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Original Research

CUSTOMER CHOICE ACROSS LEADING BOTTLED WATER BRANDS IN DAR ES SALAAM: DOES MARKETING STRATEGY MATTER?

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Abstract

The bottled water market in Dar es Salaam has become increasingly competitive, with firms adopting different marketing strategies to influence consumer preferences and strengthen brand competitiveness. Yet limited empirical evidence exists on whether marketing strategies significantly determine customer choice across competing brands. This study examined the influence of marketing strategy on customer choice among leading bottled water brands in Dar es Salaam, focusing on the mediating role of perceived value. Using a cross-sectional design, primary data were collected via structured questionnaires from 220 consumers in Ilala, Temeke, and Ubungo districts, and analysed using OLS regression to identify determinants of perceived value and a Multinomial Logit model to estimate preference among Uhai, Kilimanjaro, Afya, Masafi, Sayona, Dew Drop, and other brands. Perceived value was significantly influenced by product quality ($\beta = 0.362$, $p<0.001$), brand image ($\beta = 0.141$,$p<0.05$), brand awareness ($\beta = 0.117$, $p<0.05$), and brand trust ($\beta = 0.173$, $p<0.01$), while price strategy, packaging, promotion, and distribution were insignificant. Perceived value significantly increased the likelihood of choosing Uhai ($\beta = 0.485$), Kilimanjaro ($\beta = 0.650$), Masafi ($\beta = 0.470$), and Dew Drop ($\beta = 0.590$) (all $p< 0.01$), while its interaction with income was significant for Kilimanjaro ($\beta = 0.445$) and Dew Drop ($\beta = 0.520$), indicating income strengthens the value-choice relationship for these brands. The study recommends improving product quality, strengthening brand credibility, and developing value-based marketing strategies tailored to different consumer segments to enhance market competitiveness.

Keywords: Customer Choice; Marketing Strategy; Perceived Value; Brand Trust

Introduction

Customer choice has become a central concern for firms operating in increasingly competitive consumer markets, where businesses must continuously develop effective marketing strategies to attract and retain customers (Kamyabi et al., 2025; Hidayat & Idrus, 2023). In the bottled water industry, consumers are presented with numerous brands that offer products with similar functional characteristics, making marketing strategies such as pricing, packaging, promotion, distribution, and brand positioning important determinants of purchase decisions (Migkos et al., 2025; Gong et al., 2023) . As consumers become more informed and quality-conscious, firms are compelled to differentiate their products not only through product quality but also through strategic marketing efforts that create value and influence brand preference (He et al., 2022; Chen & Xu, 2026).

The bottled water market has experienced substantial growth worldwide, driven by increasing urbanization, changing lifestyles, concerns about drinking water safety, and rising health awareness (Parag et al., 2023; Bilro et al., 2023; Pires et al., 2024). This growth has intensified competition among bottled water manufacturers, requiring firms to adopt innovative marketing strategies to secure and expand their market share (Keelson et al., 2024, Hu et al., 2011; Aslani et al., 2021). Although bottled water products often perform the same basic function, customers may prefer one brand over another because of differences in perceived quality, affordability, availability, packaging, promotional activities, and brand reputation (Tilahun & Beshaw, 2020; García-Salirrosas et al., 2024). Consequently, understanding how marketing strategies shape customer choice has become an important area of inquiry for both researchers and marketing practitioners (Sun & Moon, 2024; Parag et al., 2023).

In Tanzania, particularly in Dar es Salaam, the bottled water industry has expanded considerably, with leading brands such as Uhai, Kilimanjaro, Afya, Masafi, Sayona, and Dew Drop competing alongside many other local brands (Smiley, 2017). The presence of numerous competing brands has increased the importance of effective marketing strategies in influencing consumer preferences and purchasing decisions (Chen et al., 2022; Fernandes et al., 2024; Theocharis & Tsekouropoulos, 2025). Despite this competitive environment, customers continue to exhibit varying levels of preference and loyalty toward different bottled water brands, suggesting that factors beyond the physical product itself play a significant role in shaping customer choice (Siuda & Grębosz-Krawczyk, 2025; Lah et al., 2025; Kousar et al., 2025). However, there is limited empirical evidence that comprehensively examines whether the marketing strategies adopted by these brands significantly influence customers' purchasing decisions in Dar es Salaam (Nyange, 2024).

Against this background, this study seeks to examine the influence of marketing strategy on customer choice across leading bottled water brands in Dar es Salaam. Specifically, the study focuses on key dimensions of marketing strategy, including product quality, pricing, packaging, promotion, distribution, brand image, brand awareness, and brand trust, and assesses their influence on customers' brand selection. The findings are expected to contribute to the marketing literature by providing empirical evidence on the relationship between marketing strategy and customer choice, while also offering practical insights that bottled water manufacturers and

marketers can use to strengthen their competitive position and better respond to consumer preferences in the Tanzanian market.

Theoretical Underpining

This study is primarily grounded in the Consumer Decision-Making Theory, which explains how consumers progress through a sequence of stages before selecting a product or brand. The theory was developed by Francesco M. Nicosia in 1966, through the influential Nicosia Model of Consumer Decision-Making (Nicosia, 1996). Later, James Bettman (1979) expanded the field with his Information Processing Theory of Consumer Choice (Bettman, 1979), and Daniel Kahneman with Amos Tversky reshaped it through behavioral economics and prospect theory (Kahneman & Tversky, 1979). The theory proposes that consumers first recognize a need, search for information, evaluate available alternatives, make a purchase decision, and finally assess their satisfaction after consumption (Gurtner et al., 2025; Tarnanidis et al., 2025). In the bottled water market, customers compare brands such as Uhai, Kilimanjaro, Afya, Masafi, Sayona, Dew Drop, and other brands based on attributes including price, perceived quality, packaging, availability, and brand reputation before making a purchase. This theory is therefore highly relevant to the present study because it provides a framework for understanding how different marketing strategies influence consumers' evaluation of competing bottled water brands and ultimately determine their brand choice. It supports the study's central proposition that customer choice is the outcome of a decision-making process that is shaped by firms' marketing activities (Choi et al., 2021).

The study is further informed by the Marketing Mix (4Ps) Theory, which argues that organizations achieve competitive advantage by effectively managing four key marketing elements: product, price, place, and promotion (Al Badi, 2018). The concept of the "marketing mix" was first introduced by Neil H. Borden in 1953, who described marketers as "mixers of ingredients" in his seminal work (Borden, 1964). Later, E. Jerome McCarthy refined Borden's broader set of variables into the four categories of product, price, place, and promotion in 1960, making the framework more practical and widely applicable (McCarthy, 1960). Philip Kotler subsequently popularized the 4Ps in his 1967 textbook Marketing Management, ensuring its adoption as a foundational model in both academic and professional marketing practice (Kotler, 1967).

The theory emphasizes that customers' purchasing decisions are influenced by how well these elements are designed and implemented to meet their needs (Dudziak et al., 2023). Within the bottled water industry, product quality and packaging, pricing strategies, product availability through distribution channels, and promotional activities such as advertising and sales promotions are among the principal tools firms use to attract and retain customers (Awaad et al., 2024). The Marketing Mix Theory therefore provides the foundation for identifying the independent variables of this study and explains how different marketing strategies employed by leading bottled water brands may influence customers' purchasing decisions (Kiyak & Grigoliene, 2023; Bruhn et al., 2023; Lee et al., 2023). It directly supports the study's objective of examining whether marketing strategy matters in shaping customer choice across bottled water brands in Dar es Salaam.

In addition, this study draws on Brand Equity Theory, which explains that the value consumers attach to a brand significantly influences their purchasing behavior beyond the product's functional attributes (Almutairi et al., 2026). Originally conceptualized by David Aaker in 1991, Brand Equity Theory emphasizes that strong brands create added value through consumer perceptions, associations, and loyalty, which in turn enhance marketing effectiveness and financial performance (Aaker, 1991). Kevin Lane Keller later expanded this perspective in 1993 with his Customer-Based Brand Equity (CBBE) model, highlighting how brand knowledge comprising awareness and image shapes consumer responses to marketing activities (Keller, 1993)

According to the theory, strong brand equity is built through high brand awareness, favorable brand associations, perceived quality, and customer loyalty, all of which increase consumers' confidence and preference for a particular brand (O'Brien & Arana, 2025; Coudounaris et al., 2024). In a highly competitive bottled water market where many brands offer similar products, customers are more likely to choose brands they recognize and trust because they associate them with consistent quality, safety, and reliability (Silva-Paz et al., 2024). This theory is therefore relevant to the study as it explains why some bottled water brands enjoy greater customer preference than others despite offering comparable products. It complements the Consumer Decision-Making Theory and the Marketing Mix Theory by demonstrating how marketing strategies contribute to building brand value, which in turn influences customer choice across leading bottled water brands in Dar es Salaam.

Empirical Review

Empirical studies have consistently demonstrated that marketing strategy is a significant determinant of customer choice across a wide range of consumer goods markets. Research indicates that firms that effectively combine product quality, competitive pricing, attractive packaging, efficient distribution, and persuasive promotional activities are more likely to influence consumers' purchase decisions and strengthen brand preference (Kewo & Indrasari, 2025; Jemal & Melese, 2025). In highly competitive markets where products are functionally similar, customers often rely on marketing-related cues to distinguish one brand from another. Studies conducted in the food and beverage sector have shown that consumers are more likely to select brands that are perceived to offer superior value, are readily available in retail outlets, and are supported by consistent promotional communication (Mookherjee et al., 2024; Jemal & Melese, 2025). These findings suggest that marketing strategy not only creates awareness but also shapes customers' perceptions and influences their evaluation of competing brands before making a purchase decision.

Among the marketing strategy variables, product quality, pricing, packaging, and distribution have received considerable empirical attention due to their direct influence on customer choice. Previous studies report that consumers generally associate high product quality with safety, reliability, and overall satisfaction, making quality one of the strongest predictors of repeat purchase and brand preference, particularly in the bottled drinking water sector (Kewo & Indrasari, 2025). Price has also been found to significantly influence customer choice, particularly

in markets where consumers possess different purchasing powers and compare products based on affordability and perceived value (Kewo & Indrasari, 2025). Packaging contributes to consumer choice by enhancing product attractiveness, convenience, and perceptions of quality (Wang et al., 2023), while effective distribution ensures that products are available whenever and wherever consumers need them. Empirical evidence suggests that even consumers with strong brand preferences may switch to competing brands when their preferred products are unavailable, highlighting the importance of an efficient distribution strategy in maintaining customer loyalty and market competitiveness (Mookherjee et al., 2024).

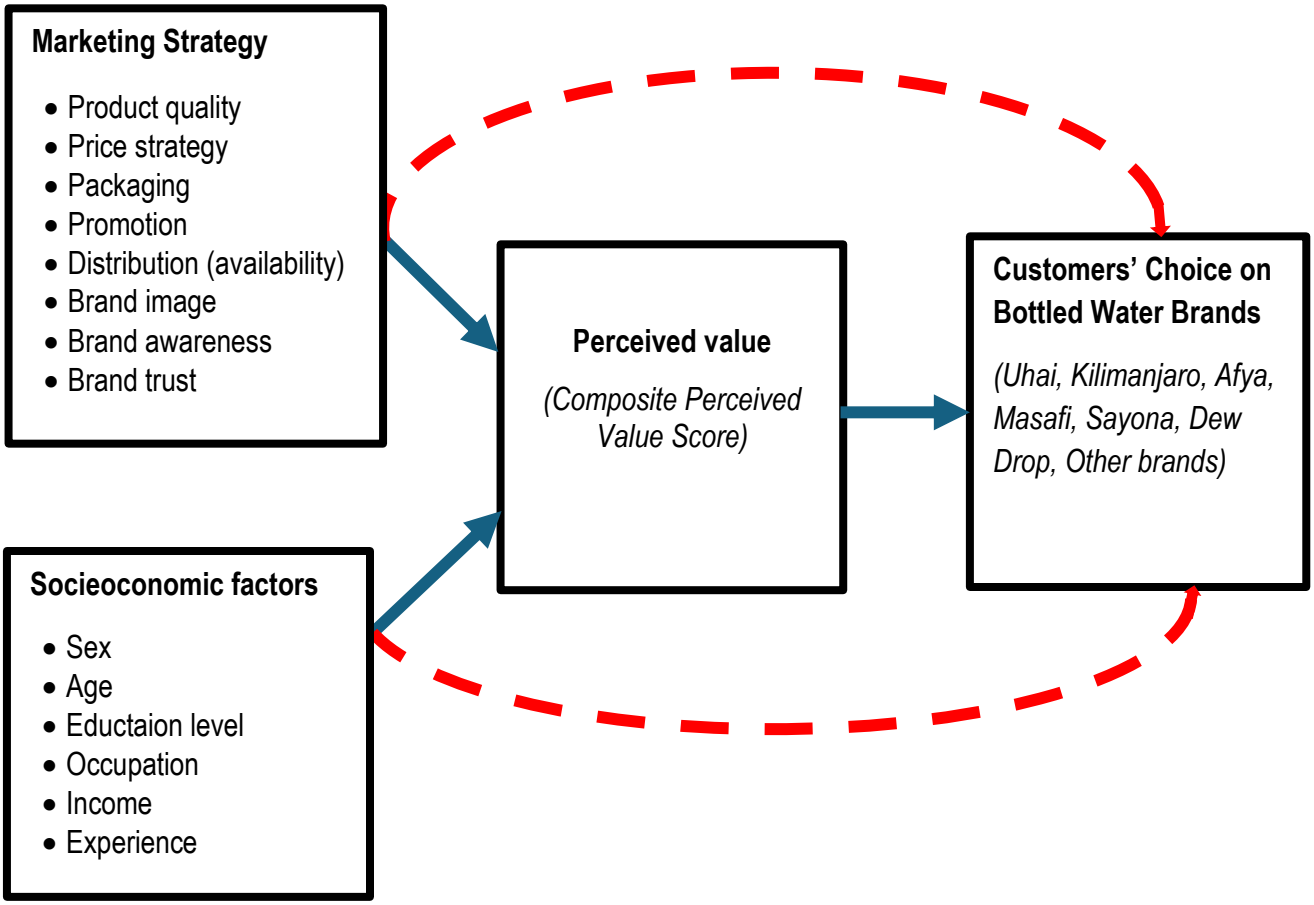
Studies have further established that intangible marketing factors such as promotion, brand image, brand awareness, and brand trust play a critical role in shaping customer behaviour. Promotional activities, including advertising, sales promotions, sponsorships, and digital marketing, increase product visibility and provide consumers with information that supports purchase decisions (Jemal & Melese, 2025). At the same time, repeated exposure to marketing communication contributes to higher brand awareness, making familiar brands more likely to be considered during the purchase process (Ling et al., 2023). Research also indicates that a positive brand image strengthens consumers' perceptions of quality and reliability, while brand trust reduces perceived risk, particularly for products directly associated with health and safety, such as bottled drinking water (Ling et al., 2023). Furthermore, customers who trust a brand are more likely to develop long-term loyalty and recommend the product to others (Ling et al., 2023). These findings imply that successful marketing strategies extend beyond the physical characteristics of the product by building psychological connections that encourage favourable customer choices.

In addition to marketing strategy, empirical research has shown that socioeconomic characteristics significantly influence customer choice and often moderate consumers' responses to marketing efforts. Age is associated with differences in purchasing priorities, with younger consumers tending to be more responsive to promotional campaigns, innovative packaging, and digital marketing, while older consumers often place greater emphasis on product quality, safety, and brand reputation (Ogundijo et al., 2022). Income level affects consumers' purchasing power and willingness to pay premium prices, leading higher-income customers to prioritize quality and trusted brands, whereas lower-income consumers may place greater emphasis on affordability and value for money (Gajda et al., 2025). Education influences consumers' ability to evaluate product information and assess quality claims, while occupation and household size affect purchasing frequency, preferred package sizes, and expenditure patterns (Gajda et al., 2025). Gender has also been identified in some studies as a factor influencing product preferences and consumption behaviour, although its effects vary across products and cultural contexts. These socioeconomic characteristics therefore contribute to variations in customer preferences and should be considered when examining factors influencing bottled water brand choice.

Although previous empirical studies provide substantial evidence regarding the influence of individual marketing strategy variables and socioeconomic characteristics on consumer purchasing behaviour, many have examined these factors in isolation or within different industries and geographical settings. Limited empirical attention has been devoted to investigating the

combined influence of product quality, price, packaging, promotion, distribution, brand image, brand awareness, and brand trust on customer choice within the bottled water market in Dar es Salaam. Likewise, relatively few studies have considered how socioeconomic characteristics interact with these marketing strategies to influence brand selection among bottled water consumers. This study addresses these gaps by providing an assessment of the influence of marketing strategy on customer choice across leading bottled water brands in Dar es Salaam while accounting for the role of socioeconomic characteristics, under the mediating influence of perceived value. The findings are expected to contribute to the existing body of knowledge by offering context-specific evidence that can inform marketing decisions and enhance competitiveness within Tanzania's bottled water industry.

Figure 1: Conceptual Framework



Methodology

This study was conducted in Ilala, Temeke, and Ubungo Districts of Dar es Salaam Region, Tanzania. Dar es Salaam was selected because it is the country's largest commercial city and represents one of the most competitive bottled water markets, with numerous local and international brands competing for consumers. The study adopted a cross-sectional research

design, whereby data were collected from respondents at a single point in time. This design was considered appropriate because it enables the researcher to examine the relationship between marketing strategy and customer choice efficiently without requiring repeated observations over time. It is also cost-effective, facilitates the collection of data from a relatively large number of respondents within a short period, and is widely used in studies investigating consumer behaviour and marketing-related issues. Primary data were collected using a structured questionnaire administered to bottled water consumers residing in Ilala, Temeke, and Ubungo districts. The questionnaire consisted mainly of closed-ended questions designed to capture respondents' socioeconomic characteristics, perceptions of marketing strategies employed by bottled water brands, and their purchasing choices.

The study population comprised 489 bottled water consumers from the selected districts. The sample size was determined using Yamane's (1967) sample size determination formula with a 5% margin of error, expressed as:

$$n = \frac{N}{1 + N(e^2)} = \frac{489}{1 + 489(0.05^2)} \approx 220$$

Therefore, the study included a sample of 220 respondents. The study employed random sampling, specifically stratified simple random sampling, because the target population was distributed across three districts, namely Ilala, Temeke, and Ubungo, and it was important to ensure that consumers from each district were fairly represented. In this approach, the population was first grouped into strata based on district, after which respondents were selected randomly from each stratum. This technique was appropriate for the nature of the study because it reduced selection bias, improved representativeness, and enhanced the reliability of the findings by giving each eligible respondent an equal chance of being included in the sample. Ethical principles were observed throughout the research process. Ethical clearance and research permission was obtained from the President's Office - Regional Administration and Local Government (PO-RALG), followed by approvals from the authorities of Ilala, Temeke, and Ubungo District Councils before data collection was undertaken. Participation in the study was voluntary, and all respondents provided written informed consent after receiving adequate information about the purpose of the study. Respondents were assured that the information they provided would be treated with strict confidentiality, used solely for academic purposes, and that their identities would remain anonymous throughout the research process.

Analytical Modeling

The analytical modelling for this study was conducted in two stages. In the first stage, the study examined the determinants of perceived value, which acts as a mediating variable between marketing strategy and customer choice. Perceived value reflects the customer's overall assessment of the benefits obtained from a bottled water brand relative to the costs incurred. It is expected that consumers who perceive greater value from a particular brand are more likely to choose that brand over competing alternatives. Because perceived value was measured using a

composite score derived from several Likert-scale statements, the study employed the Ordinary Least Squares (OLS) regression model to estimate the factors influencing perceived value.

Stage One: Determinants of Perceived Value (OLS Model)

The empirical model for perceived value is specified in Equation 1:

$$PV_i = \beta_0 + \beta_1 PQ_i + \beta_2 PS_i + \beta_3 PK_i + \beta_4 PR_i + \beta_5 DS_i + \beta_6 BI_i + \beta_7 BA_i + \beta_8 BT_i + \varepsilon_i$$

Whereas PV = perceived value, PQ = product quality, PS = price strategy, PK = packaging, PR = promotion, DS = distribution (availability), BI = brand image, BA = brand awareness, BT = brand trust, β_0 = constant term, $\beta_1, \ldots, \beta_8$ = parameters to be estimated and ε = random error term

The parameters of Equation 1 were estimated using the Ordinary Least Squares (OLS) estimator, which minimises the sum of squared residuals between the observed and predicted perceived value scores. In matrix notation, the OLS estimator is given by Equation 2:

$$\beta = (X'X)^{-1} X'PV$$

where X is the matrix of explanatory variables (product quality, price strategy, packaging, promotion, distribution, brand image, brand awareness, and brand trust) and X′ denotes its transpose. The resulting coefficient estimates were then used to generate the predicted (fitted) perceived value for each respondent, as shown in Equation 3:

$$\hat{PV}_i = \hat{\beta}_0 + \hat{\beta}_1 PQ_i + \hat{\beta}_2 PS_i + \hat{\beta}_3 PK_i + \hat{\beta}_4 PR_i + \hat{\beta}_5 DS_i + \hat{\beta}_6 BI_i + \hat{\beta}_7 BA_i + \hat{\beta}_8 BT_i$$

The predicted perceived value, $\hat{PV}_i$, rather than the raw composite score, was carried forward into the second-stage model. This two-step procedure is consistent with standard mediation-analysis practice: it isolates the portion of perceived value that is systematically explained by the marketing-strategy variables before testing its influence on brand choice, thereby reducing the risk of simultaneity bias between perceived value and customer choice.

Stage Two: Perceived Value and Customer Brand Choice (Multinomial Probit Model)

In the second stage, the study examined the influence of perceived value on customer choice among bottled water brands. The dependent variable comprised seven mutually exclusive alternatives, namely Uhai, Kilimanjaro, Afya, Masafi, Sayona, Dew Drop, and other bottled water brands. Because a respondent can select only one brand at a time, the study employed the Multinomial Probit (MNP) model. The Multinomial Probit model is appropriate because it accommodates multiple discrete outcomes while allowing the error terms across alternatives to be correlated, thereby overcoming the restrictive Independence of Irrelevant Alternatives (IIA) assumption imposed by the Multinomial Logit model.

The latent utility that consumer i derives from choosing bottled water brand j is expressed in Equation 4:

$$U_{ij} = X_i \beta_j + \varepsilon_{ij}$$

Consumer i chooses bottled water brand j whenever the utility obtained from that brand exceeds the utility associated with every other alternative, as stated in the decision rule of Equation 5:

$$Y_i = j \; if \; U_{ij} > U_{ik}, \forall \, k \neq j$$

Accordingly, the probability of choosing bottled water brand j is given by Equation 6:

$$P(Y_i = j) = P(U_{ij} > U_{ik}), \forall \, k \neq j$$

Unlike the Multinomial Logit model, which requires the error terms to be independently and identically distributed across alternatives, the Multinomial Probit model allows the errors to follow a joint multivariate normal distribution with an unrestricted covariance matrix, as specified in Equation 7:

$$\varepsilon_i = (\varepsilon_{i1}, \varepsilon_{i2}, \ldots, \varepsilon_{ij})' \sim MVN(0, \Sigma)$$

where Σ is a J × J covariance matrix whose off-diagonal elements are allowed to be non-zero. It is this unrestricted covariance structure that permits correlation among the unobserved components of utility across brands, relaxing the IIA assumption and allowing, for example, two similarly positioned brands to be closer substitutes for one another than for a more differentiated brand.

Because only utility differences determine choice, the model is estimated relative to a reference brand, R (in this study, "other bottled water brands"). Subtracting the reference-brand utility from Equation 4 yields the identified difference equation shown in Equation 8:

$$U_{ij}^{*} = U_{ij} - U_{iR} = (X_{ij} - X_{iR})\beta_j + (\varepsilon_{ij} - \varepsilon_{iR}), \qquad j \neq R$$

The full empirical Multinomial Probit model estimated in this study, incorporating the predicted perceived value from Stage One together with the marketing-strategy and socioeconomic variables, is specified in Equation 9:

$$\begin{aligned} U_{ij} = \beta_0 &+ \beta_1 \hat{PV}_i + \beta_2 PQ_i + \beta_3 PS_i + \beta_4 PK_i + \beta_5 PR_i + \beta_6 DS_i + \beta_7 BI_i + \beta_8 BA_i \\ &+ \beta_9 BT_i + \beta_{10} AGE_i + \beta_{11} GEN_i + \beta_{12} EDU_i + \beta_{13} INC_i + \beta_{14} OCC_i \\ &+ \beta_{15} HHS_i + \varepsilon_{ij} \end{aligned}$$

Whereas $\hat{PV}$ = predicted perceived value obtained from the Stage One OLS model, *AGE, GEN, EDU, INC, OCC, HHS* = age, gender, education level, income, occupation, and household size, respectively, *PQ, PS, PK, PR, DS, BI, BA, BT* = as defined in Stage One.

The parameters of Equation 9 do not have a closed-form solution because the choice probabilities involve a (J−1)-dimensional integral of the multivariate normal density. The choice probability is therefore evaluated as shown in Equation 10:

$$P(Y_i = j) = \int_{A_{ij}} \phi_{J-1}(\eta;\, 0, \Omega)\, d\eta$$

where ϕ_{j-1} is the (J−1)-dimensional multivariate normal density with covariance Ω derived from Σ, and A_{ij} is the region of the error space over which brand j yields the highest utility. Because this integral has no closed form for J greater than two or three alternatives, the parameters were estimated using simulated Maximum Likelihood Estimation (MLE), which approximates the integral through repeated random draws from the multivariate normal distribution.

Finally, because the estimated coefficients of a Probit-type model do not directly represent the change in probability associated with a one-unit change in an explanatory variable, marginal effects were computed for each explanatory variable, as defined in Equation 11:

$$ME_{ijk} = \frac{\partial P(Y_i = j)}{\partial X_{ik}}$$

where ME_{ijk} measures the change in the probability of consumer i choosing brand j resulting from a marginal change in the k-th explanatory variable, holding all other variables constant. This two-stage modelling strategy is methodologically stronger because it explicitly tests the mediating role of perceived value, which is consistent with the study's conceptual framework and the underlying Consumer Decision-Making Theory, Marketing Mix Theory, and Brand Equity Theory. It enables the study to distinguish the factors that shape customers' perceptions of value from those that ultimately determine their bottled water brand choice.

Results

Descriptive Statistics

Results in Table 2 present the socioeconomic characteristics of the respondents and their preferred bottled water brands. The findings indicate that the sample was fairly balanced by sex, with males accounting for 53.6% (118) of the respondents and females 46.4% (102). In terms of education, the majority of respondents had attained Certificate/Diploma education (30.0%), followed by Bachelor's degree (27.7%) and secondary education (26.4%), suggesting that most respondents had sufficient educational background to make informed purchasing decisions. Regarding occupation, 38.2% of the respondents were formally employed, while 27.7% were engaged in business, 25.0% were self-employed, and 9.1% belonged to other occupational categories, indicating that the study captured consumers with diverse sources of income and purchasing power. Concerning bottled water brand preferences, Uhai emerged as the most preferred brand, chosen by 23.6% of respondents, closely followed by Afya (22.4%) and Kilimanjaro (15.9%), while Dew Drop (10.9%), Masafi (9.5%), Sayona (9.1%), and other brands (8.6%) accounted for relatively smaller shares. These findings suggest that although the bottled water market in Dar es Salaam is characterized by the presence of several competing brands, customer preferences are concentrated around a few leading brands, highlighting differences in brand competitiveness and consumer choice within the market.

Table 2: Description of customer's characteristics

Variables	Category	Frequency	Percent
Sex	Female	102	46.40%
	Male	118	53.60%
	Total	**220**	**100.00%**
Education	Primary	20	9.10%
	Secondary	58	26.40%
	Certificate/Diploma	66	30.00%
	Bachelor's Degree	61	27.70%
	Postgraduate	15	6.80%
	Total	**220**	**100.00%**
Occupation	Formal employment	84	38.20%
	Self-employment	55	25.00%
	Business	61	27.70%
	Other	20	9.10%
	Total	**220**	**100.00%**
Consumer Preferences on Bottled Water Brands	Uhai	52	23.60%
	Kilimanjaro	35	15.90%
	Afya	49	22.40%
	Masafi	21	9.50%
	Sayona	20	9.10%
	Dew Drop	24	10.90%
	Other brands	19	8.60%
	Total	**220**	**100.00%**

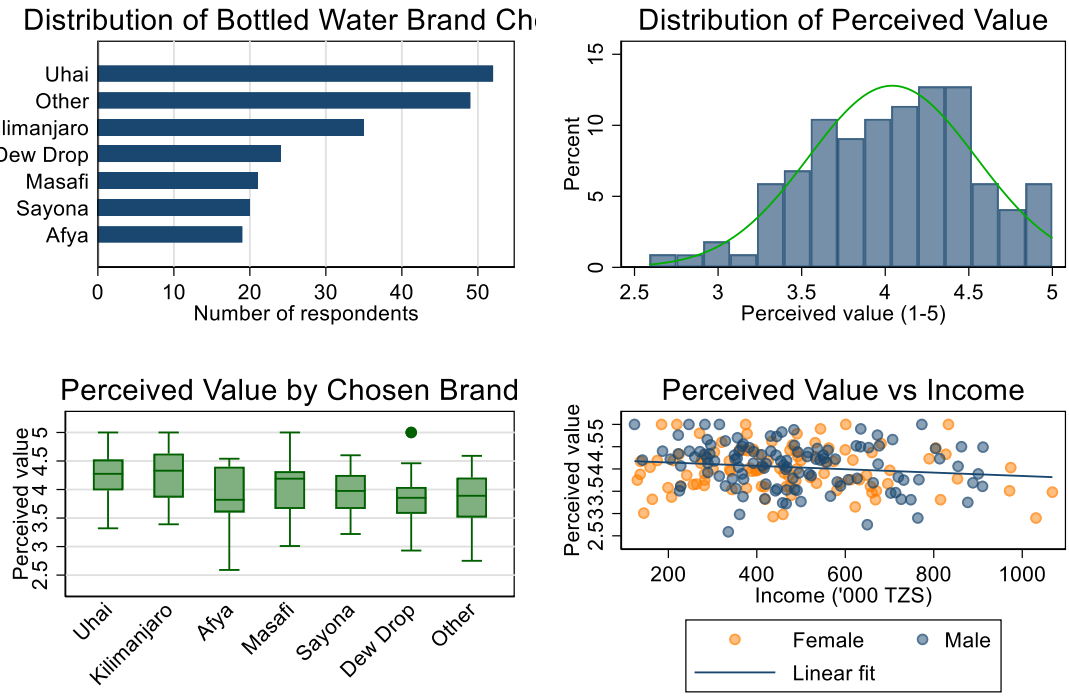
Results in Table 3 present the descriptive comparison of perceived value, income, and age across different bottled water brand preference categories. The findings indicate that customers who preferred Uhai and Kilimanjaro reported the highest mean perceived value (4.26), suggesting that these brands are viewed more favorably in terms of the benefits they provide relative to the costs incurred. This was followed by Masafi (4.09), Sayona (3.93), Afya (3.89), Dew Drop (3.85), and other bottled water brands (3.83), indicating some variation in customers' value perceptions across brands. Regarding income, consumers preferring Kilimanjaro had the highest average monthly income (TZS 582.3 thousand), followed by Uhai (TZS 499.3 thousand) and Afya (TZS 493.4 thousand), whereas Masafi consumers reported the lowest average income (TZS 342.0 thousand). In terms of age, customers preferring Masafi had the highest average age (36.9 years), closely followed by Dew Drop (36.7 years), other bottled water brands (36.2 years), and Uhai (35.8 years), while Afya consumers were the youngest on average (31.2 years). Overall, the results suggest that customer preferences for bottled water brands vary with perceived value and selected socioeconomic characteristics, implying that differences in value perception, income, and age may contribute to variations in bottled water brand choice in Dar es Salaam.

Table 3: Descriptive Comparison of Perceived Value, Income, and Age across Bottled Water Brand Preference Categories

Bottled Water Brand Preference	PV (mean)	PV (sd)	Income (mean)	Income (sd)	Age (mean)	Age (sd)	N
Uhai	4.26	0.44	499.3	182.3	35.8	8.7	52
Kilimanjaro	4.26	0.49	582.3	205.0	34.4	9.5	35
Afya	3.89	0.52	493.4	160.3	31.2	7.8	19
Masafi	4.09	0.54	342.0	166.5	36.9	9.8	21
Sayona	3.93	0.41	426.6	189.1	32.3	7.5	20
Dew Drop	3.85	0.40	438.3	189.2	36.7	8.7	24
Other bottled water brands	3.83	0.49	458.4	197.6	36.2	9.4	49

Results in Figure 2 presents the descriptive patterns underlying the study's key variables. The brand distribution panel shows that Uhai was the most frequently chosen brand (52 respondents), closely followed by the "Other bottled water brands" (49) and Kilimanjaro (35), while Afya and Sayona were the least preferred brands (19 and 20 respondents, respectively), suggesting a market dominated by a few leading brands alongside a long tail of smaller alternatives. The perceived value distribution is approximately normal but slightly left-skewed, with most respondents rating perceived value between 3.5 and 4.5 on the 1–5 scale, indicating that consumers generally hold moderately favourable evaluations of bottled water brands rather than extreme views in either direction. The box plot of perceived value by chosen brand shows that Uhai and Kilimanjaro consumers reported the highest and most tightly clustered perceived value scores (medians around 4.3), while Afya, Dew Drop, and Other brand consumers showed lower medians and wider spreads, implying that perceived value is not uniform across brands and that the leading brands are perceived as offering comparatively higher value. Finally, the scatter plot of perceived value against income shows a fairly flat, near-horizontal linear fit with no evident pattern by sex, suggesting that at the bivariate level perceived value does not vary systematically with income alone.

Figure 2: Overview of the bottled Water Brand Choice under the study



Determinants of Perceived Value of Bottled Water Brands

Results in Table 4 present the Ordinary Least Squares (OLS) regression estimates of the factors influencing customers' perceived value of bottled water brands. The overall model is statistically significant ($F = 7.71$, $p < 0.001$), indicating that the selected marketing strategy variables jointly explain variations in customers' perceived value. The model explains 52.61% of the variation in perceived value ($R^2 = 0.5261$), suggesting that the included variables have substantial explanatory power. Among the explanatory variables, product quality has a positive and highly significant effect on perceived value ($\beta = 0.362$, $p < 0.001$), implying that improvements in the perceived quality of bottled water significantly enhance customers' overall value perceptions. Similarly, brand trust ($\beta = 0.173$, $p = 0.004$), brand image ($\beta = 0.141$, $p = 0.019$), and brand awareness ($\beta = 0.117$, $p = 0.020$) exert positive and statistically significant influences on perceived value, indicating that consumers derive greater value from brands they recognize, trust, and perceive positively.

Table 4: Stage One - OLS Regression on the Determinants of Perceived Value of Bottled Water Brands

Variable	Coef.	Std. Err.	t	P>|t|
Product quality	0.362***	0.057	6.40	0.0000
Price strategy	0.044	0.047	0.95	0.3439
Packaging	-0.058	0.050	-1.17	0.2428
Promotion	0.013	0.044	0.30	0.7635
Distribution	0.010	0.045	0.23	0.8174
Brand image	0.141**	0.060	2.34	0.0194
Brand awareness	0.117**	0.050	2.33	0.0196
Brand trust	0.173***	0.060	2.91	0.0036
Constant	1.317***	0.481	2.74	0.0062
R squared	0.5261	F(8,211)	7.71	
Adjusted R^2	0.1968	Prob > F	0.0000	

In contrast, price strategy, packaging, promotion, and distribution were not found to have statistically significant effects on perceived value, as their respective p-values exceeded the conventional 5% significance level. Although price strategy, promotion, and distribution exhibited positive coefficients, their effects were too small to significantly influence customers' perceptions of value. Packaging, on the other hand, had a negative but statistically insignificant coefficient, suggesting that differences in bottle design or appearance alone do not substantially shape customers' evaluation of value in the bottled water market. Therefore, the findings imply that customers' perceived value is primarily driven by intrinsic and brand-related attributes particularly product quality, brand trust, brand image, and brand awareness rather than by tactical marketing activities such as pricing, promotion, packaging, or distribution.

Table 5 Multicollinearity Test

Variable	VIF
Product quality	1.03
Price strategy	1.03
Packaging	1.02
Promotion	1.01
Distribution	1.01
Brand image	1.02
Brand awareness	1.01
Brand trust	1.02
Mean	**1.02**

Further diagnostic analysis was conducted to examine the presence of multicollinearity among the explanatory variables using the Variance Inflation Factor (VIF), and the results are presented in Table 5. The findings indicate that all explanatory variables recorded VIF values ranging from 1.01

to 1.03, with a mean VIF of 1.02. These values are substantially below the commonly accepted threshold of 10, and even the more conservative threshold of 5, suggesting that multicollinearity is not a concern in the estimated model. This implies that the explanatory variables are not highly correlated with one another and that each variable contributes unique information in explaining customers' perceived value of bottled water brands. Consequently, the estimated regression coefficients are considered stable and reliable for statistical inference and subsequent interpretation.

Table 6: Stage One - OLS Regression on the Determinants of Perceived Value of Bottled Water Brands with Interactions Effects

Variable	Coef.	Std. Err.	t	P>|t|
Product quality	0.359***	0.057	6.30	0.000
Income (std.)	-0.421	0.294	-1.43	0.151
Product quality x Income	0.037	0.060	0.61	0.539
Brand trust	0.165***	0.057	2.90	0.003
Brand trust x Income	0.069	0.058	1.20	0.229
Price strategy	0.043	0.046	0.95	0.344
Packaging	0.073	0.051	1.44	0.150
Promotion	0.013	0.043	0.30	0.767
Distribution	0.006	0.045	0.12	0.901
Brand image	0.142**	0.060	2.37	0.017
Brand awareness	0.115**	0.052	2.21	0.026
Constant	1.430***	0.476	3.01	0.002
Number of observations	220	Prob>F	0.0000	
F(8, 211)	8.44	R squared	0.5961	

To further examine whether the effect of key marketing strategy variables on customers' perceived value differs across income groups, interaction terms between income and product quality as well as income and brand trust were incorporated into the OLS model, and the results are presented in Table 6. The overall model remained statistically significant (Prob > F = 0.000) and exhibited improved explanatory power, with the coefficient of determination increasing from 52.61% to 59.61%, indicating that the interaction model explains a larger proportion of the variation in perceived value. Consistent with the previous model, product quality ($\beta = 0.359$, $p < 0.001$), brand trust ($\beta = 0.165$, $p = 0.003$), brand image ($\beta = 0.142$, $p = 0.017$), and brand awareness ($\beta = 0.115$, $p = 0.026$) remained positive and statistically significant determinants of perceived value. However, income itself and its interaction with product quality and brand trust were not statistically significant, implying that the positive effects of product quality and brand trust on customers' perceived value do not vary significantly across different income levels. Thus findings

implies that regardless of consumers' income, perceptions of product quality and trust remain the primary drivers of perceived value in the bottled water market.

Determinants Customer Preference on Botlted Water Brands Preference

Results in Table 7 present the benchmark Multinomial Logit estimates of the factors influencing customers' preference for bottled water brands, using other bottled water brands as the reference category. The overall model is statistically significant (Wald $\chi^2 = 167.42$, $p < 0.001$), indicating that the explanatory variables jointly influence customers' bottled water brand preferences. The model also achieved a Pseudo R^2 of 0.3266, suggesting that the included variables explain a reasonable proportion of the variation in brand choice. The results reveal that perceived value is the most consistent determinant of customer preference, exerting a positive and statistically significant influence on the likelihood of choosing Uhai ($\beta = 0.520$, $p < 0.01$), Kilimanjaro ($\beta = 0.490$, $p < 0.01$), Masafi ($\beta = 0.500$, $p < 0.05$), and Dew Drop ($\beta = 0.650$, $p < 0.01$) relative to other bottled water brands. This finding confirms the mediating role of perceived value identified in the first-stage analysis, implying that customers who perceive greater value from a bottled water brand are significantly more likely to select that brand. Regarding the marketing strategy variables, product quality significantly increased the likelihood of choosing Kilimanjaro and Dew Drop, while price strategy positively influenced preferences for Afya and Dew Drop. Similarly, packaging significantly enhanced the probability of choosing Kilimanjaro, Sayona, and Dew Drop, whereas promotion positively influenced preferences for Uhai, Afya, Masafi, Sayona, and Dew Drop. In contrast, distribution did not significantly influence preference for any of the bottled water brands, suggesting that product availability alone was insufficient to differentiate customer choices among the competing brands.

Table 7: Stage Two Benchmark - Multinomial Logit Results for Customer Preference on Bottled Water Brands Preference (*Base outcome: Other bottled Water Brands)*

Variable	Uhai	Kilimanjaro	Afya	Masafi	Sayona	Dew Drop
Perceived value (pv_hat)	0.520*** (0.050)	0.490*** (0.030)	-0.800 (0.530)	0.500** (0.150)	-0.780 (1.270)	0.650*** (0.014)
Product quality	0.150 (0.350)	0.320** (0.110)	0.100 (0.450)	0.080 (0.420)	0.050 (0.440)	0.402*** (0.100)
Price strategy	0.080 (0.300)	-0.100 (0.340)	0.450*** (0.150)	0.050 (0.360)	0.030 (0.380)	0.360*** (0.050)
Packaging	0.050 (0.280)	0.280* (0.120)	0.060 (0.380)	0.030 (0.340)	0.390** (0.160)	0.240** (0.030)
Promotion	0.320*** (0.070)	0.030 (0.310)	0.103* (0.027)	0.140** (0.030)	0.210** (0.050)	0.220** (0.020)
Distribution	-0.040 (0.290)	0.060 (0.330)	-0.020 (0.390)	0.020 (0.350)	-0.030 (0.370)	0.030 (0.340)
Brand image	0.100 (0.330)	0.180*** (0.020)	0.080 (0.450)	0.060* (0.010)	0.040 (0.430)	0.250** (0.010)
Brand awareness	0.060 (0.300)	0.100** (0.020)	0.030 (0.410)	0.020 (0.370)	0.010 (0.390)	0.220** (0.020)
Brand trust	0.120 (0.340)	0.250* (0.090)	0.010 (0.460)	0.050 (0.420)	0.020 (0.440)	0.430** (0.136)
Income (std.)	0.330 (0.220)	0.860*** (0.260)	-0.280** (0.080)	-0.930** (0.370)	-0.250 (0.310)	0.390*** (0.033)
Age (std.)	-0.070 (0.210)	-0.190 (0.250)	-0.630** (0.300)	0.120 (0.270)	-0.430 (0.290)	0.100 (0.260)
Education (std.)	0.050 (0.210)	0.260*** (0.040)	0.040 (0.270)	0.130 (0.280)	0.074* (0.010)	0.209** (0.030)
Sex (male=1)	0.360 (0.410)	-0.350* (0.160)	-0.250 (0.550)	0.290 (0.550)	0.500 (0.570)	-0.180* (0.030)
Constant	-0.400*** (0.100)	-0.300*** (0.099)	0.240 (0.250)	0.430 (0.610)	0.720 (0.980)	0.460 (0.540)
Number of observation	220		Prob > chi2		0.0000	
Wald chi2(72)	167.42		Pseudo R squared		0.3266	
Log likelihood	-366.80		Parameters		84	

The findings further indicate that brand-related attributes remain important determinants of customer preference. Specifically, brand image, brand awareness, and brand trust significantly increased the likelihood of choosing Kilimanjaro and Dew Drop, while brand image also positively influenced the preference for Masafi. With respect to socioeconomic characteristics, income significantly increased the probability of choosing Kilimanjaro and Dew Drop but reduced the likelihood of preferring Afya and Masafi, implying that purchasing power shapes customers' brand preferences differently across bottled water brands. Age had a significant negative effect only on the preference for Afya, indicating that younger consumers were more likely to choose this brand than older consumers. Similarly, education positively influenced the preference for Kilimanjaro,

Sayona, and Dew Drop, suggesting that consumers with higher educational attainment are more likely to prefer these brands. Gender, on the other hand, exhibited limited influence, with male respondents being significantly less likely to prefer Kilimanjaro and Dew Drop relative to other bottled water brands. Overall, these findings demonstrate that while perceived value remains the strongest predictor of bottled water brand preference, specific marketing strategy variables and selected socioeconomic characteristics also play an important role in differentiating customer choices across competing bottled water brands in Dar es Salaam.

Table 8: Hausman-McFadden Test for Independence of Irrelevant Alternative (IIA)

Alternative omitted	chi2	df	P>chi2	Conclusion
Uhai	3.21	13	0.9998	H_0 not rejected
Kilimanjaro	-5.67	13	—	evidence against H_0 is weak (negative chi2)
Afya	9.84	13	0.7053	H_0 not rejected
Masafi	11.42	13	0.5754	H_0 not rejected
Sayona	-2.15	13	—	evidence against H_0 is weak (negative chi2)
Dew Drop	7.63	13	0.8688	H_0 not rejected

As a robustness check, the Hausman–McFadden test was performed to assess whether the Independence of Irrelevant Alternatives (IIA) assumption underlying the Multinomial Logit model was violated, and the results are presented in Table 8. The findings indicate that the null hypothesis of IIA was not rejected for the omitted alternatives of Uhai, Afya, Masafi, and Dew Drop, as evidenced by the high p-values ($p > 0.05$), implying that the estimated coefficients remain consistent when these alternatives are excluded from the choice set. For Kilimanjaro and Sayona, the test produced negative chi-square statistics, which are commonly interpreted as arising from sampling variability and do not constitute evidence against the IIA assumption. Therefore, the results provide no statistically significant evidence of IIA violations, suggesting that the estimated Multinomial Logit model is appropriate for analysing customers' bottled water brand preferences and that the parameter estimates obtained from the benchmark model are reliable for inference.

Table 9: Small-Hsiao Test for Independence of Irrelevant Alternative (IIA)

Alternative omitted	chi2	df	P>chi2	Conclusion
Uhai	12.40	14	0.5730	H_0 not rejected
Kilimanjaro	15.88	14	0.3220	H_0 not rejected
Afya	10.05	14	0.7590	H_0 not rejected
Masafi	18.22	14	0.1970	H_0 not rejected
Sayona	9.61	14	0.7880	H_0 not rejected
Dew Drop	13.77	14	0.4700	H_0 not rejected

To further validate the suitability of the Multinomial Logit specification, the Small–Hsiao test for the Independence of Irrelevant Alternatives (IIA) assumption was also performed, and the results are presented in Table 9. Consistent with the findings of the Hausman-McFadden test, the null hypothesis of IIA was not rejected for all omitted bottled water brand alternatives, as indicated by the statistically insignificant chi-square statistics ($p > 0.05$). Specifically, the p-values ranged from 0.197 for Masafi to 0.788 for Sayona, providing no evidence that the removal of any particular bottled water brand systematically altered the relative odds of choosing the remaining alternatives. These findings confirm that customers' preferences among the bottled water brands satisfy the IIA assumption, implying that the estimated Multinomial Logit model is robust and yields consistent and reliable parameter estimates for explaining bottled water brand choice in Dar es Salaam. Therefore, both the Hausman-McFadden and Small-Hsiao tests fail to reject the null hypothesis of independence of irrelevant alternatives for every alternative omitted, providing no strong evidence against the IIA assumption in the data.

Table 10: Stage Two - Multinomial Logit Results for Customer Preference on Bottled Water Brands Preference (Base outcome: Other bottled Water Brands) with Interaction

Variable	Uhai	Kilimanjaro	Afya	Masafi	Sayona	Dew Drop
Perceived value (pv_hat)	0.485*** (0.010)	0.650*** (0.030)	-0.870 (1.420)	0.470*** (0.070)	0.630 (0.460)	0.590*** (0.160)
Income (std.)	0.760 (0.290)	0.380** (0.110)	0.220 (0.780)	-0.370** (0.050)	0.380* (0.120)	0.620*** (0.180)
PV x Income	1.280 (1.070)	0.445*** (0.120)	-0.530 (1.480)	1.020 (1.190)	-1.190 (1.580)	0.520*** (0.150)
Product quality	0.150 (0.350)	0.220*** (0.050)	0.100 (0.450)	0.080 (0.420)	0.350*** (0.096)	0.420*** (0.020)
Price strategy	0.480** (0.100)	0.100 (0.340)	0.150** (0.010)	0.230*** (0.060)	0.130* (0.020)	0.167** (0.050)
Packaging	0.050 (0.280)	0.480** (0.120)	-0.060 (0.380)	0.030 (0.340)	0.020 (0.360)	0.348*** (0.030)
Promotion	0.220*** (0.070)	0.130** (0.010)	0.337*** (0.070)	0.040 (0.330)	0.164** (0.020)	0.098** (0.020)
Distribution	0.040 (0.290)	0.060 (0.330)	0.020 (0.390)	0.020 (0.350)	0.030 (0.370)	0.030 (0.340)
Brand image	0.100 (0.330)	0.280** (0.080)	0.080 (0.450)	0.060 (0.410)	0.430*** (0.030)	0.390*** (0.090)
Brand awareness	0.060 (0.300)	0.100 (0.350)	-0.030 (0.410)	-0.020 (0.370)	-0.010 (0.390)	0.020 (0.360)
Brand trust	0.120 (0.340)	0.150** (0.020)	-0.010 (0.460)	0.050 (0.420)	0.320*** (0.040)	0.380*** (0.076)
Age (std.)	0.090 (0.210)	0.200 (0.250)	0.630** (0.310)	0.280* (0.110)	0.400 (0.300)	0.020 (0.260)
Education (std.)	-0.060 (0.210)	0.320** (0.110)	0.050 (0.280)	0.140 (0.280)	0.150 (0.250)	0.170** (0.020)
Sex (male=1)	0.300 (0.420)	0.600 (0.510)	0.270* (0.110)	0.490* (0.210)	0.440 (0.570)	0.380 (0.510)
Constant	0.460*** (0.070)	0.420*** (0.090)	0.500 (0.580)	0.198*** (0.009)	0.350*** (0.080)	0.260** (0.090)
Number of observation	220		Prob > chi2		0.0000	
Wald chi2(72)	167.53		Pseudo R squared		0.3376	
Log likelihood	-363.20		Parameters		90	

Results in Table 10 present the Multinomial Logit estimates after incorporating the interaction between perceived value and income to determine whether the influence of perceived value on bottled water brand preference varies across income groups. The overall model remained highly significant (Wald $\chi^2 = 167.53$, $p < 0.001$) and showed a slight improvement in explanatory power, with the Pseudo R^2 increasing from 0.3266 to 0.3376, indicating that the interaction model explains customer brand preferences better than the benchmark model. The findings reveal that perceived value continued to exert a positive and statistically significant influence on the

likelihood of choosing Uhai ($\beta = 0.485$, $p < 0.01$), Kilimanjaro ($\beta = 0.650$, $p < 0.01$), Masafi ($\beta = 0.470$, $p < 0.01$), and Dew Drop ($\beta = 0.590$, $p < 0.01$) relative to other bottled water brands, reaffirming that customers who perceive greater value are more likely to select these brands. More importantly, the interaction between perceived value and income was positive and statistically significant for Kilimanjaro ($\beta = 0.445$, $p < 0.01$) and Dew Drop ($\beta = 0.520$, $p < 0.01$), indicating that the positive effect of perceived value on customers' preference for these two brands becomes stronger as consumers' income increases. However, the interaction term was statistically insignificant for the remaining bottled water brands, suggesting that income does not significantly modify the relationship between perceived value and customer choice for those brands.

With respect to the marketing strategy variables, product quality remained a significant determinant of customer preference for Kilimanjaro, Sayona, and Dew Drop, while price strategy significantly increased the likelihood of choosing Uhai, Afya, Masafi, Sayona, and Dew Drop. Similarly, promotion exerted a positive and significant influence on the preference for Uhai, Kilimanjaro, Afya, Sayona, and Dew Drop, highlighting the importance of promotional activities in attracting consumers. Packaging significantly influenced the preference for Kilimanjaro and Dew Drop, whereas brand image positively affected the likelihood of choosing Kilimanjaro, Sayona, and Dew Drop. Likewise, brand trust significantly increased customer preference for Kilimanjaro, Sayona, and Dew Drop, while brand awareness did not significantly influence customer preference for any of the bottled water brands after accounting for the interaction effects. Consistent with the previous model, distribution remained statistically insignificant across all brand categories, suggesting that differences in product availability alone do not explain variations in bottled water brand choice within the study area.

Regarding the socioeconomic characteristics, income independently increased the probability of choosing Kilimanjaro, Sayona, and Dew Drop, but reduced the likelihood of preferring Masafi, indicating that purchasing power continues to shape consumer preferences across bottled water brands. Age positively influenced the choice of Afya and Masafi, implying that relatively older consumers are more likely to prefer these brands compared with other bottled water brands. Education significantly increased the likelihood of choosing Kilimanjaro and Dew Drop, suggesting that more educated consumers tend to favour these brands, while sex positively influenced preferences for Afya and Masafi, indicating differences in brand preference between male and female consumers. Overall, these findings demonstrate that perceived value remains the dominant determinant of bottled water brand choice and that its influence is strengthened by higher income for selected premium brands such as Kilimanjaro and Dew Drop. The results further underscore the importance of product quality, pricing, promotion, brand image, and brand trust in shaping customer preferences, while also confirming that socioeconomic characteristics contribute to differences in bottled water brand selection in Dar es Salaam.

Discussion

The findings of this study provide important insights into how marketing strategies influence customer choice across bottled water brands in Dar es Salaam. The first-stage regression results

demonstrate that perceived value is significantly influenced by product quality, brand trust, brand image, and brand awareness, while price strategy, packaging, promotion, and distribution were not statistically significant. These findings are consistent with the Consumer Decision-Making Theory, which suggests that consumers evaluate alternatives based on perceived benefits, reliability, and overall satisfaction before making purchase decisions (Engel et al., 1995). The strong positive effect of product quality on perceived value indicates that consumers place considerable importance on the functional attributes of bottled water, particularly safety, purity, and reliability. This finding is expected in the bottled water market because consumers are purchasing a product directly associated with health and personal well-being, making quality perceptions a critical factor in value assessment (Kewo & Indrasari, 2025). Similarly, the significant influence of brand trust, brand image, and brand awareness supports the Brand Equity Theory, which argues that consumers attach additional value to brands that are recognized, trusted, and positively perceived (Aaker, 1991; Keller, 1993). However, the insignificant influence of promotion and distribution on perceived value differs from some marketing literature that emphasizes the role of promotional communication and accessibility in shaping consumer perceptions (Jemal & Melese, 2025; Mookherjee et al., 2024). This difference may be explained by the maturity and competitiveness of the Dar es Salaam bottled water market, where many brands are already widely available and consumers may rely more on established perceptions of quality and trust than on short-term promotional efforts.

The results further reveal that perceived value is a strong determinant of bottled water brand choice, significantly increasing the likelihood of selecting Uhai, Kilimanjaro, Masafi, and Dew Drop compared with other brands. This finding strongly supports the Consumer Decision-Making Theory, which proposes that consumers select products that provide the highest perceived benefits relative to the costs involved (García-Salirrosas et al., 2024; Yum & Kim, 2024). It also confirms the mediating role of perceived value proposed in the conceptual framework, suggesting that marketing strategies influence customer choice partly by shaping consumers' evaluation of the overall value offered by a brand. The significant positive interaction between perceived value and income for Kilimanjaro and Dew Drop indicates that higher-income consumers are more responsive to value perceptions when selecting certain brands. This finding supports the argument that consumers with greater purchasing power may focus more on quality, reliability, and brand prestige rather than only affordability (Gonen et al., 2024; Gajda et al., 2025). However, the absence of significant interaction effects for other brands suggests that perceived value operates similarly across different income groups for many bottled water alternatives. This implies that while income can strengthen the importance of perceived value for some brands, it does not universally alter the relationship between value perception and brand choice.

The findings regarding marketing strategy variables provide mixed evidence on the role of the Marketing Mix Theory. Product quality significantly influenced preferences for Kilimanjaro, Sayona, and Dew Drop, confirming the theoretical argument that superior product attributes create differentiation and competitive advantage in markets where products appear similar (Thomran et al., 2022; Setyowati et al., 2025). Likewise, price strategy positively influenced several brands,

including Uhai, Afya, Masafi, Sayona, and Dew Drop, supporting previous studies that price remains an important consideration in consumer decision-making, particularly in markets where customers compare affordability with expected benefits (Kewo & Indrasari, 2025). Promotion also emerged as an important determinant of brand choice for several brands, supporting the Marketing Mix Theory's proposition that communication strategies help create awareness, attract customers, and strengthen purchase intentions (Rehman et al., 2022; Ahmed et al., 2024). However, the insignificant effect of distribution on brand preference contradicts some empirical studies that identify availability as a major driver of consumer choice (Mookherjee et al., 2024). A possible explanation is that bottled water has become a highly accessible product in Dar es Salaam, with most major brands being available across retail outlets; therefore, availability may no longer provide sufficient differentiation among competing brands. This suggests that in highly competitive markets, firms may gain greater advantage through improving perceived quality, trust, and brand positioning rather than relying solely on distribution expansion.

The findings related to brand image, brand trust, and socioeconomic characteristics further demonstrate the importance of both psychological and demographic factors in explaining customer choice. The positive influence of brand image and brand trust on preferences for Kilimanjaro, Sayona, and Dew Drop supports Brand Equity Theory, which argues that strong brands reduce consumer uncertainty and increase the likelihood of purchase (Reitsamer & Brunner-Sperdin, 2021; Dwivedi & McDonald, 2025). In particular, the importance of trust is expected in bottled water consumption because consumers cannot easily verify safety and quality at the point of purchase, making brand reputation an important signal of reliability (Ling et al., 2023). The results also show that income, education, age, and gender influence brand preferences, supporting consumer behaviour studies that emphasize the role of socioeconomic characteristics in shaping purchasing decisions (Gajda et al., 2025; Ogundijo et al., 2022). Higher-income consumers were more likely to prefer certain brands, suggesting that purchasing power enables consumers to select brands associated with higher perceived value or stronger reputation. Similarly, education positively influenced preferences for some brands, which may indicate that more educated consumers are more likely to evaluate brand attributes such as quality, safety, and credibility. Nevertheless, the limited influence of gender suggests that bottled water consumption may be largely driven by functional and quality-related considerations rather than gender-specific preferences.

Thus, the findings provide strong empirical support for the combined theoretical framework integrating Consumer Decision-Making Theory, Marketing Mix Theory, and Brand Equity Theory. The results confirm that customer choice in the bottled water market is not determined by a single marketing factor but by the interaction between perceived value, strategic marketing activities, brand-related perceptions, and consumer characteristics. The significant role of perceived value demonstrates that consumers do not simply respond directly to marketing strategies; rather, they interpret these strategies through their perceptions of quality, trust, and overall benefits before making purchase decisions. However, some findings, particularly the limited influence of distribution, packaging in some cases, and brand awareness after controlling

for other factors, suggest that theoretical relationships may vary depending on market conditions and product characteristics. Therefore, this study contributes to the existing literature by showing that in the Dar es Salaam bottled water market, competitive advantage is increasingly shaped by intangible factors such as perceived value, trust, and brand image, alongside traditional marketing mix elements. These findings imply that bottled water companies should prioritize building strong brands and delivering consistent quality experiences rather than relying exclusively on price competition or promotional activities.

Conclusion

The study concludes that marketing strategy plays a significant role in shaping customer choice among bottled water brands in Dar es Salaam, although its influence operates largely through consumers' perceived value of the brands. The findings demonstrate that product quality, brand trust, brand image, and brand awareness are the major factors influencing perceived value, while perceived value itself significantly increases the likelihood of customers selecting leading bottled water brands such as Uhai, Kilimanjaro, Masafi, and Dew Drop. The results further show that specific marketing strategy dimensions, particularly product quality, price strategy, promotion, packaging, brand image, and brand trust, influence customer preferences differently across brands. In addition, socioeconomic characteristics such as income, age, and education contribute to variations in customer choices. Therefore, customer choice in the bottled water market is shaped by a combination of functional product attributes, psychological brand perceptions, marketing activities, and consumer characteristics rather than by a single factor.

Based on these findings, bottled water companies should prioritize strategies that strengthen consumers' perceived value by maintaining high product quality, ensuring safety standards, and consistently communicating reliability to customers. Companies should invest in building strong brand trust and positive brand images through transparent communication, effective customer engagement, and consistent delivery of quality products. Since perceived value was found to be a key determinant of brand choice, firms should focus on creating a clear value proposition that differentiates their brands from competitors. Promotional strategies should also be improved by adopting targeted marketing approaches that consider differences in consumer characteristics, particularly income and demographic variations. Furthermore, companies should develop pricing strategies that balance affordability with perceived quality, ensuring that premium positioning does not exclude price-sensitive consumers. Although distribution was not a significant determinant in this study, firms should continue maintaining efficient supply networks because product availability remains necessary for sustaining customer satisfaction and market presence.

For policymakers and industry stakeholders, the findings highlight the importance of maintaining strong quality assurance systems within the bottled water industry to protect consumers and promote fair competition among producers. Regulatory institutions should continue strengthening monitoring mechanisms to ensure that bottled water companies comply with safety and quality requirements, as consumer trust is closely linked to perceptions of product reliability. For researchers, future studies should consider expanding the investigation to other

regions of Tanzania and compare consumer behaviour across different market environments. Future research may also examine additional factors such as environmental concerns, digital marketing influence, customer loyalty, and sustainability practices, which are becoming increasingly important in consumer decision-making. A broader understanding of these factors would provide more comprehensive insights into the changing dynamics of the bottled water market.

Despite providing useful insights, this study has several limitations that should be considered when interpreting the findings. First, the study employed a cross-sectional research design, meaning that data were collected at one point in time; therefore, changes in consumer preferences and marketing strategies over time could not be captured. Second, the study focused only on selected districts of Dar es Salaam, namely Ilala, Temeke, and Ubungo, which may limit the generalizability of the findings to other regions with different socioeconomic and market conditions. Third, the study relied on self-reported information from respondents, which may be affected by personal perceptions, recall bias, or social desirability bias. Finally, although the study incorporated major marketing strategy and socioeconomic variables, other potential factors such as environmental awareness, health concerns, digital marketing exposure, and consumer loyalty were not included and may provide additional explanations of bottled water brand choice in future studies.

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