



EFFECT OF PRICING STRATEGIES ON THE REVENUE OF MAIZE MARKETERS IN BENUE STATE, NIGERIA

¹Ogbe, O. B., ²Okeke, A. M. and ²Ayilla, V. N.

¹Department of Agricultural Marketing and Cooperatives,
Joseph Sarwuan Tarka University Makurdi

²Department of Agribusiness, Joseph Sarwuan Tarka University Makurdi

Corresponding Author's Email: ogbeokohbright@gmail.com, **GSM:** 08144764944

ABSTRACT

The study examined the effect of pricing strategies on the revenue of maize marketers in Benue State, Nigeria. A multistage and purposive sampling technique was used in selecting 400 registered maize Marketers in six Local Government Areas of the State. Primary data were collected using structured questionnaires and analyzed using descriptive and inferential statistics. The findings revealed that majority (91.7%) applied cost plus pricing strategy in marketing of maize; (87.0%) used competitive pricing strategy, while (57.1%) used value based pricing strategy. The results also showed that 56.1% adopted bundle pricing strategy; (49.4%) applied geographical pricing strategy; few marketers used dynamic pricing (16.4%), psychological pricing (6.5%), premium pricing (2.6%), penetration pricing (1.6%), and price skimming (0.5%) respectively. The findings revealed that marketers who used dynamic pricing strategy made the highest sales revenue of ₦122,484.803, marketers that used penetration pricing recorded the least sales revenue of ₦104,333.33. Evidence from the study shows that dynamic pricing strategy enhance sales revenue of maize marketers by ₦15,104.32. It was recommended that government should enhance maize marketer's access to extension services in the state by conducting training sessions focusing on enlightening maize marketers on more profitable pricing strategies to adopt. The government should also encourage continued education among maize marketers in the state through workshops so as to enable them make informed marketing decisions.

Keywords: Pricing, Strategy, Revenue, Maize, Marketers.

INTRODUCTION

Maize (*Zea mays*) is a cereal crop, a member of the grass family (*gramineae*). In industrialized countries, maize is largely used as livestock feed and as a raw material for industrial products, while in developing countries, it is mainly used for human consumption. Maize has now risen to a commercial crop on which many agro-based industries depend on as raw material (Iken and Amusa, 2014) as stated in (Nyiatagher and Ocholi, 2015). It is an important source of carbohydrate, protein, iron, Vitamin B, and minerals. Africans consume maize as a starchy base in a wide variety, thus, playing an important role in filling the hunger gap after the dry season (International Institute of Tropical Africa- IITA, 2017). Maize is an important food in Africa and the main ingredient in several well-known national dishes. Examples are *tuwon-masara* and *akamu* in Northern Nigeria, it is eaten roasted, boiled and also grinded in fine powdered floor with a mixture of cassava chips which is cooked and consumed as Fufu in Benue and most parts of Nigeria. It is also used as animal feed and as raw material for brewing beer and for producing starch (IITA, 2018). In Nigeria, Benue state in particular, the demand for maize is increasing at a faster rate. This is due to the fact that grain is being used for feeding poultry besides being the main food for many households



(Ogunniyi, 2021). The total land area planted to maize in Nigeria is above 2.5 million hectares with an estimated yield of about 1.4 metric tones per hectare (Ogundari, 2016). Benue States is known for high production of Maize and the production of other cereal crops, Benue Agricultural Rural Development Agency,(BNARDA 2014).

Marketing is the sum total of all business activities involved in the movement of commodities from production to the place of consumption. This definition is applicable to the marketing of industrial goods as well as that of agricultural commodities (Katherine *et al.*, 2010). The marketing of agricultural products is concerned with all stages of operations which include movement of commodities (e.g. maize) from the farms to the consumers. It involves the performance of all activities involved in the flow of goods and services from the point of initial production until they are in the hands of ultimate consumers (Adesiyan *et al.*, 2007). The major determining factors of marketing are prices and the different functions performed by the various institutions involved in the activities. Marketing functions in trade activities are the creation of an optimal sales network for effective sale of products including creation of a network of retail and wholesale stores, intermediate warehouses, identification of routes, transportation, loading and unloading supply system (Rustam, 2020). Seasonal analysis of the structure, conduct, and performance (SCP) of markets for staple crops like maize (*Zea mays*) has received relatively little attention in food policy analysis, yet it has important implications for food and nutrition security (Dennis *et al.*, 2019).

Pricing strategies are the methods and approaches that businesses use to set the prices for their products or services. These strategies are essential for achieving various business objectives, such as maximizing profits, increasing market share, or positioning a product (maize) as high quality or exclusive. According to Dolansky and Vandenbosch (2017), the most common pricing strategies for agricultural products are; Cost-plus pricing (cost plus mark-up), Competitive pricing (Set a price based on what the competition charges), Price skimming (set a high price and lower it as the market evolves), Penetration pricing (set a low price to enter a competitive market and raise it later), and Value-based pricing (base your product or service's price on what the customer believes its worth).

Considerable studies has been carried out on agricultural marketing in Nigeria such as (Nyiatagher and Ocholi 2015) examined Profitability and marketing efficiency of maize in Kwande Local Government Area (LGA) of Benue State Nigeria, (Jimoh *et al.*, 2021) studied Structure, Conduct and Performance of Maize Marketing in Irewole Local Government Area, Osun State, (Abdulahi *et al.*, 2019) studied profitability of small-scale maize marketing in Kano State. All these research have provided insights into broader marketing challenges but to the best of my Knowledge lacks specific focus on the effect of pricing strategies on the revenue of maize marketers in Benue State. Therefore, this study was aimed at closing this research gap. The specific objectives were to:

- i. identify the pricing strategies used by maize marketers;
- ii. examine the effect of pricing strategies on the revenue of maize marketers in the study area.

METHODOLOGY

The Study Area

The study was conducted in Benue State. The State was created in 1976, located in the Middle Belt region of Nigeria. Benue State derives its name from River Benue, the second largest River in Nigeria. It lies approximately between latitudes 6 ½ and 8 ½° N and longitude 7 ½ and 10° E. The State shares boundaries with five other states namely, Nasarawa, to the



North, Taraba to the East, Cross River to the South and East-Enugu to the South-East, and Kogi to the West. The Southern part of the State shares boundary with Republic of Cameroon. The State is also bordered on the North by 280 km River Benue, and is traversed by 202 km of River Katsina-Ala in the inland areas. The State has a total land area of about 30,955 square kilometers and administratively it is divided into 23 Local Government Areas. Benue State has a tropical climate, which manifests two distinct seasons. The rainy season is from April to October while the dry season is from November to March. Annual average varies from 1750 mm in the Southern part of the state to 1250 mm in the North. In the mountain region of Kashimbia area average rainfall rises up to 400mm. The hot season comes in mid-April with temperatures between 32 and 38° C with high humidity. Benue state is blessed with fertile soil for agricultural activities and as such has her slogan as the food basket of the nation, the inhabitants engage in the production and marketing of Cereal crops like Maize, Sorghum, Guinea Corn, Rice, Beans, Soybeans, Groundnut, Beneseed, Melon, and so on, unlike tubers like Yam, Cassava, potatoes and so on, including Vegetables and other cash crops. Fishing as an occupation is practiced by some of the inhabitants due to presence of rivers and streams. Considering the time and cost advantages of working, Benue State of Nigeria, is selected for this study.

Population of the Study

The population of the study consisted three thousand two hundred and thirty (3230) registered maize Marketers in Six Local Government Areas of the State, two each from the Agricultural Zones comprising Zone A: Vandeikya and Kwande Local Governments, Zone B: Gboko and Guma Local Governments, and Zone C: Oju, and Otukpo Local Governments.

Sample and Sampling Technique

The study adopted multiple stage and purposive sampling to select a sample of 400 maize marketers randomly selected from Vandeikya, Kwande, Gboko, Guma, Oju and Otukpo LGAs. Structured questionnaire was used for the data collection.

Data Collection

Structured questionnaire was used for the data collection.

Analytical Technique

Data for the study were analyzed using descriptive and inferential statistics. Objectives I was analyzed using tables, percentages and frequencies, while Independent sample t-test was used to achieve objective II.

The Independent Sample t-test model was specified as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where;

t= calculated t-value

X₁= mean value of revenue of users of a pricing strategy

X₂= mean value of revenue of non-users of a pricing strategy

S₁²= variances of value of returns of users of a pricing strategy

S₂²= variances of value of returns of non-users of a pricing strategy

n₁= sample size of users of a pricing strategy

n₂= sample size of non-users of a pricing strategy

RESULTS AND DISCUSSION

Pricing Strategies Used in Maize Marketing

The analysis of pricing strategies used in maize marketing is presented in Table 1. The study identified cost-plus pricing, competitive pricing, price skimming, penetration pricing, psychological pricing, premium pricing, bundle pricing, value base pricing and geographical pricing as pricing strategies used by maize marketers in the study area.

The result shows that majority (91.7%) applied cost plus pricing strategy in marketing of maize. This is the most common strategy used because it does not require extensive research instead, you just need to analyze your production cost and determine a markup price; it also makes it easy to communicate to customers why price changes are made. This is in line with (Ezeudu, 2005), (Agwu, 2014) who asserted that It involves adding a mark-up to the cost per unit of product.

The findings also revealed that price skimming was the least adopted pricing strategy (0.5%) among maize marketers; this is because price skimming is mostly used for marketing of luxury products like mobile phones and electronic gadgets. This is in line with Kotler (2010) who stated that market skimming is a strategy for charging high price for innovative firms' product and services and it uses modern technology. (87.0%) of maize marketers used competitive pricing strategy. In this form of pricing, prices are decided relevant to those of competitors. On the other hand, (57.1%) used value based pricing strategy. In this form of pricing, price is set base on the value that the buyer assigns to the product. It is adopted in scenarios where the perceived value of a product is much higher than the cost. The price set must be in line with the customer's perception (Farese *et al.*, 2003). The findings similarly revealed that 56.1% adopted bundle pricing strategy which involves assembling a number of in a single package to save the customers the trouble of searching out and buying each one separately (Brassington and Pettitt, 2006). The strategy prompts customers to purchase multiple products, thereby increasing sales volume and boosting revenue. Less than half (49.4%) applied geographical pricing strategy; this involves selling the same product to different buyers under a variety of price (Bearden *et al.*, 2004). In this form, marketers change prices for goods and services in different geographical regions, depending upon local markets conditions and regulations. Few marketers used dynamic pricing 16.4%, psychological pricing 6.5%, premium pricing 2.6%, penetration pricing 1.6%, and price skimming 0.5% respectively. This is in agreement with Koce, (2022) who identified penetration pricing and bundle pricing as pricing strategies used in marketing of agricultural produce.

Table 1: Pricing Strategies used in Maize Marketing

Pricing strategies	Frequency	Percentage *
Cost-plus pricing	353	91.7
Competitive pricing	335	87.0
Price skimming	2	0.5
Penetration pricing	6	1.6
Psychological pricing	25	6.5
Premium pricing	10	2.6
Bundle pricing	216	56.1
Value base pricing	220	57.1
Dynamic pricing	63	16.4
Geographical pricing	190	49.4

Source: Field survey data, 2024. * Multiple responses existed, hence percentage > 100



Effect of Pricing Strategies on the Revenue of Maize Marketers

The analysis of effect of pricing strategies on the revenue of maize marketers in Table (2) revealed that the marketers used cost-plus pricing, competitive pricing, price skimming, penetration pricing, psychological pricing, premium pricing, value base pricing, dynamic pricing and geographical pricing.

The findings revealed that users of dynamic pricing strategy had mean revenue per bag of ₦122,484.803, while non-users had mean revenue per bag of ₦107,380.50 with mean difference of ₦15,104.32 which was significant at 5% level. This means that marketers that applied this pricing strategy experienced a significant increase of ₦15,104.32 in their revenue per bag of maize sold. This result also implies that dynamic pricing strategy is more effective for maize marketing in the study area. Thus, the null hypothesis that pricing strategies have no significant effect on the revenue of maize marketers was rejected. The significant increase in revenue by the users could be because this strategy involves adjusting prices in real time based on factors like market demand and competitor prices. This result is in consonance with Nijs *et al.*, (2007) who posited that dynamic pricing is associated with higher profits.

Users of cost-plus pricing strategy had mean revenue per bag of ₦110,098.79, while non-users had mean revenue per bag of ₦107,097.03 with mean difference of ₦2955.76 which was not significant; while users of competitive pricing had mean revenue of ₦110,209.36 and the non users had mean revenue of ₦107,458.60 with insignificant mean difference of ₦2750.76. Marketers that adopted price skimming strategy had mean revenue of ₦105,000.00 while non-users had ₦109,877.46 though the mean difference of ₦-4877.46 was not significant; Penetration pricing users had mean revenue of ₦104,333.33 while non-users had mean revenue of ₦109,939.49 with mean difference of ₦-5606.16 which was not significant. Marketers that used psychological pricing strategy had mean revenue per bag of ₦107,791.12 while non-users had mean revenue of ₦109,995.24. Though, the mean difference of ₦-2204.12 was not significant. Users of premium pricing strategy had mean revenue of ₦105,836.33 while non-users had ₦109,995.24 as mean revenue with a mean difference of ₦-4136.94 which was not significant. Marketers that adopted bundle pricing strategy had mean revenue per bag of ₦112,064.36, while non-users of this strategy had mean revenue per bag of ₦107,024.64 with insignificant mean difference of ₦5039.72. Users of value based pricing strategy had mean revenue per bag of ₦107,558.72 and non-users had ₦112,909.98 with mean difference of ₦-5351.26 which was not significant. Marketers that use geographical pricing strategy had mean revenue of ₦111,998.24 while non-users had mean revenue of ₦107,808.55 with insignificant mean difference of ₦-2,204.12.



Table 2: Effect of Pricing Strategies on the Revenue of Maize Marketers

Variable	Mean	Mean difference	T	p-value
Cost-plus pricing				
Revenue per 100kg bag for users	110,097.79	2,955.76 ^{NS}	0.306	0.760
Revenue per 100kg bag for non users	107,142.03			
Competitive pricing				
Revenue per 100kg bag for users	110,209.36	2,750.76 ^{NS}	0.347	0.729
Revenue per 100kg bag for non users	107,458.60			
Price skimming				
Revenue per 100kg bag for users	105,000.00	-4,877.46 ^{NS}	-0.132	0.895
Revenue per 100kg bag for non users	109,877.46			
Penetration pricing				
Revenue per 100kg bag for users	104,333.33	-5,606.16 ^{NS}	-0.261	0.794
Revenue per 100kg bag for non users	109,939.49			
Psychological pricing				
Revenue per 100kg bag for users	107,791.12	-2,204.12 ^{NS}	-0.204	0.839
Revenue per 100kg bag for non users	109,995.24			
Premium pricing				
Revenue per 100kg bag for users	105,836.33	-4,136.94 ^{NS}	-0.191	0.848
Revenue per 100kg bag for non user	109,973.27			
Bundle pricing				
Revenue per				

100kg bag for users	112,064.36	5,039.72 ^{NS}	0.940	0.348
Revenue per 100kg bag for non users	107,024.64			
Value based pricing				
Revenue per 100kg bag for users	107,558.72	-5,351.26 ^{NS}	-0.995	0.320
Revenue per 100kg bag for non users	112,909.98			
Dynamic pricing				
Revenue per 100kg bag for users	122,484.803	15,104.32 ^{**}	0.930	0.036
Revenue per 100kg bag for non users	107,380.50			
Geographical pricing				
Revenue per 100kg bag for users	111,998.24	4,189.69 ^{NS}	0.785	0.433
Revenue per 100kg bag for non users	107,808.55			

Source: Field survey data, 2024. ***= Sig @ 1%, **= Sig @ 5%, *= Sig @ 10%, NS= Not significant

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, it can be inferred that there is significant relationship between pricing strategies and revenue of sales from maize marketing. Despite the numerous pricing strategies, cost-plus pricing strategy is the most adopted by maize marketers; however dynamic pricing strategy generated more sales revenue.

The study recommends that government should enhance maize marketer's access to extension services in the state by conducting training sessions focusing on enlightening maize marketers on more profitable pricing strategies to adopt. The government should also encourage continued education among maize marketers in the state through workshops so as to enable them make informed marketing decisions.

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