PREFERENCES AND PERCEIVED EFFECTIVENESS OF VALUE-ADDED STRATEGIES AMONG PORK CONSUMERS IN MAKURDI IN BENUE STATE, NIGERIA

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ABSTRACT

Value addition strategies and consumer preferences for pork products were examined. The objectives include consumer preferences across different pork prices, types of pork products preferred, and the perceived effectiveness of value-addition strategies employed in marketing pork. Data were collected from 90 respondents using a structured questionnaire. Data analysis was carried out using descriptive statistics and arc price elasticity. The findings show that about 75% of consumers demand more pork products at ₦200 and ₦300. The own-price elasticity was negative and consistent with demand theory. The most preferred value-added product is peppered pork (43%). The perceived effective value-addition strategies focus on product quality, customer service, pricing and discount strategies, and consumer feedback mechanisms, with a mean value ≥ 3, while brand visibility and promotional activities were perceived as ineffective with a low mean value (<3). The study concludes that consumer preferences are influenced mainly by the quality of pork products. The study recommends that marketers focus on improving product quality and consumer-oriented strategies to enhance market performance.

Keywords: Arc elasticity, Pork products, Price elasticity, Value addition, Marketing, Strategies, Consumer preference.

INTRODUCTION

Pig production is a viable enterprise under the livestock sub-sector of agriculture. It significantly enhances food security, income generation, and nutritional well-being in developing economies. According to Ritchie et. al. (2019), estimates from FAO data show that the most widely eaten meat globally is pork, accounting for 36% of the world's total meat consumption, surpassing poultry (33%), beef (24%), goats and sheep (5%). The rising demand for affordable protein alternatives to beef has resulted in increased consumption of pork. It provides essential macro- and micro-nutrients (Whitney and Rolfes 2018). This implies that consumption is becoming increasingly popular as a substitute for traditional meats such as beef, chicken, mutton, and chevon, with chicken being the primary competitor to pork (Pluhar 2010). Consequently, pork production in Nigeria becomes attractive to farmers due to the rising demand for pork and its products. This results in specialization, automation in production, trade of inexpensive feedstuffs, market liberalization, low-cost energy, and advancements in genetics and feeding strategies (Chauvin *et. al.* 2012). There is an increase in demand for meat, including pork, driven by urbanization, population growth, rising incomes, and changing dietary habits. As the demand increases, there is potential for employment and further income growth (Marti *et. al*. 2012).

Farmers located near urban markets often receive higher returns on their agricultural products, and they benefit most from growing markets for diversified, high-value products (Diao *et al.* 2019). Value-added agriculture is defined as the process of transforming a product from its original state into an enhanced form through processes that differentiate the product, target niche markets, extend shelf life, and increase revenue for farmers (AgMRC 2018; Oni et al. 2018). The strategies for value addition in pork are categorized into: Use of processing and preservation techniques such as smoking, marinating, fermenting, curing, drying, and canning; Adherence to quality standards and certifications through branding; Introduction of new product forms or flavors; Effective packaging and advertisement (Diao *et al.* 2019).

Patchimaporn *et al.* (2018) reported that, in developing countries, pork consumption is affected by product prices and quality. Magqupu et al. (2024) also indicated that the price of pork predominantly influences both the quantity and type of pork cuts purchased, and there is a negative correlation between price and meat consumption overall. This corroborates the work, which indicates that price increases generally lead to reduce per capita meat intake (Demirtas, 2018). In another study, Ikeche and Ezihuo (2021), indicated that the price of pork is significantly related to the quantity demanded. Price was also highlighted as a major determinant that influences the consumption pattern of pork (Oyewumi, and Jooste 2006). In another study, marketing factors such as price, label, brand, and availability were identified **(**Font-i-Furnols 2014**).** In addition, Nwachukwu and Udegbunamin (2020) indicated that although pork is the preferred meat, its consumption is influenced more by prices than by other factors such as environment, diseases, culture, and nutritional value. Although value addition in agricultural produce creates more quality and adequate demand for the products. However, the growing market demand for quality and consistency in supply. There is a need for improved resources and technical skills so as to address the increasing consumer needs.

In Makurdi Metropolis, many people are involved in pig production. Pork and its products are used in almost every important occasion by the area's major inhabitants. The main sources of pork and pork products are small-scale processors and retailers who adopt different value-added strategies. The key role of any market-oriented enterprise is to ensure that its product provides a mix of attributes that are consistent with the purchasing behaviour and preferences of its customers (Reed, Binks, and Ennew 1991). In addition, Ogbeide 2015 indicated that meat or meat cuts appeal to consumers differently. Therefore, an understanding of the pattern and the factors influencing their preferences becomes very important from a marketing perspective. The study is therefore targeted at how to improve the marketing of value-added pork products using consumer preference as a guide. In other words, consumer preferences will show the effective strategies that can be harnessed for further development. However, there is a paucity of data on existing strategies and consumers' responses. Previous studies on the demand for meat products show that own-price elasticity primarily focuses on other meat products, such as beef, chevon, chicken, and mutton (Idris et al. 2025); beef, chicken, and seafood (Aborisade et al. 2024). Most of the meat products studied are price elastic. This implies that any change in the prices will significantly affect the consumption patterns.

Studies on the own-price elasticity of pork are few and not very current. The present research addressed these issues through the following objectives;

i. Analyze consumer preferences across different pork cuts and types of pork products,
ii. Assess the responsiveness of Consumers to Changes in price
iii. Evaluate the perceived effectiveness of the value-addition strategies.

RESEARCH METHOD

Study Area

Makurdi Metropolis is located in the North Central zone in Nigeria. It lies approximately between latitudes 7°44′–7°50′N and longitudes 8°29′–8°38′E. The area experiences a tropical sub-humid climate, with a rainy season from April to October and a dry season from November to March. Annual rainfall ranges from 1,200–1,600 mm, while mean temperatures range between 26°C and 34°C. Agriculture is the dominant occupation of the inhabitants, with Benue State known as the Food Basket of the Nation. Pig production and pork consumption are prominent due to cultural acceptance and the availability of feed resources. The metropolis hosts active markets for fresh and value-added pork products, making it well-suited for the research.

Sampling Techniques

The study population comprises all pork consumers identified at public and market places during the reconnaissance survey. Multistage and purposive sampling techniques were used to select respondents. In the first stage, 6 communities were selected based on high pork consumption and intense commercial activity, such as restaurants, eateries, and outlets that sell pork products. 15 respondents were identified in each community and selected for the study. This gave a total of 90 respondents for the research.

Data Collection

Primary and secondary data sources were used. Primary data were collected using a structured questionnaire administered through surveys to generate quantitative data on the effectiveness of the value-addition strategies. On-the-spot observation was also employed to provide more information on consumer preferences regarding taste, quality, and convenience, as well as the average quantity purchased at different price levels, to capture their sensitivity to changes in product prices.

Data Analysis

Consumer preferences were analyzed using descriptive and quantitative statistics. Descriptive statistics were carried out using means, frequency distributions, and percentages. A price sensitivity analysis was conducted to show how price changes affect the quantity of pork demanded. Price sensitivity is quantified using the arc price elasticity of demand to capture the own price elasticity of demand. The own-price elasticity of demand measures the percentage change in demand for a good resulting from a change in its own price. It is based on observed changes in the average quantity purchased by consumers at different price levels and is given thus:

$$E_d = \frac{(Q_2 - Q_1)/(\frac{Q_1+Q_2}{2})}{(P_2 - P_1)/(\frac{P_1+P_2}{2})} \qquad \text{(equation 1)}$$

where E_d is the elasticity of demand
Q_2 & Q_1 final & initial quantities, P_2 & P_1 final & initial prizes
If Ed=1, the product is unit elastic
If E_d>1, the product is elastic. The higher the value, the more elastic the product and the more responsive consumers are to price changes.

The effectiveness of the value-addition strategies was analyzed using mean output on a four-point Likert scale. The scaling options were given as follows: Extremely Effective = 4, Effective = 3, Ineffective = 2, Extremely Ineffective = 1. The cutoff point for the decision rule is 2.5

Decision Rule
Items with a mean >2.50 are positive and perceived as effective, while those with a mean <2.5 are not effective.

RESULTS AND DISCUSSION

Price Sensitivity of Consumers to Pork Cuts

Table 1 shows the prices of four different pork cuts and how consumers respond to price changes and the quantities purchased.

Table 1: Distribution according to Consumer Responses to Prices of Pork Cuts.

Prices of Pork cuts	Percentage (%)	Average Quantity Purchased
₦200	88	100
₦300	67	40
₦500	56	20
₦1000	22	10

Source: Survey, 2025.

The results presented in Table 1 show that consumers in Makurdi Metropolis are sensitive to the prices of pork cuts. 88% of consumers bought pork cuts at ₦200. The number of buyers decreased as the price of pork rose, so only 22% bought at ₦1000. The results show a strong preference for relatively low-priced pork cuts. Ogbeide (2015) also indicated that as the price of quality meat increases, the number of consumers who prefer it decreases. This aligns with the theory of demand.

Estimation of Price Sensitivity

Arc price elasticity was estimated using equation 1 to measure the responsiveness of quantity demanded to price changes. This indicates consumers' sensitivity to price changes.

Table 2: Arc Price Elasticity of Demand for Value-Added Pork Products

Price Range for pork cuts (₦)	Own Price Elasticities (Ed)
200 – 300	−2.14
301 – 501	−1.33
>502	−1.00

Survey, 2025

The estimated arc price elasticity coefficients indicate that the demand for value-added pork products is price elastic with a negative coefficient. This agrees with the price theory of demand: any small price change will result in a significant decline in quantity purchased. Therefore, pork consumption in the area is price sensitive. This means that the price change is accompanied by a large change in the quantity of pork purchased. The implication is that policies that give rise to variation in pork prices will affect consumption patterns and the general welfare of the people. This corroborates the study carried out by Igwe and Onyekwere (2007), which indicates that pork is price-elastic, with a negative coefficient. Higher prices significantly reduce the quantity demanded. Cushin (1991), in a study conducted in Australia, also concurred with this view, but from a different perspective. He indicated that disaggregated pork is price-elastic, with a negative elasticity coefficient, whereas at the aggregated level it is price-inelastic**.** This implies that any increase in the prices of specific pork products will lead to a decline in consumption. The high prices may be attributed to high production costs and a low supply of pork from pig farmers.

Consumer Preference for Value-Added Pork Products.

Table 3 outlined the primary methods employed to add value to pork products. The results show which methods consumers prefer.

Table **3: Preferred Type of Value-Added Pork Product.**

Type of Pork Product preferred	Frequency*	Percentage (%)
Marinated Pork	55	61
Peppered Pork	75	83
Ready-to-eat	60	67
Fried Pork	30	33
Smoked Pork	70	78

Source: Survey, 2025. *Multiple responses

The results show that the preferred options are peppered pork (83%), smoked pork (78%), and ready-to-eat pork (67%). These preferences reflect consumer demands for spicy products with distinct flavor and preservation qualities. Kurpas 2018, on the other hand, stated that ready-to-eat was a preferred option, while Magqupu et al. 2024 indicated that consumers preferred grilled (usually roasted with a smoky flavour) and well-cooked pork. The variation in preferences shows some level of product differentiation. These products are demand-driven. Gupta et al. 2016) opined that an understanding of consumer preferences will, among other things, facilitate product innovation and market strategies. Therefore, marketers would focus on making the most preferred products available while exploring ways to boost the appeal of less-favored options.

Effectiveness of Value-Addition Strategies

The result shows how effective the value-addition strategies used are in marketing pork products. The strategies preferred by the consumers will attract more sales and income for the marketers

Table 4: Distribution according to perceived effectiveness of value-addition strategies.

Value-Addition Strategies	EE (4)	E (3)	I (2)	IE (1)	ΣFX	Mean	Decision Rule
Customer service	168 (46.67)	84 (31.11)	30 (16.67)	5 (5.56)	287	3.19	Accept
Consumer feedback	168 (46.67)	84 (31.11)	18 (10.00)	11 (12.22)	281	3.12	Accept
Quality of Products	164 (45.56)	93 (34.44)	26 (14.44)	5 (5.56)	288	3.20	Accept
Pricing and discount strategies	116 (32.22)	108 (40.0)	30 (16.67)	10 (11.11)	264	2.93	Accept
Brand Visibility and promotional activities	80 (22.22)	48 (17.78)	62 (34.44)	23 (25.56)	213	2.37	Reject

Source: Survey, 2025. EE = Extremely Effective, E = Effective, I = Ineffective, EI – Extremely Ineffective

Table 4 indicates that customer service (3.19), consumer feedback (3.12), product quality (3.20), and pricing and discount strategies (2.93) were regarded as effective strategies for value addition. They motivate more consumers to purchase pork. This will positively impact sales and revenue. The less effective strategy was brand visibility and promotional activities, with a mean value of 2.37. Therefore, consumers in the area are more influenced by strategies that emphasize quality, price, and customer service. Delivery Lawal e*t al* (2023) identified price and quality/food safety as among the major factors that affect meat consumption in general. Therefore, strategies that directly enhance consumer satisfaction are more effective and will motivate them to pay more. Ogbeide (2015) opined that product quality, as demanded by consumers, also has implications for improvements in production and management requirements. of the livestock industry. Other studies also show that the quality attributes of meat strongly influence consumer purchasing behaviour and preferences, as well as overall consumption patterns (Garmyn 2020; Udomkun et al. 2018).

CONCLUSION

The findings provided grassroots information on the level of differentiated products, the strategies employed, and consumer preferences for the products**.** The level of differentiation of pork products is very low in the area. It depends on the mode of preparation (peppered pork) and the size of cuts (₦200).

Consumers purchase more products when value addition improves their utility at lower prices. The strategies perceived as effective in influencing pork purchases are quality of pork, consumer service, feedback, price, and discount mechanisms**.** The less effective strategies are brand visibility and promotional activities. These are potential areas to harness for more sustainable products. This calls for a rethink on how to enhance promotional approaches.

RECOMMENDATIONS

1. Efforts should be made through cooperative groups to secure funds to facilitate the adoption of improved value-added strategies in branding, packaging, and promotional activities, thereby raising awareness of the benefits of pork products.

2. The government and stakeholders should implement capacity-building programs and awareness campaigns on indigenous branding, packaging, and advertising that are cost-effective.

3. The demand for specific qualities of pork products has implications for production and management practices. Government and stakeholders should invest in techniques and equipment to support safe handling practices, ensuring consistent product quality and consumer satisfaction. In addition, the government should introduce policies to reduce the price of pork products so that consumers can afford them.

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