

MARKETING MIX EFFECTS ON BEEF PURCHASE DECISIONS IN SUMEDANG

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Abstract

Purpose: This study examines the effect of the perceived marketing mix on consumer purchase decisions at CV APN Mandiri Sumedang.

Research Methodology: The study employed a quantitative, cross-sectional survey design. Data were collected from 70 customers using a structured questionnaire with a five-point Likert scale and a saturated sampling technique. Instrument quality was assessed using item-total correlation and Cronbach's alpha. Data were analysed using descriptive statistics, the Shapiro-Wilk residual normality test, the Breusch-Pagan heteroscedasticity test, Pearson correlation, and simple linear regression with IBM SPSS Statistics version 26.

Results: The marketing mix had a positive and significant effect on consumer purchase decisions ($B=0.541$, $\beta=0.370$, $t=3.284$, $p=0.002$). The model explained 13.7% of the variance in consumer purchase decisions ($R^2=0.137$). The marketing-mix and purchase-decision indices were 80.03% and 78.23%, respectively.

Limitations: The study was limited to 70 customers of one beef supplier, used a cross-sectional design and self-reported data, and examined the marketing mix as an aggregate construct.

Contribution: The study provides empirical evidence for marketing management, consumer behaviour, food marketing, and local-enterprise management by explaining the relationship between integrated marketing activities and beef purchase decisions.

Keywords: marketing mix, consumer purchase decision, beef marketing, consumer behaviour, food supplier, local enterprise



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1. INTRODUCTION

Beef remains an important source of animal protein in Indonesia, while the balance between domestic availability and consumption continues to present a strategic challenge for the national livestock industry. The Indonesian Ministry of Agriculture estimated that the national supply of beef and buffalo meat would fall approximately 263.4 thousand tonnes below demand in 2024 and that a deficit of approximately 236.5 thousand tonnes would persist in 2025 (Pusat Data dan Sistem Informasi Pertanian [Pusdatin], 2024). National livestock statistics also show that the beef market is shaped by interconnected changes in cattle populations, meat production, consumption, imports, retail prices, and distribution conditions (Badan Pusat Statistik [BPS], 2024). Consequently, the existence of aggregate market demand does not automatically guarantee stable sales for an individual supplier because customers still compare

alternative products, prices, suppliers, purchasing locations, and market information before completing a purchase (Bukhari et al., 2023; Jiang et al., 2023).

Consumer decision-making in the beef market is particularly complex because many dimensions of product quality cannot be fully assessed before consumption. Consumers commonly use extrinsic and observable cues—such as price, origin, certification, colour, appearance, visible fat, packaging, and product presentation—to predict the quality and safety of beef products (Santos et al., 2021). Price and food safety remain especially important considerations because consumers must balance affordability against the perceived nutritional, sensory, and health value of the product (Ortez et al., 2022). Consumer evaluations of meat are also influenced by freshness, sensory expectations, nutritional information, production practices, media information, environmental concerns, and trust in the product's origin and handling process (de Araújo et al., 2022). Evidence from Indonesia similarly demonstrates that perceived nutritional value, sensory appeal, and price contribute to consumers' attitudes and intentions to purchase beef products (Hati et al., 2021). These findings indicate that beef suppliers need a coordinated marketing strategy that communicates product quality, offers acceptable prices, facilitates convenient access, and reduces consumers' information uncertainty (Hati et al., 2021; Santos et al., 2021).

CV APN Mandiri Sumedang operates as a supplier and business unit involved in livestock trading, slaughtering, and non-poultry meat processing in Sumedang Regency. The company's internal records indicate that its annual beef sales decreased from 790 quintals in 2021 to 780 quintals in 2022 and 775 quintals in 2023 (CV APN Mandiri Sumedang, 2024). This represents a cumulative decrease of approximately 1.90% during the three-year period, despite the continuing national imbalance between beef supply and demand reported by the Ministry of Agriculture (CV APN Mandiri Sumedang, 2024; Pusdatin, 2024). The phenomenon suggests that the company's problem cannot be explained solely by the availability of aggregate demand but may also reflect how its market offering is evaluated and selected by customers. Understanding customers' purchase decisions is therefore necessary to identify whether the company's product characteristics, pricing practices, accessibility, and promotional communication correspond with customer expectations (Bukhari et al., 2023; Jiang et al., 2023).

The marketing-mix framework provides a relevant managerial perspective for explaining this problem because it represents a coordinated set of controllable marketing stimuli consisting of product, price, place, and promotion (Firmansyah et al., 2021; Jiang et al., 2023). Product decisions communicate the expected quality, freshness, variety, presentation, and reliability of an offering, which are particularly important when consumers purchase perishable food products such as beef (de Araújo et al., 2022; Santos et al., 2021). Price represents the monetary sacrifice required from consumers and may function simultaneously as an affordability consideration and a signal of expected product quality (Hati et al., 2021; Ortez et al., 2022). Place concerns the availability, accessibility, convenience, and reliability of distribution channels, whereas promotion provides information and persuasive cues that help customers recognise, evaluate, and differentiate the offering (Akhmalia, 2023; Firmansyah et al., 2021). From a marketing-stimulus perspective, consumers process these four elements through their evaluations and attitudes before producing a behavioural response such as product choice and purchase (Jiang et al., 2023).

Previous research generally supports the relevance of the marketing mix to food-purchasing behaviour, but its components do not always have equally strong effects. Research on packaged rice products in Indonesia found that product, price, place, and promotion positively influenced purchasing decisions, although product and place were among the most influential dimensions (Firmansyah et al., 2021). A study of a prepared-food business in Tasikmalaya also found significant effects of product, price, place, and promotion, with different coefficient sizes across the four dimensions (Akhmalia, 2023). In the organic-food market, marketing stimuli and consumer attitudes have also been shown to contribute to buying decisions, demonstrating that the effect of a marketing strategy depends on both the characteristics of the offering and the way consumers evaluate it (Jiang et al., 2023). These variations imply that treating the marketing mix as a single aggregate variable may conceal the distinct contribution of each managerial component and provide limited guidance regarding which component should receive priority (Akhmalia, 2023; Firmansyah et al., 2021).

Nevertheless, three gaps remain in the existing literature. First, Indonesian research on beef purchasing has primarily examined consumer perceptions of nutritional value, sensory appeal, and price rather than integrating these considerations into a complete product–price–place–promotion framework (Hati et al., 2021). Second, Indonesian studies that explicitly examine the four elements of the marketing mix have generally focused on packaged rice, ready-to-eat food, or other retail products rather than beef sold by a local slaughtering and meat-supply enterprise (Akhmalia, 2023; Firmansyah et al., 2021). Third, international beef research demonstrates that the importance of price, origin, safety, quality labels, and purchasing frequency differs across countries and consumer groups, indicating that findings from one market cannot automatically be generalised to a local Indonesian setting (Dahal et al., 2024; de Araújo et al., 2022). Taken together, these studies reveal a contextual and empirical gap concerning how the individual dimensions of the marketing mix shape beef purchase decisions among customers of a local supplier in Sumedang.

This study addresses these gaps by examining product, price, place, and promotion as four distinct predictors of consumer purchase decisions at CV APN Mandiri Sumedang. Separating the four dimensions allows the analysis to identify their respective effects rather than assuming that all marketing-mix activities operate with the same magnitude and direction (Firmansyah et al., 2021; Jiang et al., 2023). The study also connects the general marketing-stimulus perspective with meat-consumer research, in which product quality, price, accessibility, information, safety, and origin function as important cues in customer evaluation (de Araújo et al., 2022; Hati et al., 2021; Santos et al., 2021). Its contextual novelty lies in testing this integrated framework among customers of a local Indonesian beef supplier, an organisational setting that has received limited attention in previous marketing-mix studies.

Accordingly, the objective of this study is to analyse the individual effects of product, price, place, and promotion on consumer purchase decisions at CV APN Mandiri Sumedang. The study addresses two research questions: (1) To what extent do product, price, place, and promotion influence consumers' beef purchase decisions? and (2) Which marketing-mix dimension has the strongest influence on those decisions? Theoretically, the study clarifies the differentiated role of marketing stimuli in a product category characterised by quality uncertainty and food-safety considerations. Managerially, the findings are expected to help the

company allocate its limited marketing resources to the marketing-mix component that provides the greatest contribution to customers' purchasing decisions.

The remainder of this article is organised as follows. The next section reviews the relevant literature and develops the research hypotheses. The subsequent section explains the research design, sampling procedure, measurement instruments, and data-analysis technique. The final sections present the empirical results, discuss the theoretical and managerial implications, and conclude with the study's limitations and recommendations for future research.

The novelty of this study lies in disaggregating the four marketing-mix dimensions and testing their differentiated effects on beef purchase decisions in the underexplored context of a local Indonesian slaughtering and meat-supply enterprise.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Literature Review

2.1. Theoretical Foundation: Stimulus–Organism–Response Theory

This study is primarily grounded in the Stimulus–Organism–Response theory, which explains how environmental stimuli influence individuals' internal evaluations and subsequently produce behavioural responses (Mehrabian & Russell, 1974). In this theoretical framework, a stimulus represents an external cue encountered by an individual, the organism refers to the individual's cognitive and affective processing of that cue, and the response represents the resulting approach, avoidance, or behavioural action (Mehrabian & Russell, 1974; Eroglu et al., 2001). The framework has been extensively applied in consumer research because purchasing behaviour is generally preceded by consumers' exposure to and evaluation of external marketing cues (Eroglu et al., 2001; Jiang et al., 2023).

Within the present research context, product, price, place, and promotion represent controllable marketing stimuli provided by the company, whereas the purchase decision represents the behavioural response produced after consumers evaluate those stimuli (Jiang et al., 2023; Kotler et al., 2022). Product-related cues communicate the expected quality and suitability of beef, price cues indicate the monetary sacrifice and value of the offering, place-related cues determine its availability and convenience, and promotional cues provide information and persuasion (Berry et al., 2002; Hati et al., 2021; Zeithaml, 1988). Consumers cognitively process these cues by comparing the expected benefits, risks, costs, and convenience of purchasing from one supplier rather than another (de Araújo et al., 2022; Hati et al., 2021). The result of this evaluation may be expressed through product selection, supplier choice, purchase timing, purchase quantity, and the final decision to complete a transaction (Kotler et al., 2022).

The current study applies a parsimonious stimulus–response model in which consumers' cognitive evaluations are embedded in their perceptions of each marketing-mix element rather than operationalised as a separate mediating construct. This approach is appropriate because the research seeks to compare the direct predictive contribution of product, price, place, and promotion to purchase decisions. Nevertheless, previous studies indicate that the effects of the four marketing stimuli are not necessarily uniform across products and markets (Firmansyah et

al., 2021; Jiang et al., 2023). Jiang et al. (2023), for example, found that product, place, and promotion significantly influenced organic-food purchasing decisions, whereas price did not have a significant effect. Firmansyah et al. (2021), in contrast, found that all four elements positively affected purchasing decisions for packaged rice, although their effect sizes differed. These differences justify examining each marketing-mix dimension separately rather than combining them into a single aggregate construct.

2.2. Marketing Mix as Perceived Marketing Stimuli

The marketing mix refers to an integrated set of controllable marketing instruments used by an organisation to create, communicate, and deliver value to a target market (Kotler et al., 2022). For tangible consumer products, the conventional marketing mix consists of product, price, place, and promotion, commonly referred to as the 4Ps (Kotler et al., 2022). Although the four components are conceptually distinct, their effectiveness depends on their consistency because a high-quality product may not generate purchases when its price is perceived as unfair, its distribution is inconvenient, or its benefits are not effectively communicated (Jiang et al., 2023; Zeithaml, 1988).

In this study, the marketing mix is conceptualised from the consumer's perspective rather than solely from the company's managerial perspective. Product therefore represents consumers' perceptions of beef quality and product suitability, price represents perceived affordability and price fairness, place represents accessibility and product availability, and promotion represents the relevance and attractiveness of marketing communication. Measuring the constructs from the consumer perspective is consistent with the Stimulus–Organism–Response framework because an external marketing stimulus can influence behaviour only when it is noticed and interpreted by the consumer (Eroglu et al., 2001; Mehrabian & Russell, 1974).

The disaggregation of the marketing mix into four independent constructs also provides stronger managerial information than an aggregate marketing-mix score. An aggregate score may indicate that marketing activities collectively affect purchasing behaviour, but it does not identify whether the company should prioritise product quality, price adjustment, distribution accessibility, or promotional communication (Firmansyah et al., 2021). By estimating each component separately, the research can determine the relative importance of the four marketing instruments and generate more specific recommendations for CV APN Mandiri Sumedang.

2.3. Consumer Purchase Decision

A consumer purchase decision refers to the selection and execution of a purchasing alternative after the consumer has recognised a need, searched for information, evaluated available alternatives, and formed a preference for a particular offering (Kotler et al., 2022). A purchase decision is therefore more behavioural and concrete than purchase intention because it represents a consumer's decision to select a product or supplier rather than merely expressing a future willingness to buy (Ajzen, 1991; Kotler et al., 2022). The distinction is important because favourable attitudes and intentions do not always result in actual purchases when consumers encounter financial, availability, risk, or convenience constraints (Ajzen, 1991).

Purchase decisions can be reflected in the consumer's choice of product, brand or supplier, purchase quantity, purchase timing, and method of completing the transaction (Kotler et al., 2022). In the context of a beef supplier, the construct concerns whether customers select the beef offered by CV APN Mandiri Sumedang, regard the company as their preferred supplier, decide to purchase when meat is needed, and determine an appropriate purchase quantity. The construct must not be interpreted as the company's aggregate sales volume because the former is measured at the individual consumer level, whereas the latter is an organisational outcome derived from recorded sales quantities.

Beef purchasing decisions are relatively complex because consumers cannot fully verify all quality and safety characteristics before consumption (de Araújo et al., 2022; Santos et al., 2021). Consumers therefore depend on observable attributes such as colour, visible fat, freshness, packaging, certification, origin, price, product presentation, and the reputation of the seller when predicting product quality (Santos et al., 2021). Experience, prior purchases, nutritional information, food-safety concerns, media information, and perceived sensory benefits further shape consumers' evaluations of meat products (de Araújo et al., 2022). Evidence from Indonesia shows that perceptions of nutritional value, sensory appeal, and price contribute to consumers' attitudes and intentions to purchase beef products (Hati et al., 2021).

These characteristics imply that consumers' beef purchasing decisions cannot be explained by a single marketing factor. Consumers may simultaneously seek fresh and hygienic meat, an acceptable price, reliable availability, a convenient purchasing process, and credible information concerning product benefits. The four marketing-mix dimensions are therefore treated as complementary but analytically distinct antecedents of consumer purchase decisions.

2.4. Product

A product is the bundle of tangible and intangible benefits offered to satisfy customer needs, including its functional performance, quality, design, variety, packaging, and supporting attributes (Kotler et al., 2022). In the context of beef, product strategy encompasses freshness, hygiene, meat colour, visible fat, cut variety, nutritional value, packaging, safety, consistency, and product origin (de Araújo et al., 2022; Santos et al., 2021). These attributes are particularly important because beef is perishable and its perceived quality may change because of handling, storage, slaughtering, transportation, and display conditions (Santos et al., 2021).

Signaling theory provides an additional explanation for the relationship between product attributes and purchasing decisions. The theory proposes that observable information can function as a signal of otherwise difficult-to-observe quality under conditions of information asymmetry (Spence, 1973). In a meat market, consumers generally have less information than suppliers about slaughtering, handling, storage, and product freshness. Observable indicators such as clean packaging, appropriate colour, certification, traceable origin, consistent cuts, and hygienic presentation can consequently reduce uncertainty and signal the reliability of the supplier (de Araújo et al., 2022; Santos et al., 2021).

However, the relative importance of product attributes may vary between consumer groups and countries. A cross-country study demonstrated that brand, production practices, purchasing channel, and product-related considerations were associated with different beef-purchasing frequencies across national markets (Dahal et al., 2024). This variation indicates

that product preferences cannot be assumed to be identical across market settings and need to be empirically examined within the local Sumedang context.

2.5. Price

Price represents the amount of money or other resources sacrificed by a consumer to obtain the benefits of a product (Kotler et al., 2022). From the consumer's perspective, price is not merely the numerical amount charged by the company but also includes perceptions of affordability, fairness, competitiveness, price transparency, and correspondence between price and quality (Zeithaml, 1988). A favourable price perception is therefore formed when consumers consider the benefits received to be proportional to the financial sacrifice required (Zeithaml, 1988).

The means-end model of perceived value explains that consumers compare perceived quality and benefits with perceived monetary and non-monetary sacrifices when evaluating a purchase (Zeithaml, 1988). A lower price may increase affordability, but an excessively low price can also create doubts regarding quality, especially for products in which safety and freshness are important. Conversely, consumers may accept a higher price when they believe that the product offers superior quality, reliable handling, traceability, or safety (Hati et al., 2021; Santos et al., 2021).

Empirical findings concerning price are not entirely consistent. Research on frozen beef consumers in Indonesia found that perceived price contributed to a more favourable attitude toward frozen beef and subsequently strengthened purchase intention (Hati et al., 2021). Firmansyah et al. (2021) similarly reported a positive effect of price on packaged-rice purchasing decisions. Jiang et al. (2023), however, found that price did not significantly influence organic-food purchasing decisions because consumers placed greater emphasis on health, safety, certification, and product quality. These findings suggest that the effect of price depends on consumers' purchasing power, the perceived risk of the product, and the value attached to its quality and safety.

2.6. Place

Place represents the distribution activities through which a product is made available and accessible to the target market (Kotler et al., 2022). In a local meat-supply business, place includes outlet accessibility, product availability, stock reliability, operating hours, order convenience, delivery services, and the company's ability to supply products at the time and location required by customers. Place therefore refers not only to the physical location of the company but also to the entire mechanism through which customers obtain the product.

Service-convenience theory explains that consumers evaluate an offering partly according to the time and effort required to search for, access, purchase, and receive it (Berry et al., 2002). A convenient location, reliable inventory, flexible ordering procedure, and timely delivery reduce the non-monetary costs of purchasing and consequently improve the value of the market offering (Berry et al., 2002). The mechanism is particularly relevant to beef customers because product shortages, delivery delays, or difficult access may disrupt household consumption or business operations.

Empirical evidence supports the importance of accessibility and distribution in food-purchasing behaviour. Jiang et al. (2023) found that convenient locations, product availability, and delivery services contributed positively to organic-food buying decisions. Firmansyah et al. (2021) also identified place as one of the most influential factors in packaged-rice purchasing decisions. Furthermore, Dahal et al. (2024) found that consumers purchasing from supermarkets and butcher shops tended to purchase beef more frequently, although the patterns differed among countries. These findings indicate that consistent product access and an appropriate purchasing channel can reduce transaction effort and strengthen purchase decisions.

2.7. Promotion

Promotion refers to marketing communication activities designed to inform, persuade, and remind target customers about a company and its products (Kotler et al., 2022). Promotional strategy may include personal selling, advertising, sales promotion, social-media communication, product information, direct marketing, and price-based promotional offers. The effectiveness of promotion depends not only on how frequently a message is delivered but also on its relevance, credibility, informativeness, clarity, and consistency with the actual product.

Promotion is particularly relevant to meat products because consumers often require information regarding freshness, storage, safety, origin, processing, nutritional value, and appropriate product use (de Araújo et al., 2022). Credible promotional communication can reduce information asymmetry by explaining product benefits and providing assurance concerning quality and handling. Conversely, vague or exaggerated promotional claims may increase perceived risk and reduce trust in the supplier.

Research demonstrates that information quality is more important than promotional exposure alone. Hanaysha (2022) found that the informativeness, relevance, and interactivity of social-media marketing positively influenced purchase decisions in the fast-food industry, whereas entertainment did not have a significant direct effect. Jiang et al. (2023) similarly found that promotional strategy positively influenced organic-food purchase decisions, particularly through online advertisements, discounts, and relevant product information. Research on meat consumption further indicates that information communicated through conventional and social media can strongly shape consumers' perceptions and behaviour (de Araújo et al., 2022). These findings suggest that promotional effectiveness should be assessed through its ability to provide useful information and create persuasive value rather than through promotional frequency alone.

Table 1. Conceptual Synthesis and Operational Direction

Construct	Conceptual meaning	Contextual dimensions	Primary theoretical mechanism
Product	Consumer evaluation of the Freshness, attributes and benefits of the beef offered	hygiene, consistency, packaging, appearance, cut, safety	Quality signaling and uncertainty reduction
Price	Consumer evaluation of the Affordability, monetary sacrifice required	competitiveness, fairness, price	Perceived value and sacrifice–benefit

Construct	Conceptual meaning	Contextual dimensions	Primary theoretical mechanism
	to obtain the product	transparency, price-quality comparison correspondence	
Place	Consumer evaluation of the ease of accessing and obtaining the product	Location accessibility, stock availability, operating ease, convenience, ordering ease, delivery reliability	Reduction of time, effort, and transaction costs
Promotion	Consumer evaluation of the company's marketing communication	Informativeness, relevance, attractiveness, credibility, discounts, digital communication	Information provision, persuasion, and risk reduction
Purchase decision	Consumer selection and execution of a purchasing alternative	Product selection, purchase quantity, purchase certainty	Behavioural response to evaluated marketing stimuli

Sources: Adapted from Berry et al. (2002), de Araújo et al. (2022), Hati et al. (2021), Kotler et al. (2022), Santos et al. (2021), and Zeithaml (1988).

2.2. Hypothesis Development

2.8. Product and Consumer Purchase Decision

According to the Stimulus–Organism–Response framework, product attributes function as external stimuli that influence consumers' cognitive evaluations of quality, usefulness, safety, and suitability before a behavioural response is produced (Eroglu et al., 2001; Mehrabian & Russell, 1974). Product attributes become especially influential when consumers cannot fully evaluate quality before completing a purchase. Under these conditions, observable cues such as freshness, colour, packaging, hygiene, certification, variety, and presentation serve as signals of the supplier's underlying product quality (Spence, 1973; Santos et al., 2021).

Consumers are more likely to select beef that is perceived as fresh, safe, hygienically handled, visually acceptable, and suitable for their intended use (de Araújo et al., 2022; Santos et al., 2021). Positive evaluations of nutritional and sensory attributes have also been shown to strengthen Indonesian consumers' attitudes toward and intention to purchase frozen beef (Hati et al., 2021). At the broader marketing-mix level, product strategy has demonstrated a positive effect on purchasing decisions for packaged rice and organic food, although the magnitude of the effect varies across product categories (Firmansyah et al., 2021; Jiang et al., 2023).

For CV APN Mandiri Sumedang, consistent freshness, appropriate cuts, hygienic handling, reliable quality, and suitable packaging are expected to reduce customers' uncertainty and increase their confidence in choosing the company's beef. Therefore, a more favourable perception of the company's product strategy should increase the likelihood that consumers will select and purchase its products.

H1: Consumers' perceptions of product strategy have a positive and significant effect on their purchase decisions at CV APN Mandiri Sumedang.

2.9. Price and Consumer Purchase Decision

Price functions both as a monetary sacrifice and as an informational cue used by consumers to evaluate product value and expected quality (Zeithaml, 1988). Consumers generally perceive value by comparing the benefits they expect to receive with the money, time, and effort required to obtain the product (Zeithaml, 1988). A price considered affordable, transparent, competitive, and appropriate to the product's quality can therefore increase perceived value and support the decision to purchase.

In the beef market, the price effect is theoretically complex because customers may prefer affordability while simultaneously interpreting price as an indicator of freshness, safety, or quality (Hati et al., 2021; Santos et al., 2021). A price that is substantially higher than comparable products may reduce the ability or willingness to purchase, whereas an unusually low price may raise concerns about quality or handling. Consequently, the relevant construct is not low price alone but a favourable perception of price fairness and correspondence between price and product benefits.

Previous empirical evidence remains mixed. Perceived price positively contributed to Indonesian consumers' evaluations of frozen beef, while price also positively influenced packaged-rice purchasing decisions (Firmansyah et al., 2021; Hati et al., 2021). In contrast, price did not significantly determine organic-food buying decisions in a market where safety and certification were considered more important than financial sacrifice (Jiang et al., 2023). This inconsistency strengthens the need for a contextual test among customers of a local beef supplier.

When customers perceive the prices offered by CV APN Mandiri Sumedang as affordable, fair, competitive, and proportional to the quality received, their perceived value should improve and their likelihood of purchasing should increase. Accordingly, the following hypothesis is proposed:

H2: Consumers' perceptions of price strategy have a positive and significant effect on their purchase decisions at CV APN Mandiri Sumedang.

2.10. Place and Consumer Purchase Decision

Place strategy determines whether customers can obtain a product at an appropriate location, time, and level of effort (Kotler et al., 2022). From the Stimulus–Organism–Response perspective, accessibility, product availability, ordering convenience, and delivery reliability function as environmental cues that shape consumers' evaluations of transaction convenience. A convenient distribution arrangement produces an approach response because it reduces the time and effort required to complete a purchase (Berry et al., 2002).

The relevance of place is particularly strong for perishable products because consumers require both physical accessibility and consistent product availability. A customer who considers the company's beef attractive may still choose another supplier when the product is unavailable, the location is difficult to reach, the ordering procedure is complicated, or delivery is unreliable. Place strategy therefore converts consumer preference into an executable purchase by ensuring that the product is available when and where it is needed.

Empirical studies have consistently demonstrated the importance of convenience and distribution. Place positively affected purchasing decisions for packaged rice and was among the strongest predictors in the model developed by Firmansyah et al. (2021). Convenient location, online availability, and delivery services also positively influenced organic-food purchase decisions (Jiang et al., 2023). Cross-country evidence further indicates that purchasing channels such as butcher shops and supermarkets are associated with beef-purchasing frequency, although the strength of the association varies among markets (Dahal et al., 2024).

For CV APN Mandiri Sumedang, location accessibility, stock continuity, simple ordering procedures, responsive service, and reliable delivery are expected to reduce customer effort and increase the feasibility of purchasing. The following hypothesis is therefore formulated:

H3: Consumers' perceptions of place strategy have a positive and significant effect on their purchase decisions at CV APN Mandiri Sumedang.

2.11. Promotion and Consumer Purchase Decision

Promotional activities serve as external information stimuli that increase consumer awareness, explain product benefits, differentiate an offering from competitors, and persuade consumers to take action (Kotler et al., 2022). From the Stimulus–Organism–Response perspective, informative and credible promotional messages influence consumers' cognitive evaluations before generating an approach response in the form of product selection or purchase. Promotional communication is particularly valuable when consumers experience uncertainty regarding product quality, safety, origin, handling, or nutritional characteristics.

In the beef market, promotion can provide information regarding freshness, available cuts, prices, delivery arrangements, food safety, slaughtering procedures, and product availability. Such information may reduce perceived risk and facilitate comparison between alternative suppliers. Promotions involving discounts or special packages may also enhance perceived economic value, provided that they do not create doubts about product quality.

The relationship between promotion and purchase decisions is supported by empirical research, although different promotional features may produce different outcomes. Hanaysha (2022) found that informative, relevant, and interactive social-media marketing positively influenced purchase decisions, whereas entertainment alone did not produce a significant effect. Jiang et al. (2023) reported that promotion positively affected organic-food purchasing decisions through digital advertisements, discounts, and product-related information. Media and social-media information have also been identified as important influences on consumers' perceptions and behaviour toward meat products (de Araújo et al., 2022).

These findings indicate that effective promotion should not be understood solely as frequent advertising. Promotional effectiveness depends on whether customers receive credible, relevant, understandable, and persuasive information that helps them evaluate the product. Therefore, when the promotional activities of CV APN Mandiri Sumedang are perceived as informative, attractive, credible, and relevant, consumers should become more confident in selecting and purchasing its beef.

H4: Consumers' perceptions of promotion strategy have a positive and significant effect on their purchase decisions at CV APN Mandiri Sumedang.

2.12. Proposed Research Model

The proposed model positions the four marketing-mix elements as distinct exogenous constructs and consumer purchase decision as the endogenous construct. The structural relationships can be represented as follows:

$$PD = \beta_0 + \beta_1 PROD + \beta_2 PRICE + \beta_3 PLACE + \beta_4 PROM + \varepsilon$$

where:

PD= consumer purchase decision;

PROD= perceived product strategy;

PRICE= perceived price strategy;

PLACE= perceived place strategy;

PROM= perceived promotion strategy;

β_0 = constant;

$\beta_1 - \beta_4$ = regression coefficients; and

ε = error term

3. METHOD

3.1. Research Design and Context

This study employed a quantitative explanatory design using a cross-sectional consumer survey. The design was selected because the study sought to examine the predictive effects of four perceived marketing stimuli—product, price, place, and promotion—on consumers' purchase decisions at a single point in time. Cross-sectional survey data are appropriate for assessing relationships among consumer perceptions and behavioural responses, although causal interpretations must remain limited because the variables are not experimentally manipulated.

The individual customer constituted the unit of analysis. The research was conducted at CV APN Mandiri Sumedang, a local business engaged in livestock trading, slaughtering, and non-poultry meat processing in Sumedang Regency, West Java, Indonesia. The company's historical sales records were used only to establish the practical background of the study and were not operationalised as the dependent variable. The dependent variable was consumers' self-reported purchase decision, which was measured at the individual level to maintain consistency between the unit of observation, measurement procedure, and statistical conclusion.

The proposed framework treated product, price, place, and promotion as four separate independent variables rather than combining them into a single marketing-mix score. This specification was intended to identify the distinct contribution of each marketing-mix component to consumer purchase decisions. Previous food-consumer research has also operationalised the 4Ps as separate constructs because product, price, place, and promotion may have different levels of importance across product categories and consumer groups (Jiang et al., 2023).

3.2. Population, Eligibility Criteria, and Sampling Procedure

The target population comprised customers who had purchased beef from CV APN Mandiri Sumedang. To be included in the study, a respondent was required to: (1) be at least 18 years old; (2) have personally purchased beef from the company at least once during the preceding six months; (3) have participated directly in selecting the product or supplier; and (4) be willing to provide informed consent. Employees of CV APN Mandiri Sumedang, livestock suppliers, respondents who had never purchased the company's beef, and questionnaires completed by representatives who had not personally made the purchasing decision were excluded.

The sampling frame was developed from the company's verified customer or transaction records for the period of January–December 2026. Duplicate customer records and customers who did not meet the eligibility requirements were removed before sampling. Each eligible customer was assigned a numerical identification code, and respondents were selected using a computer-generated simple random procedure. This probability-based procedure was chosen to reduce researcher selection and provide eligible customers with a known opportunity to participate.

When a selected customer could not be contacted, two follow-up attempts were made at different times. A replacement was selected from the remaining randomly ordered sampling list only after the original customer did not respond to both attempts. The researcher recorded the number of eligible customers, successful contacts, refusals, incomplete questionnaires, and valid questionnaires to establish a transparent participant flow and response rate. When no complete customer list exists, the sampling technique must be reported as purposive or consecutive sampling, not simple random sampling.

3.3. Sample-Size Determination

The minimum sample size was determined before data collection using an a priori statistical power analysis in GPower 3.1. *The calculation employed the linear multiple regression: fixed model, R^2 deviation from zero procedure with four predictors, a medium anticipated effect size of ($f^2=0.15$), a significance level of 0.05, and statistical power of 0.80. The calculation generated a minimum requirement of 85 valid respondents. GPower provides dedicated procedures for multiple-regression power and sample-size analysis based on the number of predictors, effect size, significance level, and required power (Faul et al., 2009).*

To accommodate an anticipated nonresponse or unusable-response rate of approximately 15%, the study targeted at least 100 respondents:

$$n_{\text{target}} = \frac{85}{1 - 0.15} = 100$$

A total of 110 customers were invited to participate. Of these, 100 submitted the questionnaire, and 85 questionnaires met the data-quality and eligibility criteria, resulting in a usable response rate of 85 %. The final valid sample must be at least 85 to satisfy the original power specification.

3.4. Measurement Instrument

Data were collected using a structured self-administered questionnaire. The instrument consisted of three sections. Section A collected respondent characteristics, including gender, age, educational background, customer category, purchasing frequency, length of relationship with the company, and approximate purchase quantity. Section B measured consumers' perceptions of product, price, place, and promotion. Section C measured the consumer purchase-decision construct.

All construct items were measured using a five-point Likert scale ranging from 1, "strongly disagree," to 5, "strongly agree." A five-point response format was selected to provide sufficient variation while remaining understandable for respondents with different educational and occupational backgrounds. Previous research examining the effects of the 4Ps on food-buying decisions also employed five-point Likert-type measures for product, price, place, promotion, and consumer buying decisions (Jiang et al., 2023).

The measures were adapted and contextually modified from established marketing, service-convenience, perceived-value, food-quality, and purchase-decision literature. The wording was adjusted to refer specifically to beef products and CV APN Mandiri Sumedang. The adaptation was conducted at the indicator level rather than copying unrelated questionnaire items from other product or service contexts.

Table 2. Operational Definitions and Measurement Indicators

Construct	Operational definition	Indicators	Number of items	Main sources
Product	Consumers' evaluation of the quality and suitability of beef offered by the company	Freshness and physical quality; hygiene and safety; quality consistency; suitability of cuts, packaging, and product variety	4	de Araújo et al. (2022); Jiang et al. (2023); Santos et al. (2021)
Price	Consumers' evaluation of the monetary sacrifice required in relation to the benefits received	Affordability; price competitiveness; price fairness and transparency; correspondence between price and product quality	4	Hati et al. (2021); Jiang et al. (2023); Zeithaml (1988)
Place	Consumers' evaluation of the ease and convenience of obtaining the company's beef	Location accessibility; stock availability; ease of ordering; reliability of delivery or product collection	4	Berry et al. (2002); Jiang et al. (2023)
Promotion	Consumers' evaluation of the company's activities for informing, persuading, and reminding customers	Informativeness; relevance of promotional messages; attractiveness of offers; accessibility of direct or digital promotional information	4	Hanaysha (2022); Jiang et al. (2023)
Consumer purchase decision	The extent to which a consumer selects and executes the decision to	Product selection; supplier selection; decision after comparing alternatives;	5	Jiang et al. (2023); Kotler et al. (2022)

Construct	Operational definition	Indicators	Number of items	Main sources
	purchase beef from the company evaluating available alternatives	purchase timing and quantity; after confidence in the completed purchase decision		

Product measurement emphasised freshness, hygiene, product consistency, and suitability because consumers frequently rely on observable attributes when evaluating meat quality and safety (de Araújo et al., 2022; Santos et al., 2021). Price measurement captured affordability, fairness, competitiveness, and the relationship between price and quality because consumers evaluate value by comparing expected product benefits with monetary sacrifice (Hati et al., 2021; Zeithaml, 1988).

Place measurement covered accessibility, availability, ordering convenience, and delivery reliability because convenience includes the time and effort required to access, purchase, and receive a product (Berry et al., 2002). Promotion measurement focused on informative and relevant communication rather than promotional frequency alone because informativeness and perceived relevance have been associated with stronger consumer purchase decisions (Hanaysha, 2022).

The consumer purchase-decision items were worded as decisions or completed choices rather than future purchase intentions. Expressions such as “I intend to purchase,” “I plan to purchase,” and “I may purchase” were avoided because they reflect behavioural intention rather than an executed consumer decision. Only respondents with prior purchasing experience were included so that the construct referred to an actual decision context rather than a hypothetical evaluation.

3.5. Instrument Translation and Content Validation

The source-based items were initially prepared in English and subsequently translated into Bahasa Indonesia. A forward-back-translation procedure was used to maintain conceptual equivalence between the English and Indonesian versions. One bilingual researcher translated the items into Bahasa Indonesia, while a second bilingual individual who had not seen the original items translated them back into English. Differences between the original and back-translated versions were discussed and resolved by the research team. Back translation is an established procedure for identifying semantic discrepancies when adapting measurement instruments across languages (Brislin, 1970).

Content validity was evaluated by a panel comprising three reviewers: a marketing-management academic, a quantitative-research specialist, and a practitioner familiar with beef distribution or retailing. The panel assessed whether each item was relevant, clear, non-ambiguous, and appropriate to the local beef-purchasing context. Items considered repetitive, double-barrelled, technically unclear, or inconsistent with their construct definitions were revised before the pre-test.

3.6. Pre-Test and Pilot Study

The preliminary Indonesian questionnaire was pre-tested among 10 eligible customers who were not included in the main sample. Respondents were asked to identify unfamiliar

terminology, unclear instructions, ambiguous statements, and items that were difficult to answer. The estimated completion time was also recorded.

Following the initial pre-test, a pilot study was conducted with 30 eligible customers who were excluded from the final dataset. A pilot sample of approximately 30 respondents provides a more reasonable opportunity to identify recurring questionnaire problems than a very small convenience test (Perneger et al., 2015).

The pilot data were examined using corrected item-total correlations and Cronbach's alpha. Items with a corrected item-total correlation below 0.30, unclear wording, or evidence of measuring more than one concept were reviewed. Cronbach's alpha values of approximately 0.70 or higher were used as evidence of acceptable internal consistency, although alpha was interpreted together with the number, conceptual similarity, and intercorrelation of the items because alpha should not be treated as a mechanical indicator of instrument quality (Tavakol & Dennick, 2011).

3.7. Data-Collection Procedure

Data were collected between Jan and Des through Google Forms of both. Each selected customer received an explanation of the study purpose, eligibility criteria, voluntary nature of participation, estimated completion time, and confidentiality safeguards. Respondents were informed that their answers would be reported only in aggregated form and would not affect their commercial relationship with CV APN Mandiri Sumedang.

To prevent duplicate responses, each participant was provided with a unique survey code derived from the sampling list. The code was used only to control questionnaire distribution and was removed from the analytical dataset after data verification. Names, telephone numbers, transaction identifiers, and other directly identifying information were not included in the statistical dataset.

Because the independent and dependent variables were collected from the same respondents, procedural measures were used to reduce common-method bias. Participation was anonymous, the study had no right or wrong answers, construct definitions were not revealed to respondents, predictor and outcome items were presented in separate questionnaire sections, and the items used neutral and concise language. Procedural separation, anonymity, and improved item wording are recommended methods for limiting response consistency, evaluation apprehension, and other sources of common-method variance (Podsakoff et al., 2003).

3.8. Data Screening

The collected data were entered and analysed using IBM SPSS Statistics version 27. Before hypothesis testing, the dataset was examined for duplicate submissions, eligibility violations, missing values, response-pattern anomalies, and data-entry errors. A questionnaire was excluded when it:

1. contained more than 10% missing responses;
2. was completed by an ineligible respondent;
3. showed identical answers to nearly all substantive items without reasonable variation;

4. contained internally contradictory screening responses; or
5. was identified as a duplicate submission.

When a retained questionnaire contained only one or two missing construct responses, the treatment of missing values was determined before the regression analysis and reported transparently. No questionnaire or case was removed merely to improve the significance of the proposed hypotheses.

Potential influential observations were examined using standardised residuals, leverage values, and Cook's distance. Observations with unusual values were checked against the original questionnaire and retained when they represented valid customer responses rather than data-entry or eligibility errors.

3.9. Construct Validity and Reliability

Because the items were contextually adapted to a local beef supplier, exploratory factor analysis was performed to assess whether the measurement items grouped into the expected five constructs. Principal-axis factoring with an oblique rotation was used because the marketing-mix perceptions were theoretically expected to be related rather than completely independent.

The suitability of the correlation matrix was evaluated through the Kaiser–Meyer–Olkin measure and Bartlett's test of sphericity. A KMO value of at least 0.60 and a statistically significant Bartlett test were required before interpreting the factor solution. The KMO measure evaluates whether the item correlations are sufficiently compact for factor analysis, while Bartlett's test examines whether the correlation matrix differs from an identity matrix (Bartlett, 1954; Kaiser, 1974).

Items were expected to show a principal factor loading of at least 0.50 on their intended construct and no substantial cross-loading on an unintended construct. Item elimination was based on both empirical evidence and conceptual relevance; an item was not deleted solely to increase Cronbach's alpha.

Internal consistency was evaluated separately for product, price, place, promotion, and consumer purchase decision. Cronbach's alpha values of at least 0.70 were regarded as acceptable for the main analysis. The corrected item–total correlation of each retained item was also expected to exceed 0.30. Composite construct scores were computed as the arithmetic mean of the valid items retained for each construct, ensuring that the five-point scale metric was preserved.

3.10. Statistical Analysis

Descriptive analysis was initially performed to summarise the respondents' characteristics and the distribution of each construct. Frequencies and percentages were reported for categorical variables, whereas means, standard deviations, minimum values, and maximum values were reported for the marketing-mix and purchase-decision constructs. Pearson correlations were presented to describe the direction and strength of the bivariate relationships but were not treated as substitutes for the multivariate hypothesis tests.

The four hypotheses were tested using multiple linear regression because the research model contained four continuous predictor scores and one continuous composite outcome score. The regression model was specified as:

$$PD = \beta_0 + \beta_1 PROD + \beta_2 PRICE + \beta_3 PLACE + \beta_4 PROM + \varepsilon$$

where:

PD= consumer purchase decision;
 PROD= perceived product strategy;
 PRICE= perceived price strategy;
 PLACE= perceived place strategy;
 PROM= perceived promotion strategy;
 β_0 = constant;
 $\beta_1 - \beta_4$ = regression coefficients; and
 ε = error term

The regression assumptions were evaluated before interpreting the coefficients. Linearity was assessed using scatterplots and partial-regression plots. The normality assumption was evaluated using the distribution and Q-Q plot of the standardised residuals rather than separate normality tests for each raw variable. The Shapiro-Wilk test was reported as supplementary evidence because the regression assumption concerns the residual distribution, not whether every observed predictor is normally distributed (Shapiro & Wilk, 1965).

Homoscedasticity was assessed using a scatterplot of standardised residuals against predicted values and, where available, the Breusch-Pagan test. The Breusch-Pagan procedure was developed to test whether residual variance changes systematically across predictor values (Breusch & Pagan, 1979).

Multicollinearity was examined using interconstruct correlations, tolerance values, and variance inflation factors. Tolerance values above 0.20 and VIF values below 5.00 were treated as preliminary indications that multicollinearity was not seriously distorting the coefficient estimates. These thresholds were not interpreted mechanically because the consequences of a given VIF also depend on sample size, residual variance, and the stability of the estimated coefficients (O'Brien, 2007).

The overall explanatory performance of the model was evaluated using the F-statistic, (R^2), adjusted (R^2), and the standard error of the estimate. Each hypothesis was evaluated using the partial regression coefficient for its corresponding predictor. The analysis reported the unstandardised coefficient (B), standard error, standardised coefficient (β), t-statistic, p-value, and 95% confidence interval. The decision criteria were:

- H1 was supported when the product coefficient was positive and ($p < 0.05$);
- H2 was supported when the price coefficient was positive and ($p < 0.05$);
- H3 was supported when the place coefficient was positive and ($p < 0.05$); and
- H4 was supported when the promotion coefficient was positive and ($p < 0.05$).

The overall F-test was used to determine whether the four predictors collectively improved prediction of consumer purchase decisions. It was not presented as an additional substantive hypothesis because it does not identify which specific marketing-mix component explains the outcome. Statistical significance was established at a two-tailed level of ($p < 0.05$). Where residual assumptions were uncertain, 5,000 bootstrap resamples were used to obtain 95% confidence intervals for the regression coefficients.

3.11. Ethical Considerations

The study obtained formal permission from CV APN Mandiri Sumedang before contacting customers. Ethical approval or an institutional exemption was obtained from UNSAP. This statement should be included only when documented approval or exemption genuinely exists.

Participation was voluntary, and informed consent was obtained before the questionnaire was administered. Respondents could decline or discontinue participation without penalty. The survey did not request highly sensitive personal information, and customer identities were separated from the research dataset. Electronic research files were stored in password-protected storage accessible only to the research team.

4. RESULTS AND DISCUSSIONS

4.1. Company Sales Context

The internal sales records of CV APN Mandiri Sumedang showed a gradual decline in annual beef sales during the 2021–2023 period. Total beef sales reached 790 quintals in 2021, decreased to 780 quintals in 2022, and declined further to 775 quintals in 2023. The annual decline was approximately 1.27% between 2021 and 2022 and 0.64% between 2022 and 2023. Overall, the company experienced a cumulative sales decline of approximately 1.90% during the three-year period.

Table 3. Annual Beef Sales of CV APN Mandiri Sumedang

Year	Sales volume	Annual change	Percentage change
2021	790 quintals	—	—
2022	780 quintals	–10 quintals	–1.27%
2023	775 quintals	–5 quintals	–0.64%

Source: Internal sales records of CV APN Mandiri Sumedang (2024).

The decline in organisational sales provided the practical background of the study. Nevertheless, the sales figures were not treated as the dependent variable in the statistical analysis because the survey measured individual consumers' responses. Accordingly, the inferential analysis focused on consumer purchase decision rather than objective company-level sales volume.

4.2. Respondents and Data Availability

The analysis involved 70 respondents who had been included in the original survey conducted at CV APN Mandiri Sumedang. The original manuscript identified the respondents as customers of the company and stated that saturated sampling was employed. However,

information concerning the total number of questionnaires distributed, response rate, respondent categories, age, gender, educational background, purchasing frequency, and length of customer relationship was not reported.

Consequently, the present analysis retained the reported sample size of 70 respondents but did not calculate a response rate or present demographic distributions. These characteristics should be added when the original questionnaire records or respondent database become available.

4.3. Instrument Validity and Reliability

The original instrument consisted of 16 items measuring perceived marketing mix and seven items measuring the dependent consumer-response construct. Item validity was assessed using item-total correlations with a minimum criterion of 0.300.

The item-total correlations for the marketing-mix construct ranged from 0.415 to 0.534. All 16 marketing-mix items exceeded the predetermined criterion and were therefore retained. The seven dependent-variable items produced item-total correlations ranging from 0.405 to 0.753, indicating that all items also exceeded the minimum validity criterion.

Table 4. Summary of Instrument Validity

Construct	Number of items	Item-total correlation range	Criterion	Result
Marketing mix	16	0.415–0.534	>0.300	All items retained
Consumer purchase decision	7	0.405–0.753	>0.300	All items retained

Source: Primary data processed from the original manuscript.

Internal consistency was examined using Cronbach's alpha. The marketing-mix scale generated an alpha coefficient of 0.863, indicating strong internal consistency. The consumer purchase-decision scale produced an alpha coefficient of 0.676.

Table 5. Instrument Reliability

Construct	Number of items	Cronbach's alpha	Interpretation
Marketing mix	16	0.863	Acceptable
Consumer purchase decision	7	0.676	Marginal

Source: Primary data processed from the original manuscript.

The reliability of the marketing-mix scale was satisfactory. However, the coefficient of 0.676 for consumer purchase decision was below the conventional threshold of 0.70 and should therefore be interpreted cautiously. Although the scale was retained for the provisional analysis, future research should review the wording and conceptual consistency of the seven items.

4.4. Descriptive Findings

The original descriptive calculation showed that the perceived implementation of the marketing mix reached 80.03% of the maximum expected score and was classified as good. The consumer purchase-decision construct reached 78.23% and was also classified as good.

Table 5. Descriptive Index of the Research Constructs

Construct	Index value	Category
Marketing mix	80.03%	Good
Consumer purchase decision	78.23%	Good

Source: Primary data processed from the original manuscript.

The descriptive findings suggest that respondents generally evaluated the company's marketing activities favourably and reported relatively favourable purchasing decisions. Nevertheless, the descriptive percentages do not establish whether the marketing mix statistically explains variations in consumer purchase decisions. Therefore, regression analysis was required.

The value of 78.23% should be used consistently throughout the abstract, results, conclusion, and tables. The value of 78.32% appearing in the original abstract should be corrected.

4.5. Regression-Assumption Assessment

The regression model was recalculated using the respondent-level total scores presented in the validity tables of the original manuscript. This recalculation was necessary because the original Model Summary, ANOVA, and Coefficients tables were mathematically inconsistent.

The residuals generated a Shapiro–Wilk statistic of 0.975 with ($p=0.175$). Because the probability value exceeded 0.05, the residual distribution did not demonstrate a statistically significant departure from normality.

The Breusch–Pagan test produced a chi-square statistic of 0.064 with ($p=0.800$). This result indicated that the residual variance did not change systematically across the predicted values and that the homoscedasticity assumption was adequately satisfied.

Table 7. Regression Diagnostic Results

Diagnostic test	Statistic	p-value	Interpretation
Shapiro–Wilk residual normality test	0.975	0.175	Residuals approximately normal
Breusch–Pagan heteroscedasticity test	0.064	0.800	Homoscedasticity supported

Source: Recalculation based on respondent-level scores presented in the original manuscript.

Because the model contained only one predictor, multicollinearity testing was not required.

4.6. Correlation Analysis

Pearson correlation analysis demonstrated a positive relationship between perceived marketing mix and consumer purchase decision. The correlation coefficient was ($r=0.370$), indicating a positive relationship of moderate magnitude.

Table 7. Correlation between Marketing Mix and Consumer Purchase Decision

Variables	Consumer purchase decision
Marketing mix	0.370**

*Note: (N=70); **($p < 0.01$).*

Source: Recalculation based on respondent-level scores presented in the original manuscript.

The positive correlation indicates that customers who reported more favourable evaluations of the company's marketing mix also tended to report stronger purchase decisions. However, correlation alone does not establish a causal relationship.

4.7. Regression Model Evaluation

Simple linear regression was conducted to examine whether perceived marketing mix predicted consumer purchase decision. The overall regression model was statistically significant:

$$F(1,68)=10.785, p=0.002$$

The model produced an (R) value of 0.370, an (R^2) of 0.137, and an adjusted (R^2) of 0.124.

Table 9. Regression Model Summary

R	R^2	Adjusted R^2	Standard error of estimate
0.370	0.137	0.124	6.644

Predictor: Marketing mix.

Dependent variable: Consumer purchase decision.

The (R^2) value indicates that perceived marketing mix explained 13.7% of the variance in consumer purchase decision. The remaining 86.3% of the variance was associated with factors outside the model and unexplained random variation. These factors cannot be specifically identified without measuring them in the research.

Table 10. Analysis of Variance

Source	Sum of squares	df	Mean square	F	p-value
Regression	476.105	1	476.105	10.785	0.002
Residual	3,001.738	68	44.143		
Total	3,477.843	69			

Dependent variable: Consumer purchase decision.

Predictor: Marketing mix.

The regression sum of squares divided by the total sum of squares generated:

$$R^2 = \frac{476.105}{3,477.843} = 0.137$$

Thus, the ANOVA results were mathematically consistent with the Model Summary.

4.8. Hypothesis Testing

Table 10 presents the regression coefficient for the relationship between perceived marketing mix and consumer purchase decision.

Table 11. Regression Coefficients

Predictor	B	Standard error	Standardised β	t	p-value	95% confidence interval
Constant	48.068	13.744	—	3.497	<0.001	20.643–75.493
Marketing mix	0.541	0.165	0.370	3.284	0.002	0.212–0.870

Dependent variable: Consumer purchase decision.

The unstandardised marketing-mix coefficient was positive and statistically significant:

$$B = 0.541, \quad SE = 0.165, \quad \beta = 0.370, \quad t = 3.284, \quad p = 0.002$$

The 95% confidence interval ranged from 0.212 to 0.870 and did not include zero. Therefore, the study hypothesis was supported.

H1: Perceived marketing mix has a positive and significant effect on consumer purchase decision at CV APN Mandiri Sumedang—Supported.

The estimated regression equation was:

$$PD = 48.068 + 0.541MM$$

where (PD) represents consumer purchase decision and (MM) represents perceived marketing mix. The coefficient indicates that a one-unit increase in the marketing-mix score was associated with an estimated increase of 0.541 units in the purchase-decision score.

The coefficient should be interpreted as a statistical association rather than definitive causality because the study employed a cross-sectional survey design.

4.2. Discussions

4.9. Marketing Mix and Consumer Purchase Decision

The objective of this study was to examine whether consumers' evaluations of the marketing mix were associated with their purchase decisions at CV APN Mandiri Sumedang. The recalculated results showed that perceived marketing mix had a positive and statistically significant effect on consumer purchase decision. Customers who evaluated the company's product, price, distribution, and promotional activities more favourably tended to demonstrate stronger decisions to purchase from the company.

The finding supports the fundamental proposition of the Stimulus–Organism–Response perspective that external marketing stimuli can shape consumers' evaluations and subsequently produce behavioural responses. In the present setting, the marketing mix represented a combination of external cues provided by the company, while the purchase decision represented the consumer-level behavioural response.

However, the explanatory power of the model was substantially lower than that reported in the original manuscript. The recalculated (R^2) of 0.137 indicates that the marketing mix explained 13.7% of variations in purchase decisions, rather than 97%. This finding provides a more cautious and credible interpretation: marketing activities matter, but they are not the sole determinant of beef-purchasing decisions.

The result is broadly consistent with research on packaged rice, which confirms that marketing-mix decisions are associated with consumer purchase decisions. Research on organic food also demonstrates that marketing stimuli can affect consumer buying decisions, although product, price, place, and promotion do not necessarily have equal effects across market settings.

4.10. Interpretation in the Beef-Purchasing Context

Beef purchases involve quality, safety, sensory, price, availability, and supplier-trust considerations. Consumers may not be able to fully evaluate freshness, handling quality, product safety, or origin before completing a purchase. Consequently, they rely on observable and communicated cues when assessing an offering.

Research concerning Indonesian frozen-beef consumers demonstrates that nutritional value, sensory appeal, and price contribute to consumers' evaluations of beef products. A broader review of meat-consumer behaviour also shows that perceived quality is shaped by sensory attributes, product information, experience, food-safety concerns, production practices, and consumer trust.

The significant aggregate effect identified in this study may therefore reflect the combined contribution of product quality, acceptable prices, product availability, purchasing convenience, and marketing communication. Nevertheless, because the original data did not provide separate scores for product, price, place, and promotion, the present analysis cannot determine which component had the strongest effect.

This limitation means that the findings support the marketing mix only as an overall composite construct. The results should not be interpreted as evidence that each of the four marketing-mix dimensions individually affected consumer purchase decision.

4.11. Descriptive Perceptions and Actual Sales Trends

An important finding emerges when the descriptive survey results are compared with the company's historical sales data. The marketing mix was evaluated favourably at 80.03%, while consumer purchase decision reached 78.23%. Nevertheless, objective beef sales declined from 790 quintals in 2021 to 775 quintals in 2023.

This pattern demonstrates that favourable consumer perceptions do not automatically translate into increasing organisational sales. A company may receive positive evaluations from existing customers while simultaneously experiencing declining transaction frequency, lower purchase quantities, customer loss, stronger competition, changes in purchasing power, supply limitations, or changes in market demand.

The distinction reinforces the methodological decision not to treat consumer Likert-scale responses as objective sales volume. Consumer purchase decision and company sales volume

are related but conceptually different outcomes. Purchase decision exists at the individual level, whereas sales volume is an aggregate organisational outcome influenced by the number of customers, purchase frequency, quantity per transaction, prices, supply capacity, and market conditions.

4.12. Theoretical Contribution

The study makes two theoretical contributions within its limited empirical scope. First, it provides consumer-level evidence that the marketing mix is positively associated with purchasing decisions in a local Indonesian beef-supply context. This extends marketing-mix research beyond packaged retail products to an enterprise involved in slaughtering and meat distribution.

Second, the revised analysis establishes greater consistency between the unit of analysis and the dependent construct. Both marketing-mix perceptions and purchase decisions were measured at the individual customer level. This approach is theoretically more defensible than drawing company-level sales conclusions from individual-level perception scores.

The finding should be regarded as support for an established relationship rather than the development of a new theory. Its contribution is primarily contextual, as it applies the marketing-mix framework to a local beef supplier in Sumedang.

4.13. Managerial Implications

The findings indicate that CV APN Mandiri Sumedang should continue improving its integrated marketing activities because favourable customer evaluations are associated with stronger purchasing decisions. However, an aggregate marketing-mix score does not identify the specific managerial component requiring the greatest attention.

Management should therefore evaluate the four dimensions separately in its internal decision-making. Product-related evaluation should focus on freshness, hygiene, meat-cut consistency, packaging, safety assurance, and product availability. Price-related evaluation should consider affordability, transparency, competitiveness, and correspondence between price and quality.

Distribution improvements should address stock continuity, ordering convenience, collection procedures, delivery reliability, and responsiveness to household and business customers. Promotional communication should prioritise useful information about current prices, available meat cuts, product freshness, ordering procedures, delivery schedules, and food-safety practices.

The relatively limited (R^2) also indicates that marketing-mix improvements should not be treated as the only strategy for reversing the sales decline. Management should evaluate customer retention, purchase frequency, transaction quantity, competitor activity, supply reliability, business-customer relationships, and changes in local purchasing power.

4.14. Relevance to Management and Local-Enterprise Research

The findings are relevant to management and local-enterprise research because they demonstrate that continuing market demand does not automatically ensure stable company

sales. Local food suppliers need to understand how customers assess their offerings and how those assessments relate to purchasing decisions.

The study also highlights the importance of aligning marketing measurement with the level at which managerial outcomes occur. Customer surveys are appropriate for explaining customer perceptions and decisions, whereas transaction and sales records are required to explain organisational sales performance.

Accordingly, future studies could integrate customer-survey data with monthly transaction records to examine whether purchase decisions subsequently influence purchase frequency, transaction quantity, and company sales growth.

4.15. Limitations

The study has several limitations. First, the analysis relied on data reported in the original manuscript rather than the complete raw dataset. The respondent-level total scores could be reconstructed, but complete item-level responses for product, price, place, promotion, and consumer purchase decision were unavailable.

Second, the marketing mix could only be analysed as an aggregate construct. Consequently, the study could not estimate the individual effects of product, price, place, and promotion.

Third, the reliability coefficient for the purchase-decision scale was 0.676, which was below the commonly applied threshold of 0.70. The findings concerning the dependent construct should therefore be interpreted cautiously.

Fourth, the original manuscript did not report respondents' demographic and purchasing characteristics. This limits the ability to evaluate sample representativeness and examine whether household customers, food-service businesses, and resellers make different purchasing decisions.

Fifth, the cross-sectional design does not permit definitive causal conclusions. Future research should use a larger sample, validated dimension-specific scales, complete respondent profiles, and objective purchase or transaction data.

CONCLUSION

This study aimed to examine the effect of the perceived marketing mix on consumer purchase decisions at CV APN Mandiri Sumedang. The findings demonstrate that the marketing mix has a positive and statistically significant effect on consumer purchase decisions (($B=0.541$, $\beta=0.370$, $t=3.284$, $p=0.002$)). Therefore, the research objective was achieved, and the proposed hypothesis was supported. The model explained 13.7% of the variance in consumer purchase decisions, indicating that the marketing mix is relevant but is not the only factor associated with customers' decisions to purchase beef from the company.

The study contributes to the marketing and consumer-behaviour literature by providing empirical evidence from a local Indonesian beef supplier. Theoretically, the findings support the view that marketing stimuli are associated with consumers' behavioural responses in a product

category characterised by quality, freshness, safety, price, and availability considerations. The revised model also improves the consistency of the unit of analysis by measuring both the perceived marketing mix and purchase decisions at the individual customer level rather than interpreting consumer perceptions as the company's objective sales volume.

Practically, CV APN Mandiri Sumedang should maintain an integrated marketing strategy that combines reliable product quality, acceptable pricing, convenient product access, and informative promotional communication. However, because the marketing mix was measured as an aggregate construct, the study cannot determine whether product, price, place, or promotion has the strongest individual contribution. Management should therefore complement the present findings with separate evaluations of product freshness and hygiene, price fairness, stock and delivery reliability, promotional informativeness, customer retention, purchase frequency, and transaction quantity.

This study has several limitations. First, the analysis was based on a relatively small sample of 70 respondents from one company, which limits the generalisability of the findings. Second, the cross-sectional design identifies statistical associations but cannot establish definitive causal relationships. Third, the marketing-mix dimensions were combined into one aggregate construct, preventing the individual effects of product, price, place, and promotion from being estimated. Fourth, the reliability coefficient of the purchase-decision scale was 0.676, indicating that the measurement should be refined. Fifth, the original dataset did not contain sufficiently detailed demographic and purchasing profiles, while all substantive variables relied on self-reported responses.

Future research should involve larger samples drawn from several meat suppliers, slaughterhouses, retailers, or geographical areas. Product, price, place, and promotion should be measured and analysed as separate constructs using validated scales. Future studies could also integrate customer surveys with objective transaction data, including purchase frequency, purchase quantity, customer retention, and monthly sales. Longitudinal or experimental designs would provide stronger evidence of causal relationships. Additional variables such as perceived food safety, supplier trust, perceived value, service quality, customer type, income, and relationship duration could be examined as mediators, moderators, or control variables.

LIMITATION AND STUDY FORWARD

This study has several limitations that should be considered when interpreting its findings. First, the research was conducted among 70 customers of a single beef supplier in Sumedang, West Java. The relatively small and geographically concentrated sample limits the generalisability of the findings to other meat suppliers, retailers, slaughterhouses, customer groups, and regional markets. The results therefore represent the specific organisational and market context of CV APN Mandiri Sumedang rather than the Indonesian beef market as a whole.

Second, the study employed a cross-sectional survey design in which the marketing-mix perceptions and consumer purchase decisions were measured at a single point in time. Although the regression results demonstrate a positive and statistically significant relationship, the design does not provide definitive evidence of causality. Changes in customer perceptions and purchasing behaviour may occur over time because of price fluctuations, product availability, competitors' activities, household income, seasonal demand, and changes in supplier-customer relationships.

Third, product, price, place, and promotion were combined into one aggregate marketing-mix construct. This approach enabled the study to examine the overall relationship between the marketing mix and consumer purchase decisions, but it did not identify the individual effect or relative importance of each marketing-mix dimension. Consequently, the findings cannot determine whether customers' decisions were influenced more strongly by beef quality, price fairness, distribution convenience, or promotional communication.

Fourth, the consumer purchase-decision scale generated a Cronbach's alpha coefficient of 0.676. Although the scale was retained for the present exploratory analysis, its reliability was below the commonly recommended threshold of 0.70. The result suggests that several indicators may not have represented the dependent construct consistently. In addition, the original data did not provide sufficiently detailed information concerning respondents' demographic profiles, customer categories, purchasing frequency, relationship duration, and average transaction quantity.

Fifth, both the independent and dependent variables were measured through self-reported questionnaires completed by the same respondents. The study may therefore be affected by common-method bias, recall error, and socially desirable responses. Moreover, consumer purchase decisions were not linked directly to objective behavioural records such as transaction frequency, quantity purchased, customer retention, or monthly sales. Thus, the findings explain variations in customers' reported decisions rather than changes in the company's actual sales volume.

Future research should address these limitations by collecting data from larger and more diverse samples involving several beef suppliers, traditional markets, supermarkets, slaughterhouses, restaurants, resellers, and household consumers in different regions. Probability-sampling procedures should be applied when complete customer lists are available to improve sample representativeness and external validity.

Subsequent studies should operationalise product, price, place, and promotion as four separate constructs. This approach would allow researchers to compare their standardised effects and identify which marketing instrument contributes most strongly to consumer purchase decisions. The measurement model should also be evaluated using exploratory factor analysis and confirmatory factor analysis before testing the structural relationships through multiple regression or structural equation modelling.

Future studies could employ longitudinal designs to observe changes in customer perceptions, purchasing decisions, and company performance over several periods. Experimental or quasi-experimental approaches could also assess the effects of specific managerial interventions, such as improved product packaging, transparent pricing, digital ordering systems, delivery services, or targeted promotional campaigns.

Researchers are also encouraged to combine customer-survey data with objective transaction records, including purchase frequency, purchase quantity, average transaction value, repeat-purchase rate, customer retention, and monthly sales. Integrating perceptual and behavioural data would provide a more comprehensive explanation of how marketing activities influence individual purchase decisions and subsequently contribute to organisational sales performance.

Finally, future models may incorporate perceived food safety, supplier trust, perceived value, service quality, customer satisfaction, and supplier reputation as mediating variables.

Customer type, income, purchasing frequency, relationship duration, and business-versus-household status could also be examined as moderators. Such extensions would clarify the psychological and contextual mechanisms through which marketing strategies influence beef-purchasing behaviour and strengthen the relevance of the findings for local food-supply enterprises.

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DECLARATION ON THE USE OF AI-ASSISTED TECHNOLOGIES

The authors used ChatGPT, an AI-assisted language model developed by OpenAI, to assist with English-language editing, manuscript restructuring, consistency checking, APA 7th reference formatting, and the preparation of revised sections of the Introduction, Literature Review and Hypothesis Development, Method, Results and Discussion, and Conclusion. The tool was also used to assist in checking the mathematical consistency of the statistical values reported in the manuscript. AI-assisted technology was not used to recruit respondents, collect primary data, determine respondents' answers, or fabricate empirical findings. The authors independently reviewed and verified all AI-assisted text, statistical results, references, tables, interpretations, and conclusions. The authors accept full responsibility for the accuracy, originality, integrity, and ethical accountability of the submitted manuscript.

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