 22% of the total. Retailers under the age of 30 are the smallest group, representing 10% of the sample.

Table 1: Retailers age distribution

S.No.	Age (Years)	Number of retailers	Percent
1	Under 30	5	10.00
2	30-45	11	22.00
3	45-60	18	36.00
4	Above 60	16	32.00
	Total	50	100.00
Chi-square (χ^2) = 8.08, df. = 3, p-value = 0.0.044			
Source: Data was collected from field and results was computed by the researcher.			

Gender-wise distribution
Gender is a crucial aspect under consideration in the current study, aimed at understanding gender-based differences. Out of the 50 retailers, 43 are male, accounting for 86% of the total, while only 7 are female, representing 14%. This gender breakdown in the retail market shows a significant underrepresentation of women, suggesting that female entrepreneurs have yet to make significant inroads into the retail agri-input market.

Table 2: Gender distribution of Retailers (In Numbers and Percentage)

Respondents	Male	(%)	Female	(%)	Total	(%)
Retailers	43	86.0	7	14.0	50	100
Source: Data was collected from field and results was computed by the researcher.						

Literacy level of retailers
In table 3, the chi-square test with a p-value of 0.000 indicates a statistically significant association between the literacy level and the distribution of retailers in the agri-input retail sector. This suggests that the literacy level of retailers is not randomly distributed but is related to the distribution of retailers. The majority of retailers (64%) have a graduate-level education. A substantial portion of retailers (22%) have intermediate-level education. A smaller, but still significant, group (14%) have a postgraduate education.

This information highlights the educational diversity among retailers in the agri-input retail sector. It suggests that a significant portion of retailers in this sector have attained a higher level of education, particularly at the graduate level. This diverse educational background can have implications for business strategies, decision-making, and the adoption of modern practices within the agri-input retail sector. It may also inform policies and programs aimed at enhancing the skills and knowledge of retailers in this industry.

Table 3: Literacy level of Retailers (In Numbers and Percentage)

Literacy Level	No. of retailers	Percentage
Intermediate	11	22.00
Graduate	32	64.00
Postgraduate	7	14.00
Total	50	100.00
Chi-square (χ^2) = 21.64, df. = 02, sig. = 0.000		
Source: Data was collected from field and results was computed by the researcher.		

Year of establishment of store
In the table 4 chi-square test with a p-value of 0.000 indicates a statistically significant association between the year of establishment and the number of retailers in the agri-input retail sector. This suggests that the establishment year of stores is not randomly distributed but is related to the distribution of retailers.

The year 2018 saw the highest number of agri-input retail store establishments, with 16 stores, accounting for 32% of the total. The year 2016 witnessed the second-highest establishment rate, with 12 stores, constituting 24%. The year 2014 had 4 stores established, making up 8% of the total. 2017 and 2019 each had 5 stores established, representing 10% each. The years 2015, 2020, and 2021 had lower establishment rates, with 2, 1, and 2 stores, respectively, each accounting for 4% or less. In 2022, 3 stores were established, making up 6%.

This data suggests that there are distinct patterns in the establishment of agri-input retail stores over the years. The years 2016 and 2018 were significant for new establishments, indicating potential growth in the sector during those years. Understanding the dynamics of store establishment can be valuable for assessing market trends, planning for the agricultural retail sector, and identifying factors influencing business start-ups and expansions.

Table 4: Year of establishment of store (In Numbers and Percentage)

Year	Number of retailers	Percentage
2014	4	08.00
2015	2	04.00
2016	12	24.00
2017	5	10.00
2018	16	32.00
2019	5	10.00
2020	1	02.00
2021	2	04.00
2022	3	06.00
Total	50	100.00
Chi-square (χ^2) = 37.12, df. = 08, sig. = 0.000		
Source: Data was collected from field and results was computed by the researcher.		

Motive to start the business

Retailers were asked to mention the motive to start the retail business. The above table presents the reasons for the establishment of the business. Different motives have contributed for establishment of this businesses.

Table 5: Motive to start Agri-input retail store (In Numbers and Percentage)

Motive	Number of retailers	Percentage
Family Business	6	12.00
Income generation	20	40.00
Social Service	7	14.00
Self-motivation	8	16.00
Peer-pressure	5	10.00
Store Unavailability	4	08.00
Total	50	100.00
Chi-square (χ^2) = 20.80, df. = 5, sig. = 0.000		
Source: Data was collected from field and results was computed by the researcher.		

Table 5 provides information about the motivations behind the establishment of Agri-input retail stores, presenting both the number of retailers and the corresponding percentages. The most prevalent motive for starting an agri-input retail store is income generation, with 20 retailers, making up 40% of the total. Motivation is the second most common motive, with 8 retailers, representing 16%. 6 retailers, or 12%, established their stores as a family business. 7 retailers, accounting for 14%, cite social service as their motive. 5 retailers, or 10%, reported peer pressure as the driving force. 4 retailers, comprising 8%, indicate that store unavailability led to their establishment.

The Chi-square statistic ($\chi 2$) is 20.80, with 5 degrees of freedom (df). The significance level (sig) is 0.000, indicating a statistically significant relationship between the motive for starting the agri-input retail store and the number of retailers.

In summary, this table highlights the diverse motivations behind the establishment of agri-input retail stores. The most common motive is income generation, followed by self-motivation, family business, and social service. The Chi-square test suggests a statistically significant association between the motive and the number of retailers, implying that these motives play a significant role in determining why individuals choose to enter the agri-input retail sector. Understanding these motivations can be valuable for policymakers, researchers, and industry stakeholders in the agricultural retail sector.

Retail store formats

The table 6 provides a breakdown of Agri-input retail stores based on ownership, investment, annual income, and store format, along with relevant statistical values like Chi-square, degrees of freedom, and significance levels. It appears that certain characteristics, such as form of ownership and store format, show statistically significant differences among the retail stores, while investment and annual income do not display significant variations. In form of ownership 23 retailers are sole traders, 18 are with partnership and 9 are company operated or ownership. For the investment, 14 have invested less than 10 lakhs in rupees, 23 has invested 10 to 20 lakhs in rupees and 13 has invested between 20 to 30 lakhs in rupees. In terms of income 15 retailers have income less than 10 lakhs, 12 have income between 10 to 20 lakhs in rupees, 14 have income in range 20 to 30 lakhs in rupees and 9 have income above 30 lakhs in rupees in rupees annually. In terms of store format 12 are branded stores, 13 are speciality store and 25 are individual stores.

Table 6: Distribution of agri-input retail stores

Particulars		Number of retailers	Percentage	Chi-square
Form of ownership	Sole trader	23	46	χ^2 = 6.040 df: 02 Sig: 0.048
	Partnership	18	36	
	Company	9	18	
	Total	50	100	
Investment (in Lakhs rupees)	>10	14	28	χ^2 =3.640 df: 02 Sig: 0.162
	10-20	23	46	
	20-30	13	26	
	Total	50	100	
Annual Income (In Lakhs rupees)	> 10	15	30	χ^2 = 0.341 df: 02 Sig: 0.843
	10-20	12	24	
	20-30	14	28	
	< 30	9	18	
	Total	50	100	
Store format	Branded Stores	12	24	χ^2 = 6.28 df: 02 Sig: 0.043
	Specialty Store	13	26	
	Individual	25	50	
	Total	50	100	
Source: Data was collected from field and results was computed by the researcher.				

In this comprehensive analysis of agri-input retail stores, the table 6 reveals valuable insights into their distribution across multiple factors. Notably, it shows that a substantial portion of these stores falls under sole proprietorship (46%), with partnerships and company-owned establishments constituting 36% and 18%, respectively. Regarding investment levels, 46% of stores have investments in the range of 10-20 lakhs, while 28% fall in the 20-30 lakhs category, and 14% operate with investments below 10 lakhs. Annual income distributions depict that 30% of the stores earn below 10 lakhs, 24% earn between 10-20 lakhs, 28% earn 20-30 lakhs, and 18% report an annual income above 30 lakhs. The table also underscores differences in store formats, with 50% categorized as individual stores, 26% as specialty stores, and 24% as branded stores. Significance tests (Chi-square) were

conducted to assess the associations, and the results indicate statistical significance in the context of form of ownership and store format, with p-values of 0.048 and 0.043, respectively, suggesting noteworthy distinctions among these categories. In contrast, investment and annual income levels did not yield statistically significant variations (p-values of 0.162 and 0.843, respectively). These findings contribute to a more nuanced understanding of the agri-input retail landscape, providing valuable data for future research and decision-making in this sector.

Conclusion

A significant portion of agri-input retailers are more experienced and mature. Understanding the age distribution can help tailor marketing and business strategies to cater to different age groups. There was under representation of women in the sector suggests that efforts are needed to promote diversity and inclusion in the agri-input retail market. The majority of retailers (64%) were found to have graduate-level education, indicating a well-educated workforce in the agri-input retail sector. This highly literate group can potentially adopt modern business practices and adapt to changing market conditions more effectively. The year of establishment analysis revealed that the years 2016 and 2018 saw the highest number of agri-input retail store establishments. This indicates potential growth and opportunities in the sector during those years. Understanding these establishment trends can inform market strategies and business planning. The motives for starting agri-input retail businesses were diverse, with income generation being the most common reason. The analysis of store formats indicated a diversity in ownership structures, these findings can guide policy and business development strategies to cater to different store formats.

In summary, the socio-economic analysis of agri-input retailers provides a comprehensive understanding of the retail landscape, offering insights into demographics, education, and business dynamics within this sector. These insights are invaluable for policymakers, researchers, and industry stakeholders in developing strategies, support programs, and policies that cater to the needs and characteristics of agri-input retailers.

Author's Contribution

Conceptualization and designing of the research work (Akash Rai, Dr. Nitin Barker) Execution of Field/Lab experiments and data collection (Akash Rai); Analysis of data and interpretation (Akash Rai, Priyanka Kumari); Preparation of manuscript (Akash Rai, Priyanka Kumari)

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