

MARKETING MARGIN AND MARKET CONCENTRATION OF POULTRY FEED RETAILERS IN MAKURDI LOCAL GOVERNMENT AREA OF BENUE STATE, NIGERIA

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ABSTRACT

This study examined the marketing margin and market concentration of poultry feed retailers in Makurdi Local Government Area of Benue State, Nigeria. Primary data was used for the study, with 112 retailers sampled. Data was collected through questionnaire administration. Market margin analysis and the Herfindahl-Hirschman Index were used to analyze the data. Most retailers (43.75%) operated within a margin of 1.11%- 1.50%, with a mean margin of 1.68%. This indicates a low margin, suggesting little difference between the selling and buying prices of poultry feed in the study area. The Herfindahl-Hirschman Index was 172, indicating low market concentration among poultry feed retailers in the study area and high market competition. Government intervention is needed to enhance poultry feed marketing by providing infrastructure to improve storage and transportation, thereby reducing marketing costs and improving supply. Also, improved access to credit for marketers should be implemented to address income disparities, and stricter regulatory oversight by agencies to ensure product quality should be strengthened.

Keywords: Marketing Margin, Market Concentration, Financial Sustainability, Inventory

INTRODUCTION

Poultry feeds are commonly made of the diet (carbohydrate, proteins, vitamins and minerals) responsible for the growth and maintenance that take place in the development of poultry feeds (Emenyonu and Nkemka, 2013). This includes all the metabolic, anabolic, immune and repair processes. Feeding birds plays a major role in poultry production, as it is important for their growth and development. Feed cost alone accounts for the largest share of total cost in poultry production (Dejene *et al.*, 2014).

Marketing involves transferring goods from producers to consumers at the right place, in the right form and at the right time. The main purpose of marketing is to create utility and maximize profit (Anyanwu, 2000). An inefficient market reduces gains from production, which can result in lower output as producers are less motivated.

Marketing margin refers to the proportion of the consumer's expenditure that covers the costs of marketing activities, as well as the price difference between what producers receive and what final consumers pay for a commodity (Downey and Erickson, 2011). It can also be understood as the payment for marketing services or the spread between farm-gate and retail prices (Kinnucan and Zhang, 2015). Market margins may be expressed either in absolute monetary terms or as percentages, calculated as the difference between selling and purchase prices, or as a percentage of that difference (Adegeye and Dittoh, 1985). Importantly, low producer margins can reduce marketers' incentives to expand, as returns may not adequately compensate for input costs and managerial effort (Arene, 2012).

Market concentration refers to the extent to which the market shares (sales or assets) of the largest firms in the market account for a substantial share of total market activity (Sharmin and Arman 2020). Higher levels of concentration are generally associated with an increased likelihood of monopolistic tendencies. Rising market concentration reduces competition and efficiency.

The challenges faced by Nigeria have also affected the growth of the poultry and feed mill industry and the marketing of its inputs and products (Gbigbi and Chuks-Okonta, 2020). These include inadequate marketing and production knowledge, high feed prices, lack of government support, insufficient credit, poor road network, insufficient storage facilities and credit sales. Today's high feed costs and low feed quality, as well as sporadic scarcity, call for improvements in the performance of production and animal feed marketing (Mafimisebi, 2002).

This study analyzes the marketing of poultry feed in Makurdi Local Government Area of Benue State, Nigeria. Specifically, it determined the marketing margin of poultry feed marketers in the study area and assessed the degree of market concentration among them.

METHODOLOGY

The study area is Makurdi Local Government Area in Benue State, Nigeria. Primary data were used for this study. The population for the study were poultry feed retailers in the study area. From a population of 400 retailers, Taro Yamane's formula was used to determine a sample size of 112 retailers at 8% level of significance (tolerable error). Furthermore, the Bowley's population allocation formula was used to determine the number of marketers to be sampled from the selected markets in the study area. The selected markets were Wurukum, High level, Wadata and Modern markets with population sizes of 95, 80, 105 and 120 retailers respectively. Using Bowley's population allocation formula, 27 retailers were randomly sampled from Wurukum market, 22 from High level market, 29 from Wadata market and 34 from Modern market, for a total sample size of 112 poultry feed retailers in the study area. The marketers were asked questions about their socio-economic characteristics, marketing costs, and sales via a questionnaire. The marketing margin analysis was used to determine the marketing margin of poultry feed retailers, while the Herfindahl-Hirschman Index (HHI) was used to assess market concentration among retailers in the study area.

Taro Yamane's Formula

$$n = \frac{N}{1 + N(e)^2}$$

Where,

n = Sample size

N = Population of the study

e = Level of significance (tolerable error) at 8%

The Bowley's Population Formula

$$nh = \frac{n * Nh}{N}$$

Where,

nh = sample size per sub-sector (markets)

n = total sample size

Nh = population size per sub-sector (markets)

N = total population size

Marketing Margin

$$\text{Marketing margin} = \frac{\text{Selling price} - \text{Buying price}}{\text{Selling price}} \times 100$$

Herfindahl-Hirschman Index (HHI)

$$\text{HHI} = \sum_{i=1}^N P_i^2$$

$$\text{HHI} = \sum_{i=1}^N P_i^2 = P_1^2 + P_2^2 + P_3^2 + \dots + P_n^2$$

Σ = summation

N = total number of firms in the industry (total number of respondents)

P_i = the market share (ratio of individual sales to total shares, i.e. ratio of individual revenue of retailer to the total revenue of all the retailers in the market) of the i^{th} firm ($i = 1, 2, \dots, n$)

Note: in order to ascertain the degree of market concentration (HHI), market shares were expressed as decimals, squared, summed, then multiplied by 10,000;

If the index takes a value of ≤ 1500 , the market concentration is low (competitive market)

HHI between $>1500 \leq 2500$, the market concentration is said to be medium

HHI between $>2500 \leq 10000$ the market concentration is said to be high (Monopoly)

RESULTS AND DISCUSSION

Socio-economic characteristics of the Poultry feed retailers

Table 1 presents the distribution of socio-economic characteristics among poultry feed retailers in the study area. The majority of the retailers were male (71.43%), married (63.39%) and obtained a secondary education (50.89%). The mean age of the retailers was 40.36 years, with a mean experience of 7.01 years. The mean household size was 5.54.

These results imply that poultry feed markets in the study area were dominated by male retailers, who were relatively young, active, educated and with good marketing experience. Also, with the majority of them married, poultry feed marketing was seen as a source of income to meet household expenditure. Moreover, these findings corroborate Okonkwo (2013), who found that poultry feed retailers in the Mbaize Local Government Area of Imo State were male-dominated, married, aged 36–46 years, had secondary school education and had 5–8 years of marketing experience.

Table 1: Socio-economic characteristics of Poultry feed retailers

Variables	Frequency	Percentage	Mean
Sex			
Male	80	71.43	
Female	32	28.57	
Marital Status			
Single	25	22.32	
Married	71	63.39	
Divorced	8	7.14	
Widow	8	7.14	
Education			
Never attended school	3	2.68	
Primary education	12	10.71	
Secondary Education	57	50.89	
Tertiary Education	40	35.71	
Age			
21-30	24	21.43	
31-40	24	21.43	
41-50	44	39.29	40.36
51-60	20	17.85	
Total	112	100.00	
Household Size			
1-5			
6-10	56	49.11	
11-15	55	50.00	5.54
	1	0.89	
Years of Experience			
1-5			
6-10	45	40.18	
11-15	51	45.54	7.01
16-20	11	9.82	
21-25	3	2.68	
	2	1.78	

Source: Field Survey, 2021

Marketing margin of the Poultry feed retailers

Table 2 shows the distribution of marketing margins among poultry feed retailers in the study area, with most (43.75%) operating within the range of 1.11% - 1.50%. The minimum and maximum margins ranged from 0.50% to 3.68% with a mean of 1.68%. The result reveals a low marketing margin, suggesting that the retailers earn a very small return from their marketing activities after accounting for purchase prices. This low margin implies intense competition among marketers, as competitive pressure limits retailers' ability to charge higher prices. Also, it indicates that the market is relatively efficient, with only a small difference between producer and retail prices. This marketing margin result is lower than the 19% marketing margin reported by Okonkwo (2013) for poultry feed retailers in the Mbaise Local Government Area of Imo State, Nigeria. This difference might be due to price differentials (prevailing market prices) in poultry feed at the time the studies were conducted.

Table 2: The distribution of the marketing margins of the poultry feed retailers

Marketing Margin	Frequency	Percentage (%)
0.50 – 1.00	5	4.47
1.11 – 1.50	49	43.75
1.51 – 2.00	23	20.54
2.10 – 2.25	32	28.56
≥ 2.51	3	2.68
Minimum		0.50
Maximum		3.68
Mean		1.68

Source: Field Survey, 2021

Market concentration of the Poultry feed retailers

Table 3 shows the distribution of retailers' revenue, with minimum, maximum and mean revenue of ₦1,005,000, ₦7,920,000 and ₦1,319,671.6, respectively. The total market revenue was ₦147,803,250. The Table also shows that the minimum, maximum and mean market share of retailers were 0.00072, 0.05647 and 0.00941, respectively. The market shares were obtained by taking the ratio of each retailer's revenue to the total market revenue.

The Herfindahl-Hirschman Index (HHI) of 172 indicates a low concentration of marketers, reflecting high market competition and an equitable distribution of trade volume among poultry feed retailers. This result differs from the findings of Abah *et al.* (2015), who found evidence of high market concentration and variation in income distribution amongst paddy rice marketers in Benue State, Nigeria. This difference might be due to the nature of the commodities considered, as paddy rice prices fluctuate between harvest and lean seasons.

Table 3: Distribution of market concentration of poultry feed marketers

Variables	Minimum	Maximum	Mean
Revenue of Marketers	100500	7920000	1319671.6
Market Share of Marketers	0.00072	0.05647	0.00941
Total market revenue	147803250		
HHI	172		

Source: Field Survey, 2021

CONCLUSION

The study revealed that the market concentration of poultry feed retailers in the study area was low, indicating a high degree of competition. Also, the study found that the marketing margin of poultry feed marketers was low, indicating little difference between the prices paid by marketers and the prices offered for sale. This low margin and high competition suggest that the retailers are operating efficiently within the market.

To further strengthen retailers' operations in the market, the government should put in place infrastructure to improve transportation and storage, thereby reducing marketing costs. Enhancing marketers' access to credit is also crucial, as it can help address income disparities within the sector. Additionally, regulatory agencies should be strengthened to ensure the production and distribution of quality feed products, reduce information gaps and improve market transparency.

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