

PRICE SENSITIVITY AND PRODUCT ATTRIBUTES IN CONSUMER EVALUATION OF PLANT- BASED MEAT ALTERNATIVE

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Abstract. This study examined how price sensitivity and product attributes influence consumer purchase intentions toward plant-based meat alternatives in Cebu province, Philippines. Using a quantitative descriptive-correlational design, data were collected from 124 respondents through a structured questionnaire measuring taste, texture, perceived health benefits, price sensitivity, and purchase intention. Reliability testing confirmed strong internal consistency (Cronbach's $\alpha = 0.808$). Results showed that consumers are highly price-sensitive ($M = 5.07$, $SD = 0.85$), yet purchase intention remains positive ($M = 4.82$, $SD = 0.89$), indicating that product quality can mitigate cost concerns. Among product attributes, perceived health benefits ($M = 4.95$) were rated most important, followed by taste ($M = 4.82$) and texture ($M = 4.67$). Correlation analysis revealed a strong relationship between price sensitivity and purchase intention ($r = 0.72$, $p < 0.05$) and a very strong relationship between product attributes and purchase intention ($r = 0.81$, $p < 0.05$). These findings highlight that while affordability is a decisive factor, sensory satisfaction and nutritional value play a greater role in shaping consumer acceptance. For manufacturers, success requires a dual strategy: competitive pricing alongside continuous innovation in taste, texture, and health attributes. Policymakers and retailers should reinforce these efforts through awareness campaigns that emphasize both nutritional and sensory improvements, thereby reducing cultural resistance and fostering consumer confidence. Ultimately, consumer acceptance in emerging markets depends on balancing affordability with product excellence to achieve deeper market penetration and long-term sustainability.

Keywords: Descriptive-correlational, plant-based meat alternative, price sensitivity, product attributes, purchase intention, quantitative

Introduction

The global food industry is undergoing a significant transformation, particularly with the emergence of plant-based meat alternatives in the mainstream food market. In fact, a key driver of this shift is growing consumer awareness of the health, environmental, and ethical impacts of traditional animal husbandry (Hwang et al., 2020). Therefore, understanding how consumers evaluate plant-based protein has become essential for agribusinesses, manufacturers, and policymakers. While positive environmental and ethical attitudes generate interest, actual consumer acceptance depends heavily on several factors, mainly price sensitivity and the product's properties (Van Loo et al., 2020). Premium prices often create a significant barrier, preventing product trial and keeping even eco-conscious consumers from purchasing. However, economics does not entirely determine consumers' choices, as sensory characteristics are the most important

factors in consumer adoption. Many consumers prefer traditional meat because taste, familiarity, and routine use consistently shape acceptance more strongly than abstract benefits of alternatives (Liu et al., 2022; Miller, 2020). Disgust and negative taste expectations can also hinder adoption (Vural et al., 2023). Research shows that plant-based meat products can substitute for traditional meat products, offering a similar sensory experience at a reasonable price. Sensory experience often influences consumers' choices more than price, so improving it can be more beneficial than lowering the price.

The process of adopting plant-based foods differs greatly across regions, since new markets in developing countries like the Philippines face specific challenges related to culture, economy, and structure that differ from those in modern economies. Meat consumption is part of Philippine culture, where meat has strong social and celebratory significance, resulting in low acceptance of plant-based alternatives. In addition, limited distribution, limited accessibility, and high prices further complicate the situation (Onwezen & Dagevos, 2024). Thus, as low-income societies face food insecurity, expensive alternative proteins are seen as non-urgent luxuries rather than food staples (Sogari et al., 2023). Structural changes driven by increasing urbanization, internet use, and social media foster openness among younger middle-class urban residents, exposing them to wellness and sustainability concepts worldwide. While awareness is growing, the gap between digital enthusiasm and actual purchases persists because of high prices and inconsistent organoleptic characteristics. It is essential to note that empirical studies regarding the crucial choices made by Filipino consumers regarding the financial aspect and functional properties of products, such as flavor, health-related aspects, and environmental impact, are insufficient in number, indicating the pressing need to understand whether price or preference for taste is more distinctive in driving consumers towards sustainable protein consumption in the developing Asian markets.

This quantitative research aimed to address this gap by examining the role of price sensitivity in Filipino consumers' purchase intentions toward plant-based meat substitutes and by analyzing the relationships and trade-offs among internal product characteristics—taste, health, and environmental sustainability—as they shape consumers' decision-making. The research examines how price influences product characteristics by considering behavioral, social, and cash flow factors.

Research Questions

This study examined consumer perceptions of plant-based meat alternatives by analyzing how price sensitivity influences evaluation and purchase decisions. It also sought to identify which product attributes consumers consider most important when purchasing plant-based meat alternatives.

Specifically, this study seeks to answer the following research questions:

1. What is the level of consumer price sensitivity and purchase intention toward plant-based meat alternatives?
2. Which product attributes are considered most important by consumers when purchasing plant-based meat alternatives, in terms of:
 - 2.1. Taste
 - 2.2. Texture
 - 2.3. Perceived Health Benefits

3. Is there a significant relationship between:
 - 3.1. Price sensitivity and purchase intention, and
 - 3.2. Product attributes importance and purchase intention?

Methodology

Design

This research used a descriptive correlational quantitative approach to examine how price sensitivity and the importance of product attributes affect consumers' intention to buy plant-based meat alternatives. The descriptive element assessed consumer price sensitivity and the perceived significance of product features, including taste, texture, cost, and health advantages. The correlational method was employed to evaluate the connections among price sensitivity, product features, and buying intention. Furthermore, estimation analysis was used to assess the independent variables' predictive ability and evaluate the proposed hypotheses. This design is suitable because the study aims to quantify variables and examine their correlations using statistical techniques.

Locale and Participants

The research was conducted in the Province of Cebu, Philippines, one of the largest commercial and urban centers in the Central Visayas region, with a diverse demographic composition and a growing demand for healthy, sustainable food products. Cebu, therefore, serves as an appropriate setting for exploring consumer behavior, price sensitivity, and purchasing intentions in a developing retail context in the Philippines. The research sample consisted of 124 individual respondents based in Cebu who were considered potential consumers of plant-based meat products. The target population was defined by the following inclusion criterion: the ability to recognize alternative protein food products in general and involvement in food shopping in particular.

The sample was recruited using probability sampling, which gives eligible consumers in the sampling population a fair chance of selection, reducing selection bias and improving sample efficiency. Before the full data collection, a pilot test was conducted with a different group of campus-based consumers studying various academic majors to assess the instrument's readability, construct clarity, and internal consistency. The feedback and measured statistical reliability values from this preliminary testing were used to address unclear questions and determine the scale's parameters. After validating the instrument, the full survey was administered to the main sample of 124 respondents to ensure the information gathered aligned with the consumer knowledge and experience needed to evaluate plant-based meat alternatives.

Instrument

The primary data-gathering tool was a structured questionnaire covering key variables: price sensitivity, product attribute importance (taste, texture, price, and perceived health benefits), and purchase intention. Each variable included multiple indicators adapted from related literature and modified to fit the context of plant-based meat alternatives. The instrument used a Likert scale from 1 (strongly agree) to 6 (strongly disagree), allowing respondents to indicate their level of agreement.

To ensure the instrument's validity, the researcher approached three (3) research experts to conduct a face validity assessment. The researcher also conducted a pilot test and measured reliability using Jamovi to ensure internal consistency, yielding 0.808. Exceeding the standard baseline threshold of 0.70, this score confirms that the items dependably evaluate the target construct and that the instrument is ready for full-scale deployment (Sheposh, 2023). Furthermore, the study upheld core ethical principles by obtaining informed consent, ensuring voluntary participation, and strictly preserving respondent anonymity and data confidentiality without coercion or deception (Research Ethics and Informed Consent, 2023).

Data Analysis

The collected data were analyzed using descriptive and inferential statistical methods. Descriptive statistics, including the mean and standard deviation, assessed price sensitivity and the importance of product attributes. Pearson correlation analysis examined the strength and direction of relationships between variables. Furthermore, multiple regression analysis was conducted to determine the predictive effect of price sensitivity and product attributes on purchase intention and to test the study's hypotheses. These statistical tools provided a comprehensive analysis of the data.

Ethical Considerations

The study adhered to fundamental ethical research principles. Participation was voluntary, and the researcher obtained informed consent before participants completed the survey. Respondents were assured that their responses would remain confidential and anonymous. The researcher collected no personally identifiable information and used all data strictly for academic purposes. The researcher ensured that all information was securely stored and that no harm, coercion, or misrepresentation occurred throughout the research process.

Results and Discussions

Table 1.

Price Sensitivity and Purchase Intention

Variable	Mean	SD	Interpretation
Price Sensitivity	5.07	0.85	Strongly Agree
Purchase Intention	4.82	0.89	Agree

Table 1 shows the descriptive results for the two variables, price sensitivity and Purchase intention, along with their respective mean, standard deviation (SD), and interpretation. The table shows that price sensitivity was rated highest ($M = 5.07$, $SD = 0.85$), indicating strong agreement that consumers are highly aware of product pricing and value-for-money considerations. However, purchase intention also scored favorably ($M = 4.82$, $SD = 0.89$), suggesting that despite price awareness, consumers remain positively inclined to buy plant-based meat alternatives. This highlights that while cost is a barrier, it does not entirely deter purchase decisions when consumers

perceive strong product quality and health benefits. In other words, consumers evaluate price relative to the product's overall perceived value, and high-quality attributes can offset cost concerns.

These findings carry important implications for both manufacturers and policymakers. For producers, the results suggest that competing solely on price is insufficient in emerging markets such as Cebu. Instead, long-term success requires a dual strategy: maintaining competitive pricing while continuously innovating in sensory and health-related attributes. For policymakers and advocates of sustainable food systems, the study underscores the need to launch awareness campaigns highlighting the nutritional and environmental benefits of plant-based alternatives. By doing so, they can help reduce cultural resistance and strengthen consumer confidence in these products. Retailers, meanwhile, should consider bundling plant-based options with promotions that emphasize taste and health benefits rather than focusing exclusively on affordability.

The findings align with prior research emphasizing that sensory and functional qualities often outweigh price in shaping consumer acceptance. In fact, Giacalone et al. (2022), Moss et al. (2023), and Szenderák et al. (2022) highlighted that sensory properties, particularly flavor and texture, were consistently identified as the key factors in consumer acceptance of plant-based meat alternatives. Similarly, several papers have consistently found that consumers in other countries identify health as a primary motivator for purchasing plant-based alternatives, with perceived nutritional advantages strongly predicting purchase intention (Ang, 2023; Yonwikai & Wannamakok, 2025). These studies reinforce the present findings, showing that consumer purchase intention is not determined by price alone but by the interplay of economic and sensory considerations.

Table 2.

Product Attributes Importance

Criteria	Mean	SD	Interpretation
Taste	4.82	0.91	Agree
Texture	4.67	1.02	Agree
Health Benefits	4.95	0.88	Agree

Table 2 illustrates the results of the importance of product attributes, particularly the taste, texture, and health benefits, indicating a generally favorable consumer evaluation across all key criteria, with mean scores falling within the "Agree" interpretation range. Specifically, health benefits received the highest rating ($M = 4.95$, $SD = 0.88$), underscoring strong consumer consensus on the nutritional advantages of plant-based meat alternatives—such as lower saturated fat and higher fiber content—over traditional meats (Aschemann-Witzel et al., 2021). Sensory attributes also received strong approval, with taste ($M = 4.82$, $SD = 0.91$) and texture ($M = 4.67$, $SD = 1.02$) both receiving positive evaluations, reflecting manufacturers' success in replicating the flavor profile and mouthfeel of conventional meat products (Fiorentini et al., 2020). These results indicate that health considerations and sensory performance collectively drive consumer acceptance in the plant-based protein market.

Building on these findings, the product-attribute analysis showed favorable consumer evaluations across all dimensions, confirming that both sensory and health-related attributes drive consumer acceptance. The high rating for health benefits suggests consumers view plant-based meat alternatives as healthier substitutes, aligning with global trends that emphasize nutrition and wellness in food choices. Meanwhile, the positive scores for taste and texture highlight the importance of sensory satisfaction in overcoming cultural and psychological barriers to adoption. Consumers are more likely to integrate plant-based substitutes into their diets when these products deliver a familiar, enjoyable eating experience, reducing resistance rooted in taste expectations or food neophobia (Vural et al., 2023).

These results imply that manufacturers should prioritize continuous improvement in sensory qualities while maintaining strong nutritional profiles. Health benefits alone may attract initial interest, but sustained consumer loyalty depends on taste and texture that closely mimic traditional meat. For emerging markets such as Cebu, this dual emphasis is particularly crucial, as consumers remain highly price-sensitive yet willing to pay more when substitutes deliver superior sensory and health value. Retailers and marketers should therefore highlight both the nutritional advantages and sensory improvements in promotional campaigns to strengthen consumer confidence and encourage trial.

The findings are consistent with prior studies that emphasize the interplay between sensory and health attributes in shaping consumer acceptance. In particular, a 2019 survey of US adults found that 86% of consumers considered taste the major driver of purchase intention, and the Food and Health Survey consistently shows taste ranks above price, convenience, and health (Fiorentini et al., 2020; Short et al., 2021), while studies confirmed that health benefits are a major motivator in purchase decisions. In fact, a meta-analysis of organic food purchase behavior confirmed that health, product quality, and environmental concern are the main motives, with health always ranking highest (Rana & Paul, 2020). Collectively, these studies reinforce the present results, highlighting that consumer acceptance of plant-based meat alternatives is not determined by price alone but by the combined influence of sensory satisfaction and nutritional value.

Table 3.

Pearson's r Correlation Coefficient

Variables	R-value	P-value	Interpretation
PS and PI	0.72	<0.05	Strong relationship, meaningful practical significance
PAI and PI	0.81	<0.05	Very strong relationship, variables closely related

Legend: 0-0.19 Very Weak; 0.20-0.39 Weak; 0.40-0.59 Moderate; 0.60-0.79 Strong; 0.80-0.99 Very Strong; 1.0- Perfect

Table 3 presents the inferential analysis results using Pearson r, revealing statistically significant and practically meaningful relationships among Purchase Intention (PI), Price Sensitivity (PS), and Product Attributes Importance (PAI), with all coefficients significant at $p < 0.05$.

In the first line of results, the interplay between PS and PI reveals that there is a strong positive correlation ($r = 0.72$), suggesting that consumer purchase decisions are influenced by pricing dynamics, supporting prior evidence that the strongest evidence shows that demand for some plant-based meat alternatives (PBMA) responds more to price changes than demand for conventional meat, but this is not uniform across products, settings, or populations (Caputo et al., 2025; Jahn et al., 2024)

Another line of results, particularly PAI and PI, shows a very strong correlation ($r = 0.81$), indicating that consumers who place high importance on product attributes such as taste, texture, and health benefits are more likely to express higher purchase intention, underscoring the critical role of sensory and functional qualities in shaping consumer acceptance (Onwezen et al., 2021).

Complementary descriptive analysis further supports these findings, with price sensitivity rated highest ($M = 5.07$), reflecting strong agreement that consumers focus on value for money. However, higher prices do not necessarily deter purchase (Apostolidis & McLeay, 2021). Health benefits ranked second ($M = 4.95$), confirming their role as a major motivator in consumer decision-making (Aschemann-Witzel et al., 2021), while taste ($M = 4.82$) and texture ($M = 4.67$) also received high ratings, pointing to improvements in product formulation that enhance sensory resemblance to conventional meat (Fiorentini et al., 2020).

Taken together, these results demonstrate that consumer disposition toward plant-derived meat substitutes is positive but nuanced, shaped by both economic and sensory considerations. Price remains a decisive factor, but perceptions of product quality and health benefits moderate its influence, suggesting consumers are willing to pay more when substitutes deliver superior sensory and nutritional value. This reinforces the importance of balancing affordability with continuous innovation in sensory and health-related attributes to sustain market growth.

Conclusion

This study concluded that consumer purchase intention for plant-based meat alternatives is jointly driven by price sensitivity and key product attributes, particularly health benefits, taste, and texture. Consumers in Cebu province hold an overall positive perception of these products, with health benefits rated highest, followed closely by taste and texture. At the same time, price sensitivity remains a decisive, though not exclusive, determinant of purchase behavior. Importantly, consumers do not evaluate price in isolation; rather, they assess it relative to the product's overall perceived value. High product quality reduces price sensitivity and increases willingness to buy, whereas lower quality amplifies cost concerns and deters purchase.

The findings imply that market success for plant-based meat manufacturers hinges on a dual strategy: delivering competitive, accessible pricing while maintaining high standards of sensory and nutritional quality. This dual emphasis is particularly critical in emerging markets, where consumers are highly price-conscious yet increasingly health-oriented and open to innovation. For policymakers and retailers, the results highlight the need to promote awareness campaigns that emphasize both the nutritional advantages and sensory improvements of plant-based alternatives, thereby reducing cultural resistance and strengthening consumer confidence.

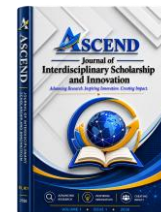
These conclusions align with prior research showing that sensory satisfaction and health benefits are key motivators in consumer adoption, while perceptions of product quality moderate price sensitivity. Collectively, the evidence reinforces that affordability alone is insufficient;

sustained consumer acceptance requires products that deliver value beyond price by combining taste, texture, and health benefits to justify the cost and encourage long-term loyalty.

Ultimately, the study underscores that the future of plant-based meat alternatives in the Philippines depends not only on lowering economic barriers but also on enhancing product quality and consumer trust. By balancing affordability with innovation, manufacturers can achieve deeper market penetration, foster consumer loyalty, and contribute to the broader shift toward sustainable food systems.

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