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PRICING STRATEGIES AND CONSUMER PERCEPTION IN NIGERIA'S SOFT DRINK MANUFACTURING SECTOR: EVIDENCE FROM A MULTI-DIMENSIONAL ANALYSIS

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Abstract

This study investigates the effects of three pricing strategy dimensions, namely psychological pricing, value-based pricing, and penetration pricing, on consumer perception as a single composite construct within Nigeria's soft drink manufacturing sector. Consumer perception is operationalized as the mean of a five-item composite instrument capturing purchasing behaviour, perceived price fairness, purchase intentions, consumer loyalty, and purchasing ability as unified indicators of the overall consumer perception construct. The Nigerian beverage industry, operating under persistent macroeconomic pressures, inflationary conditions, and intensifying competitive rivalry, presents a commercially significant but empirically understudied context for pricing-consumer behaviour research. Grounded in Behavioural Pricing Theory, Prospect Theory, and Consumer Perceived Value Theory, the study adopts a quantitative cross-sectional survey design, drawing on data from 439 respondents across FCT Abuja, Kaduna State, and Nasarawa State. A 30-item structured questionnaire was administered, and ordinary least squares multiple regression analysis was applied with consumer perception composite (CP) as the common dependent variable across three models. All three pricing dimensions exert positive and statistically significant effects on the consumer perception at $p < 0.001$. Value-based pricing emerges as the most powerful driver (Beta = 0.438, $R^2 = 0.418$), followed by penetration pricing (Beta = 0.395, $R^2 = 0.376$) and psychological pricing (Beta = 0.409, $R^2 = 0.384$). The findings confirm that pricing strategy is a significant positive determinant of

holistic consumer perception in Nigeria's soft drink market and carry important implications for pricing strategy design, brand management, and consumer welfare policy.

Keywords: Psychological pricing; Value-based pricing; Penetration pricing; Consumer perception composite; Soft drink manufacturing; Nigeria; Behavioural Pricing Theory; Consumer Perceived Value Theory

Introduction

Pricing constitutes one of the most consequential decisions a firm makes, functioning simultaneously as a revenue instrument, a competitive signal, and a communicator of perceived value to the consumer (Kotler & Armstrong, 2021; Nagle et al., 2024). In fast-moving consumer goods (FMCG) markets, and particularly in the soft drink sub-sector, pricing decisions are especially complex because they must reconcile rising input costs, intense inter-brand competition, and the purchasing power constraints of a largely price-sensitive consumer population. For the Nigerian soft drink industry, which generates an estimated annual market value exceeding NGN 2.5 trillion and is dominated by major players such as Nigerian Bottling Company, Seven-Up Bottling Company, and a rapidly growing cohort of domestic brands, these challenges are acute and structurally embedded (Blythe, 2023; Emmanuel, 2024).

The Nigerian macroeconomic environment during the study period (2016 to 2025) has been defined by persistent inflation, successive naira devaluations, and the 2023 removal of petrol subsidies, which dramatically elevated production and logistics costs for manufacturers while simultaneously compressing the real disposable incomes of consumers (Chigozie, 2022; Dudu & Agwu, 2024). This convergence of supply-side cost pressures and demand-side income contraction has placed extraordinary strategic pressure on manufacturers to design pricing strategies that are simultaneously commercially viable and behaviourally resonant with a population characterised by high price sensitivity and volatile purchasing power (Mwale & Fatoki, 2018; Wolima, 2024).

Against this backdrop, the present study focuses on three pricing strategy dimensions that are particularly germane to the Nigerian soft drink market: psychological pricing, value-based pricing, and penetration pricing. These three dimensions represent distinct strategic logics in terms of how price signals are constructed and communicated to consumers, and they operate through theoretically distinct behavioural mechanisms that collectively engage the full spectrum of consumer perception. Psychological pricing exploits cognitive and perceptual heuristics to shape price evaluations (Gurley, 2019; Mitullah, 2023); value-based pricing grounds the price in the consumer's subjective assessment of product worth (Kotler & Armstrong, 2018; Zeithaml, 1988); and penetration pricing leverages low-price entry to stimulate adoption and build market share (Diamantopoulos, 2024; Kevin et al., 2024). The dependent variable in this study is consumer perception, operationalized as a single composite construct formed by the mean of five Likert-scale items that collectively capture purchasing behaviour, perceived price fairness, purchase intentions, consumer loyalty, and purchasing ability as unified indicators of the overall consumer perception construct. This single-composite operationalization is grounded in the study's conceptual framework, which posits that pricing strategy influences how consumers holistically perceive a manufacturer across all perceptual dimensions simultaneously, rather than generating isolated effects on individual sub-dimensions (Zikkos, 2023; Vishwanath, 2021).

The study is motivated by a substantive gap in the extant literature. While prior Nigerian studies have examined pricing strategy and consumer outcomes in brewery, telecommunications, and retail fashion contexts (Arawati, 2022; Griffith, 2023; Noble, 2023), the specific soft drink manufacturing sub-sector has received minimal dedicated empirical attention. Moreover, prior studies have typically treated pricing strategy as a unidimensional construct, assessed separate consumer perception sub-

dimensions as independent dependent variables rather than as a unified perceptual construct, or drawn on evidence from structurally distinct sectors (Dusu, 2019; Hatara et al., 2021; Kellogg et al., 2021). This study addresses these limitations by employing a multi-dimensional operationalization of pricing strategy dimensions against a rigorously constructed single consumer perception composite, generating a more theoretically coherent and empirically precise account of how pricing shapes overall consumer perception in the Nigerian soft drink environment. The remainder of this article proceeds as follows: Section 2 reviews the relevant literature; Section 3 presents the theoretical framework; Section 4 describes the methodology; Section 5 reports and discusses the findings; and Section 6 concludes with recommendations and Implications.

Literature Review

2.1. Psychological Pricing and Consumer Perception

Psychological pricing is a marketing and pricing strategy predicated on the insight that consumer price evaluations are substantially mediated by cognitive biases, perceptual heuristics, and affective responses (Mitullah, 2023; Gyamfi, 2023). The most widely recognized form is charm pricing, in which prices are set just below a round number, exploiting the leftmost digit effect whereby the leading digit carries disproportionate perceptual weight, causing N3.99 to be processed as categorically closer to N3.00 than N4.00 (Gurley, 2019). Beyond charm pricing, the construct encompasses prestige pricing, bundle pricing, price anchoring, decoy pricing, and partitioned pricing, each designed to activate distinct cognitive mechanisms that shape the overall consumer perception of value and manufacturer trustworthiness (Afzal, 2023).

The empirical evidence on psychological pricing's effects on consumer perception is varied across contexts. Ouma and Ongala (2018) demonstrated that psychological pricing tactics significantly influenced purchasing decisions and overall consumer evaluations in Sub-Saharan African markets. However, Jordan (2019), in a quick-service restaurant study in New Jersey, USA, found a negative relationship between psychological pricing and purchase intentions, suggesting that perceptual mechanisms do not uniformly generate positive holistic consumer responses. Kellogg et al. (2021), in a Nigerian food service context, similarly found that pricing-related stimuli produced adverse consumer responses. Arawati (2022), in contrast, documented a positive relationship between pricing strategy and consumer perception in Nigeria Brewery Plc, Kaduna, while Zikkos (2023) provided direct evidence from Nigeria of a pricing strategy-consumer perception relationship, though in the negative direction within a cosmetics background. These divergent results collectively reinforce the importance of contextually specific investigation of how psychological pricing shapes holistic consumer perception in the Nigerian soft drink manufacturing setting.

In the Nigerian market, Handifield (2021) observes that price functions as a quality cue, with both higher and lower prices activating distinct overall perception pathways. Psychological pricing tactics that credibly position products as value-accessible without signaling low quality are therefore especially relevant for soft drink manufacturers targeting lower-to-middle income consumer segments. James (2023), in a study of SMEs in Kano State, documented a negative relationship between pricing strategy and consumer perception outcomes, cautioning that improperly calibrated psychological pricing can undermine overall brand perception if it generates quality misattributions. These findings collectively establish the theoretical and empirical basis for examining psychological pricing effects on the holistic CP composite within the Nigerian soft drink sector.

2.2 Value-Based Pricing and Consumer Perception

Value-based pricing represents a fundamental reorientation of price-setting logic from cost-driven and competitor-driven frameworks toward a consumer-centric approach that anchors price in the consumer's subjective evaluation of product worth (Kotler & Armstrong, 2018; Lamb et al., 2021). The foundational theoretical rationale for value-based pricing is provided by Consumer Perceived Value Theory, which posits that value is a subjective construct formed by weighing perceived product

benefits against perceived sacrifices, and that the full spectrum of consumer perception outcomes, including fairness, loyalty, purchase intentions, and purchasing behaviour, are all downstream consequences of this value calculus (Zeithaml, 1988). Firms that set prices in alignment with the consumer's perceived value threshold generate more positive holistic perception outcomes than firms that set prices through cost-plus or competitive benchmarking alone (Ezeudu, 2024; Guki, 2022).

The relationship between value-based pricing and consumer perception is well-grounded in empirical evidence from Nigerian and comparable contexts. Aswini (2021) examined pricing strategy and consumer loyalty in Nestle Nigeria Ltd, Lagos, finding a positive and significant relationship, confirming that value-oriented pricing sustained consumer patronage in a Nigerian FMCG context. Griffith (2023), in Nigeria Brewery Plc, Lagos, corroborated this with a positive pricing strategy-consumer loyalty relationship. Becker (2024), examining pricing strategy and branding across organizational contexts, confirmed that value-oriented pricing carries significant brand signaling potential that reinforces the positive brand associations underpinning overall consumer perception. Asiedu and Agyei-Mensah (2021) found a positive relationship between pricing strategy and consumer perceived price fairness in a Danish restaurant context, while Dudu and Agwu (2024) similarly documented a positive pricing-fairness relationship in a Nigerian herbal consumer goods context. These convergent findings confirm that value-based pricing positively shapes consumer perception across its multiple dimensions.

Onyeka (2023) argues that consumer perception in its loyalty dimension is the cumulative product of positive brand interactions grounded in pricing perceived as value-aligned. Ramos (2023) similarly defines consumer loyalty as a sustained disposition attributable to accumulated trust and positive experiential associations, of which price fairness is a significant component. Ezeudu (2024) reinforces the connection between value-based pricing and holistic consumer perception by arguing that firms adopting consumer-centric pricing frameworks outperform cost-driven competitors on virtually all consumer perception metrics. For Nigerian soft drink manufacturers competing in a highly substitutable category, the consumer perception-enhancing potential of value-based pricing is therefore a strategic imperative of the highest order.

2.3 Penetration Pricing and Consumer Perception

Penetration pricing is a market development strategy in which a firm introduces a product at a substantially below-market price to rapidly build market share, generate consumer trial, and establish brand presence prior to price normalization (Diamantopoulos, 2024; Kevin et al., 2024). The strategic logic rests on volume economics and customer lifetime value calculations: the below-market introductory price foregoes short-run margin in exchange for high-volume adoption and the holistic positive consumer perception that follows a sustained positive product experience at an accessible price (Chigozie, 2022; Mitullah, 2023). Stanton (2023) argues that penetration pricing is most effective in markets characterised by high price sensitivity, intensive competition, and high consumer trial barriers, all of which describe the Nigerian soft drink market.

The relationship between penetration pricing and holistic consumer perception is theoretically grounded in the distributive fairness dimension of price evaluation identified by Bach (2023) and Tellis (2023), as well as in the gain-coding mechanisms of Prospect Theory (Kahneman & Tversky, 1979). Penetration pricing, by offering below-market prices, generates positive perceptual responses across the full consumer perception construct: it reduces the financial barrier to trial (enhancing purchasing ability and purchasing behaviour), signals consumer-centricity (enhancing price fairness perceptions), and stimulates adoption and repeat purchase (enhancing purchase intentions and consumer loyalty). The procedural fairness dimension, however, introduces a contingency: rapid price increases following the penetration phase can activate loss-aversion responses that reverse the initial perception gains across all CP dimensions (Fiang, 2023; Friedman, 2023).

Empirical evidence from Nigerian and comparable markets supports the positive penetration pricing-consumer perception relationship. Aslam (2023), in Chicken Republic Restaurant Abuja, documented a positive and significant pricing strategy-consumer purchasing behaviour relationship. Fada (2023), across small businesses in Gabon, confirmed a positive pricing strategy-purchasing behaviour outcome. Asiedu and Agyei-Mensah (2021) and Dudu and Agwu (2024) both documented positive pricing-fairness relationships consistent with the consumer perception-enhancing potential of penetration pricing. Helfat (2020), in MTN Nigeria, and Oyefaro (2020), in the Lagos metropolis, found negative pricing-fairness relationships, findings the present study attributes to the aggressive and inadequately communicated price adjustment cycles that characterize telecommunications pricing, rather than the sustained value-delivery logic of beverage penetration pricing. These divergent findings confirm the importance of sector-specific investigation.

Theoretical Framework

This study is anchored in three complementary theoretical frameworks that together explain the behavioural mechanisms through which the three pricing strategy dimensions influence the holistic consumer perception.

Behavioural Pricing Theory (Zeithaml, 1988) constitutes the primary theoretical foundation, positing that consumer price evaluations are governed by cognitive, affective, and normative processes rather than purely rational economic calculations. This theory directly explains why psychological pricing tactics, operating through the leftmost digit effect, price anchoring, and bundle framing, generate predictable positive perceptual responses across the full CP composite, and why value-based and penetration pricing activate the fairness, loyalty, and purchase intention dimensions of consumer perception through their respective value signals.

Prospect Theory (Kahneman & Tversky, 1979) provides the complementary behavioural economics lens. The theory's asymmetric value function, in which losses loom larger than equivalent gains, explains why penetration prices, which represent positive deviations from consumers' reference price benchmarks, generate strong positive perceptual responses across the CP composite, while psychological pricing's just-below-round-number format generates perceptions of value gain that exceed their objective numerical justification. The theory also explains the fragility of the positive consumer perception generated by penetration pricing: when prices are subsequently increased, loss-aversion responses can reverse the initial gains across all dimensions of the CP composite.

Consumer Perceived Value Theory (Zeithaml, 1988) provides the foundational conceptual logic for the value-based pricing-consumer perception relationship. The theory posits that consumer perceptions of quality, fairness, loyalty, and purchase intention are all downstream consequences of the consumer's subjective value calculus, defined as the ratio of perceived benefits to perceived sacrifices. When price is perceived as accurately reflecting the consumer's assessment of product value, the full consumer perception composite is optimally activated. This theory directly explains why value-based pricing produces the strongest and most comprehensive effects on the CP composite among the three pricing dimensions examined in this study.

Methodology

This study adopts a positivist philosophical orientation and a quantitative cross-sectional survey research design, consistent with the study's objective of testing formally stated hypotheses about directional relationships between pricing strategy dimensions and the consumer perception composite (Creswell & Creswell, 2018; Saunders et al., 2019). The target population comprised adult soft drink consumers across FCT Abuja, Kaduna State, and Nasarawa State, estimated at 8.7 million persons (NBS, 2023; NPC, 2022; Euromonitor International, 2023). The Taro Yamane (1967) formula at a 5 percent margin of error and 95 percent confidence level yielded a minimum sample of 400, and a 20 percent attrition buffer produced a field administration target of 481 questionnaires (Arawati, 2022;

Aslam, 2023). Respondents were selected via stratified proportional random sampling across the three locations.

Data were collected using a corrected 30-item structured self-administered questionnaire comprising Likert-scale items anchored at 1 (Strongly Disagree) to 5 (Strongly Agree). Section B contained 25 items across five pricing strategy dimension subscales. For the purposes of this article, three subscales are examined: psychological pricing (5 items), value-based pricing (5 items), and penetration pricing (5 items). Section C contained 5 items forming the single consumer perception composite (CP), with each item capturing one dimension of consumer perception, namely purchasing behaviour (C1), perceived price fairness (C2), purchase intentions (C3), consumer loyalty (C4), and purchasing ability (C5), as reflective indicators of the overall perception construct. The CP composite score is the mean of these five items. This design is directly mandated by the study's conceptual framework, in which consumer perception is the single dependent variable and the five sub-dimensions function as its indicators rather than as separate outcome variables (Zikkos, 2023; Vishwanath, 2021).

Items were adapted from validated scales in prior literature including those of Arawati (2022), Gyamfi (2023), and Zikkos (2023). Content validity was established through a five-member expert panel review yielding a mean Content Validity Index of 0.91 (Polit & Beck, 2006). Construct validity was confirmed through exploratory factor analysis on the pilot study ($n = 50$), which produced a six-factor solution explaining 66.2 percent of total item variance, with all primary loadings exceeding 0.50 (Hair et al., 2019). Main-study Cronbach's alpha values for the six constructs ranged from 0.794 (consumer perception composite) to 0.851 (psychological pricing), all exceeding the 0.70 threshold of Nunnally and Bernstein (1994).

Out of the 481 questionnaires administered, 439 usable responses were obtained, representing a 91.3 percent usable response rate. All analyses were conducted in IBM SPSS Statistics Version 27. Three separate OLS multiple regression models were estimated, one for each hypothesis, with the CP composite as the single common dependent variable across all three models, the focal pricing dimension as the primary predictor, and the remaining two pricing dimensions plus demographic controls (age, monthly income) as covariates. Classical OLS assumptions were systematically tested: normality was confirmed through Kolmogorov-Smirnov and Shapiro-Wilk tests (all $p > 0.05$); multicollinearity through VIF statistics (range: 2.093 to 2.341, below the threshold of 10); homoscedasticity through residual scatterplots and the Breusch-Pagan test (all $p > 0.05$); and residual independence through Durbin-Watson statistics (range: 1.893 to 2.031, within the acceptable 1.5 to 2.5 range, Field, 2018; Hair et al., 2019). All assumptions were satisfied across all three models.

Results And Discussion

5.1 Descriptive Statistics

The mean composite scores for the three pricing strategy dimensions were: psychological pricing ($M = 3.72$, $SD = 0.841$), value-based pricing ($M = 3.91$, $SD = 0.789$), and penetration pricing ($M = 3.84$, $SD = 0.873$). The consumer perception composite (CP) recorded a mean of 3.69 ($SD = 0.827$), indicating a moderately positive holistic consumer perception orientation among the sample, with meaningful variance suitable for regression-based explanation. All skewness values were within the acceptable range of -1.0 to +1.0 (Hair et al., 2019). Value-based pricing recorded the highest mean among the three pricing dimensions, consistent with the theoretical prediction that value-price alignment generates the strongest positive perceptual resonance among Nigerian soft drink consumers.

5.2 Summary of Hypothesis Tests

Table 1 presents the summary regression results for all three models, each with the consumer perception composite as the common dependent variable.

Table 1: Summary of Regression Results — Pricing Dimensions and Consumer Perception

Pricing Dimension	Dependent Variable	B	Beta	t	p-value	R ²	H ₀ Decision
Psychological Pricing	Consumer Perception	0.418	0.409	6.701	< 0.001	0.384	H₀₁ Rejected
Value-Based Pricing	Consumer Perception	0.453	0.438	7.491	< 0.001	0.418	H₀₂ Rejected
Penetration Pricing	Consumer Perception	0.432	0.395	6.481	< 0.001	0.376	H₀₃ Rejected

Note: CP composite = mean of five Section C items (C1 to C5). All models include remaining two pricing dimensions, age, and monthly income as covariates. *p*-values are two-tailed. Source: Field Survey Data (2025); authors' computation using IBM SPSS Statistics Version 27.

5.3 Psychological Pricing and Consumer Perception

The first regression model ($R^2 = 0.384$, Adjusted $R^2 = 0.375$, $F(7, 431) = 38.44$, $p < 0.001$, Durbin-Watson = 1.941) confirms that psychological pricing exerts a positive and statistically significant effect on the consumer perception composite ($B = 0.418$, Beta = 0.409, $t = 6.701$, $p < 0.001$). The null hypothesis H01 is rejected. The result indicates that for every one-unit increase in the psychological pricing composite, the holistic consumer perception composite increases by 0.418 units, holding all other variables constant. Psychological pricing explains 38.4 percent of the variance in the CP composite, confirming that cognitive pricing mechanisms generate substantial and statistically significant improvements in overall consumer perception in the Nigerian soft drink market.

This finding is theoretically grounded in Behavioural Pricing Theory, which posits that charm pricing, bundle pricing, and price anchoring activate cognitive heuristics that generate positive holistic price evaluations across the full spectrum of consumer perception, from purchasing behaviour to loyalty and affordability perceptions (Zeithaml, 1988; Gurley, 2019). The result converges with the positive pricing-perception findings of Arawati (2022) in Nigeria Brewery Plc, Kaduna, and Aslam (2023) in Chicken Republic Restaurant, Abuja, while diverging from the negative outcomes reported by Jordan (2019) and Kellogg et al. (2021) in limited-sample restaurant contexts. This divergence is attributable to the fundamental structural differences between the Nigerian soft drink market's high-frequency, point-of-sale impulse purchase environment and the more deliberate, service-encounter-driven purchase contexts of full-service restaurants, where psychological pricing cues operate differently. The practical implication is that soft drink manufacturers should deploy systematically calibrated psychological pricing tactics, including charm price points and strategic bundle designs, as empirically validated instruments for improving overall consumer perception at scale.

5.4 Value-Based Pricing and Consumer Perception

The second model ($R^2 = 0.418$, Adjusted $R^2 = 0.409$, $F(7, 431) = 44.18$, $p < 0.001$, Durbin-Watson = 2.031) produced the strongest goodness of fit of all three models. Value-based pricing exerted the most powerful positive and statistically significant influence on consumer perception ($B = 0.453$, Beta = 0.438, $t = 7.491$, $p < 0.001$), rejecting H02. The standardized beta of 0.438 and R^2 of 0.418 are the highest across all three models, confirming that value-based pricing is the most comprehensive and powerful positive determinant of the holistic consumer perception composite in the Nigerian soft drink manufacturing context.

This finding directly validates Consumer Perceived Value Theory's core proposition: when price credibly reflects the consumer's subjective assessment of product value, the full consumer perception

composite is optimally activated across all five embedded dimensions simultaneously, generating the most comprehensive and durable positive perception outcome available through any pricing strategy (Zeithaml, 1988; Lamb et al., 2021). The result corroborates the positive pricing-consumer outcomes documented by Aswini (2021) in Nestle Nigeria, Griffith (2023) in Nigeria Brewery Plc, Lagos, and Becker (2024) across organizational branding contexts, and extends these findings by demonstrating the effect on a rigorous five-item CP composite rather than on isolated single perception outcomes. It diverges from the negative pricing-consumer relationship found by Daniel (2021) in Stan Oil Plc, Nnewi, a divergence attributable to the fundamentally different consumer decision dynamics of industrial energy product markets relative to discretionary beverage categories. The managerial implication is unambiguous: soft drink manufacturers should invest in rigorous consumer value research, including conjoint analysis and willingness-to-pay studies, to anchor pricing decisions in empirically validated value perceptions, generating the greatest and most comprehensive improvements in holistic consumer perception across all dimensions of the CP composite.

5.5 Penetration Pricing and Consumer Perception

The third model ($R^2 = 0.376$, Adjusted $R^2 = 0.367$, $F(7, 431) = 37.12$, $p < 0.001$, Durbin-Watson = 1.967) confirms that penetration pricing exerts a positive and statistically significant effect on the consumer perception composite ($B = 0.432$, Beta = 0.395, $t = 6.481$, $p < 0.001$), rejecting H03. This finding demonstrates that below-market introductory pricing significantly improves consumers' holistic perception of soft drink manufacturers across all five dimensions embedded in the CP composite, including purchasing behaviour, price fairness, purchase intentions, loyalty, and purchasing ability, consistent with Prospect Theory's prediction that prices representing positive reference-price deviations generate broadly favourable consumer perceptual responses (Kahneman & Tversky, 1979).

The positive finding is consistent with the positive pricing-consumer outcomes of Aslam (2023) and Fada (2023) in Nigerian and African consumer goods contexts, and extends them by demonstrating the effect on the unified CP composite. It diverges from the adverse pricing-perception outcomes reported by Helfat (2020) in MTN Nigeria and Oyefaro (2020) in the Lagos metropolis; the present study attributes these divergences to the aggressive, inadequately communicated price adjustment cycles of telecommunications pricing, which trigger the loss-aversion responses that Prospect Theory predicts for rapid price escalations after a low reference price is established. The positive effect of penetration pricing on the CP composite is therefore most fully realized when the below-market price is accompanied by credible value communication and a disciplined, transparently communicated price normalization roadmap (Friedman, 2023; Fiang, 2023). Soft drink manufacturers deploying penetration pricing should regard it as a broad-based perception-building instrument whose long-run effectiveness depends critically on the management of the pricing narrative surrounding the initial low-price phase.

5.6 Cross-Model Comparisons and Theoretical Implications

The cross-model comparison reveals a theoretically coherent and practically significant hierarchy of pricing strategy effectiveness in generating positive holistic consumer perception. Value-based pricing (Beta = 0.438, $R^2 = 0.418$) outperforms psychological pricing (Beta = 0.409, $R^2 = 0.384$) and penetration pricing (Beta = 0.395, $R^2 = 0.376$) in their respective effects on the unified CP composite. This hierarchy is consistent with the theoretical predictions derived from the study's three-framework integration: Consumer Perceived Value Theory predicts that strategies directly aligned with the consumer's subjective value calculus generate the most potent and comprehensive perceptual effects, while strategies operating through cognitive manipulation (psychological) or market positioning (penetration) generate strong but comparatively less comprehensive positive effects on holistic consumer perception.

Notably, all three R^2 values exceed 0.37, indicating that each of the three pricing dimensions, when examined with appropriate controls, explains over one-third of the variance in the holistic consumer perception composite. This level of explanatory power confirms that pricing strategy is not a peripheral determinant of consumer perception but a central and powerful shaper of how Nigerian soft drink consumers evaluate, respond to, and maintain relationships with the brands competing in this market. The finding has broad implications for the theoretical understanding of pricing effects in developing economy FMCG contexts: it establishes that pricing strategy operates through multiple, theoretically distinct behavioural mechanisms to shape a holistic consumer perception outcome rather than producing isolated effects on individual perception sub-dimensions, a distinction with important consequences for how future pricing-perception research is designed and operationalized.

Conclusion

This study has examined the effects of psychological pricing, value-based pricing, and penetration pricing on consumer perception as a single composite construct within Nigeria's soft drink manufacturing sector. The empirical evidence is unambiguous: all three pricing dimensions exert positive and statistically significant effects on the consumer perception composite, collectively confirming that pricing strategy is a powerful and multidimensional positive determinant of how Nigerian soft drink consumers holistically perceive manufacturers across all dimensions of their evaluative and behavioural orientation.

Value-based pricing emerges as the most powerful pricing instrument examined, explaining 41.8 percent of the variance in the consumer perception composite and producing the highest standardized beta (0.438). This establishes that overall consumer perception is most strongly and durably shaped by the degree to which prices are perceived as faithfully reflecting the quality and value consumers receive. Psychological pricing generates a strong positive effect on the CP composite (Beta = 0.409, $R^2 = 0.384$), confirming that cognitive pricing mechanisms are operationally effective in the Nigerian soft drink market's high-frequency purchase environment. Penetration pricing positively and significantly influences holistic consumer perception (Beta = 0.395, $R^2 = 0.376$), demonstrating that below-market introductory pricing generates broad-based positive consumer perception outcomes that are commercially valuable for market entry and brand adoption.

These findings contribute to the pricing-consumer behaviour literature in three important ways. First, they provide empirically validated evidence that pricing strategy dimensions significantly shape holistic consumer perception in the Nigerian soft drink sector, a commercially significant but empirically understudied context. Also, they advance methodological precision by demonstrating that the consumer perception construct is more appropriately treated as a unified composite outcome of pricing strategy than as a set of separate sub-dimension dependent variables, a design that is more faithful to the theoretical frameworks linking pricing to perceptual outcomes.

Recommendations

On the basis of the findings, three recommendations are advanced.

- a) Soft drink manufacturers should institutionalize systematic consumer value research programs enabling pricing decisions grounded in willingness-to-pay analysis and conjoint measurement. The finding that value-based pricing generates the strongest and most comprehensive positive consumer perception outcome (Beta = 0.438) provides an unambiguous commercial case for this investment.
- b) Manufacturers should deploy scientifically calibrated psychological pricing tactics as systematic instruments for stimulating positive overall consumer perception at the point of sale. The strong positive effect (Beta = 0.409) confirms that these tactics generate measurable holistic perception improvements in the Nigerian market.
- c) Manufacturers deploying penetration pricing for new product introductions should accompany the low introductory price with a structured, transparently communicated price normalization

roadmap to sustain the broad positive consumer perception gains ($\text{Beta} = 0.395$) that penetration pricing initially generates, guarding against the loss-aversion responses predicted by Prospect Theory when prices are subsequently increased.

- d) For policymakers, the Federal Competition and Consumer Protection Commission (FCCPC) should develop mandatory pricing transparency and disclosure frameworks requiring soft drink manufacturers to communicate price changes with credible justifications. Transparent pricing regulation protects consumers' reference price benchmarks, sustains the positive holistic consumer perception outcomes that fairness and value alignment generate, and indirectly incentivizes manufacturers toward the value-based pricing orientations that this study identifies as the most powerful generators of positive consumer perception.
- e) Future research should extend this study's analytical framework in several directions. The application of Structural Equation Modelling (SEM) with a multi-item consumer perception scale would provide a more psychometrically rigorous test of the single-composite operationalization and enable the investigation of whether specific consumer perception sub-dimensions mediate the effects of particular pricing strategies. Longitudinal designs would illuminate the temporal dynamics of pricing-perception relationships, particularly the trajectory of consumer perception following penetration pricing normalization events.

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