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DETERMINANTS OF PROFITABILITY OF POULTRY FEED MARKETING IN ILORIN METROPOLIS, KWARA STATE

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Abstract

The poultry feed industry is crucial to the global food supply chain, with marketing playing a vital role in its success. However, the sector faces a lot of challenges which affects poultry feed profitability and sustainability. This study investigates the factors affecting poultry feed marketing in Ilorin Metropolis, Kwara State. A cross-sectional survey of 120 poultry feed marketers was conducted. Descriptive statistics and multiple regression analysis were employed in the study. The results showed that the majority of the poultry feed marketers were male (67.5%), with a mean age of 41years, had tertiary level of education (67.8%) and mean marketing experience of 8.7years. The regression analysis results also indicated that buying price, selling price and quantity sold were significant factors in profitability of poultry feed marketing the study area. The study concludes that higher input costs can erode profitability while higher output prices and sales volumes can enhance profitability. The study recommends that Poultry feed marketers should adopt effective input cost management strategies to minimize the impact of input costs on profitability and also aim at increasing their sales volumes in order to improve profitability and also reduce dependence on a single market or customer.

Keywords: Poultry feed, Marketing, Profitability, Socioeconomic factors, Regression analysis

Introduction

Poultry farming is a significant contributor to Nigeria's economy, with approximately 7.9 million households engaged in poultry rearing (KPMG, 2020). The country boasts of the second-largest chicken population in Africa, with approximately 180 million birds. The country produces 454,000 tonnes of meat and over 14 billion eggs annually. The poultry sector contributes 6-8% of GDP, accounting for about 30% of the total agricultural contribution (FAO, 2018). Notably, the demand for poultry products in Nigeria far exceeds local production, with a staggering 47% annual shortfall in production over the past five years (CBN, 2019), presenting opportunities for domestic producers to meet the growing demand.

Poultry feed is a critical component of the industry, accounting for 50-70% of production costs (Dejene et al., 2014; KPMG, 2020). The poultry feed market is a competitive sector, comprising small, medium, and large-scale manufacturers catering to diverse nutritional needs. The industry has witnessed a shift towards scientifically formulated, commercially produced poultry feed, driven by increasing demand for poultry products (Delgado, 2020). However, the rising cost of poultry products has become a significant concern, with the cost of poultry feed being a critical factor in the profitability of poultry farming operations (Markets and Markets, 2023).

The poultry feed industry faces numerous challenges, including high input costs, reduced demand, and limited access to credit facilities (Eko, 2009). These challenges undermine the profitability and sustainability of poultry feed marketing. According to Munyori et al. (2014), animal feed supply is unpredictable due to seasonal fluctuations, inefficient marketing, and poor availability and quality of raw materials. These challenges undermine the profitability and sustainability of poultry feed marketing in Ilorin metropolis, Kwara State. This study examines the determinants of profitability in poultry feed marketing in Ilorin metropolis. Specifically, the objectives are to describe the socioeconomic characteristics of poultry feed marketers and examine the factors influencing profitability, with a view to providing insights into improving the sustainability and profitability of the poultry feed industry.

Empirical Literature Review

A study by Gbigbi and Chuks-Okonta (2020) analyzed poultry feed marketing in Nigeria and revealed that the enterprise was profitable with a gross margin of N51,181.87 and marketing efficiency of 81.6%. Furthermore, the study showed that selling price, marketing experience, and quantity sold positively impacted profit, while buying price, transportation, market charges, and shop costs had negative impact on it. Overall, the study highlights the potential for growth and profitability in Nigeria's poultry feed marketing sector. In the same vein Kassali et al. (2019) examined the characteristics and operational efficiency of poultry feed marketing in Nigeria. The results showed that most marketers were male (54%), married (59%), and had formal education (98%), with an average of 8 years of experience and a monthly income of ₦65,000. The study found that the poultry feed market was monopolistic in nature, with only 25% of respondents achieving operational efficiency of 60% or higher, and identified factors such as gender, marital status, and prices of different feeds as determinants of efficiency.

Similarly, Omoniyi et al. (2019) examined the poultry feed marketing sector and found that most marketers were male (85%), married (88%), and under 60 years old (75%), with an average profit of ₦938,300. Regression results showed that quantity of feed bought, and cost of purchase were significant factors important factors determining the total revenue from poultry feed marketing in the study area. While the major challenge faced by marketers was high marketing costs. Furthermore, Njoroge

et al. (2015) applied econometric models to estimate the impact of price adjustments on poultry farmers. The results showed that layer farmers adjusted to price changes moderately, while broiler farmers adjusted slowly. The study also found that lagged prices of poultry feeds significantly influenced the population of layers and broilers kept by farmers.

Materials and Methods

Data Collection

Primary data was used for this study. It was collected through the administering of a well-structured questionnaire. The questionnaire was designed to collect data on the socioeconomic characteristics, marketing, and financial performance of poultry feed marketers.

Sampling Procedure

The target population comprised poultry feed marketers in Ilorin metropolis. The target A two-stage sampling procedure was employed to select the respondents. In stage 1, the list of registered poultry feed marketers was obtained from Poultry Feed Marketers Association of Nigeria, Kwara State Chapter. This list served as the sampling frame for the study. While stage 2 involved the use of simple random sampling technique (Randomization method) to select 120 poultry feed marketers from the list obtained in Stage 1. This technique ensures that every respondent has an equal chance of being selected, making the sample representative of the entire population of poultry feed marketers in Ilorin metropolis.

Analytical tools

Descriptive statistics: Such as frequency, mean, and percentage was used to describe the socioeconomic characteristics of the poultry feed marketers.

Multiple Regression analysis: Multiple regression analysis is a statistical method that shows the relationship between a dependent variable and one or more independent variables. The multiple regression model allows us to effectively hold other factors fixed while examining the effects of a particular independent variable on the dependent variable. It explicitly allows the independent variables to be correlated (Wooldridge, 2013). The model was explicitly specified below:

$$\text{Profit} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots + \beta_8 X_8 + \varepsilon$$

Where:

Profitability = measured by Profit Margin

X_1 = Age (years)

X_2= Level of Education (dummy variable: 0=not literate,1=primary,2= secondary, 3=tertiary)

X_3= Reduced demand (dummy variable: 1=Yes, 0=No)

X_4 = Buying price of poultry feed (₦)

X_5 = Selling price of poultry feed (₦)

X_6 = Transportation cost (₦)

X_7 = Marketing experience (years)

X_8 = Quantity sold (kg)
B_0-β_8 = Regression coefficients
E = Error term

Results And Discussion

The Socioeconomic Characteristics of Poultry Feed Marketers

The socioeconomic characteristics of poultry feed marketers in Ilorin metropolis presented in Table 1, reveals a demographic profile that could have implications for policy and practice. Most respondents (67.5%) being male suggests a potential gender imbalance in the industry, which may impact the market's ability to tap into the skills and perspectives of female marketers. The mean age of respondents (41 years) and the majority (36.67%) falling within the 41-50 age range indicate that the marketers were in their active ages. Most respondents (63.33%) have household size of 4-6 persons indicates a potential market for poultry products, as larger households tend to consume more poultry products. This result agrees with the findings of Gbigbi and Chuks-Okonta (2020) and Omoniyi et. al., 2019. The mean experience of respondents (8.7 years) and the majority (55.00%) having 5-10 years of experience suggest that the market is characterized by a stable and experienced workforce. The high level of education among respondents (65.83% with a tertiary education) suggests that poultry feed marketers are knowledgeable about their business. However, this also implies that the market may be characterized by a high level of competition, as educated marketers are better equipped to navigate the market and make informed decisions. This corroborates the work of Kassali et al., 2019. The occupation of respondents, with most (55.00%) being poultry feed marketers, indicates a specialized market with a high level of expertise. However, majority relied on informal credit. The reliance on cooperatives and personal savings as sources of credit may indicate a need for more formal and affordable credit options to support the growth and development of the market. This agrees with the findings of Egbeadumah et.al., 2022)

Table 1: Socioeconomic characteristics of poultry feed marketers

Variables	Frequency (120)	Percentage	Mean
Gender			
Male	81	67.5	
Female	39	32.5	
Age (years)			
≤ 30	18	15.0	
31- 40	38	31.67	41
41 – 50	44	36.67	
Above 50	20	16.67	

Highest level of education			
No formal	4	3.33	
Primary	9	7.50	
Secondary	28	23.33	
Tertiary	79	65.83	
Household size (persons)			
1 – 3	20	16.67	
4 – 6	76	63.33	5
7 – 9	24	20.00	
Marketing experience (years)			
1 – 5	31	25.83	
5 – 10	66	55.00	8.7
11 – 15	14	11.67	
Above 15	9	7.50	
Primary occupation			
Poultry feed marketers	66	55.00	
Civil servant	31	25.83	
Others	23	19.17	
Access to credit			
Yes	71	59.17	
No	49	40.83	
Sources of credit			
Cooperative	46	39.32	
Personal savings	39	33.33	
Bank	13	11.11	
Others	19	16.24	

Sources: Field survey, 2024

Factors affecting the profitability of poultry feeds marketing.

The results of the multiple regression analysis are presented in Table 2, which examines the factors affecting the profitability of poultry feeds marketing. The results indicate that buying price, selling price, and quantity sold are significant determinants of profitability. Specifically, buying price has a significant negative impact on profitability, suggesting that higher input costs can substantially erode profitability. Notably, a one naira increases in buying price of poultry feed would

decrease profitability by ₦255.97, ceteris paribus. This finding underscores the importance of effective input cost management for marketers. Conversely, selling price had a significant positive impact on profitability, indicating that higher output prices can enhance profitability. One naira increase in selling price of a feed, would increase profitability by ₦258.40, ceteris paribus. This result aligns with the findings of Omoniyi et al. (2019) and Njoroge et al. (2015). Quantity sold also had a significant positive impact on profitability, suggesting that higher sales volumes can significantly improve profitability. A kilogram increase in quantity sold would increase profitability by ₦2158.88. This result corroborates the work of Gbigbi and Chuks-Okonta (2020) and Omoniyi et al. (2019).

The analysis also reveals that age, transportation cost and reduced demand were negatively related to profitability, while marketing experience, level of education had a positive relationship, but do not have a significant impact on profitability.

The model is statistically significant (F-statistic = 179.119, $p < 0.001$) and explains 94.3% of the variation in profitability ($R^2 = 0.943$). The adjusted R-squared value of 93.8% further confirms the model's reliability.

Table 2. Factors affecting Profitability of Poultry Feeds Marketing

Variable	**Coefficients b**	**Coefficient St. Error**	**t**	**Sig**
Constant	-317110.111	899111.789	-3.527	<0.001
Age	-14.698	23.310	-6.31	0.529
Buying price	-255.976***	28.901	-8.857	<0.001
Sellin price	258.410***	29.357	8.802	<0.001
Marketing experience	16.698	23.310	0.716	0.476
Education	0.088	0.112	0.786	0.433
Quantity sold	2158.884***	69.639	30.912	<0.001
Reduced demand	-32453.326	36887.812	-0.880	0.382
Transportation cost	-3.780	8.653	-0.437	0.663
R^2	0.943			
Adjusted R^2	0.938			
F-Statistics	179.119***			<0.001

Field survey, 2024 ***α=0.005

Conclusion and Recommendations

The study results showed that buying price, selling price and quantity sold had significant effect on profitability of poultry feed marketing in the study area. While other variables were related to profitability of poultry feed, they do not have any significant effect on it. The study concludes that higher input costs can erode profitability while higher output prices and sales volumes

can enhance profitability. Based on these results, the study recommends that

i. Poultry feed marketers should focus on managing input costs effectively, particularly buying prices, to maintain profitability. This can be achieved through strategies such as bulk purchasing and supplier negotiation.
ii. Poultry feed marketers should aim at increasing sales volume to improve profitability. This can be achieved through market expansion, customer relationship building.

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