Effect of Product Packaging on Consumer Buying Behavior: An Econometric Case Study of Jambo Drinking Water, Nyegezi Ward, Mwanza City, Tanzania

Beatrice Masesa [a], David Haruna Mrisho [b*] and Laurent Masui [a]

[a] Department of Human Resources, Procurement and Marketing, St. Augustine University of Tanzania, P. O. Box 307, Mwanza, Tanzania.
[b] Department of Public Relations and Advertising, St. Augustine University of Tanzania, P. O. BOX 307, Mwanza, Tanzania.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study explores the impact of product packaging on consumer buying behavior, focusing specifically on Jambo Drinking Water in Nyegezi Ward, Mwanza City, Tanzania. The research investigates two key aspects of packaging: design and convenience, using the AIDA (Attention,

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Corresponding author: Email: sangomrisho@yahoo.com;

Interest, Desire, and Action) model as a framework to understand how packaging influences consumer decision-making. A quantitative research approach was employed, with a population of 28,454 and a sample size of 379 respondents, determined using the Krejcie and Morgan table. Random sampling was used to ensure an equal chance of selection for all participants. Data was collected through questionnaires and analyzed using multiple regression analysis with SPSS version 20.0. The results revealed that packaging design significantly influences consumer choices, with a coefficient of 0.322, while convenience emerged as the most influential factor, positively affecting buying behavior. The study found that packaging plays a crucial role in capturing consumer attention and stimulating interest and desire, ultimately driving action. The findings suggest that Jambo Group of Companies should focus on improving packaging design and enhancing convenience to better align with consumer preferences. Limitations of the study included challenges in respondent engagement and time constraints. Based on these findings, recommendations include ongoing improvements in packaging strategies and greater collaboration across departments within Jambo Group of Companies to enhance product appeal and customer satisfaction.

1. INTRODUCTION

The evolution of product packaging has been significantly shaped by the industrial revolution, which introduced mass production and set the stage for the modern packaging industry. With the advent of globalization, the demand for standardized, innovative packaging materials, designs, and shapes grew, driven by the need for product differentiation, brand recognition, and sustainability (Pelet et al., 2020; Abubakar et al., 2019; Octoriana et al., 2022). In the context of Africa, particularly in the East African region, the growth of innovative and sustainable packaging practices became more pronounced in the mid-20th century. The industrial revolution spurred urbanization, which, in turn, led to a surge in the consumption of packaged drinking water. The adoption of alternative packaging materials such as PET plastic played a crucial role in addressing logistical challenges and environmental concerns, while also ensuring the integrity of products across diverse geographic regions (Amad, 2022; Hwang & Oh, 2020; Martinez et al., 2021).

In Tanzania, water was traditionally sourced directly from natural bodies such as springs, wells, lakes, and the ocean. However, the introduction of packaged drinking water presented new opportunities for companies to cater to local tastes and appeal to an expanding consumer base (Zhao et al., 2021; Mabanda et al., 2021). Specifically, in Mwanza City, the availability of packaged drinking water—largely sourced from Lake Victoria—became essential for various purposes, including domestic, agricultural, industrial, and socio-economic development. As urban populations grew and technology advanced, so did the demand for water, spurring the emergence of numerous packaged water brands. Notable brands such as Kilimanjaro, Afya, Dasani, Dew Drop, Jambo, and Aqua Water became widely available in different sizes, shapes, price points, and quality, allowing consumers to quickly identify their preferred choices (Alatas et al., 2023; Fu et al., 2023).

Jambo Drinking Water, a well-established local brand produced by Jambo Foods and Products Company in Shinyanga, Tanzania, has seen significant expansion across the Lake Zone regions, including Mwanza, Shinyanga, Simiyu, Mara, Kagera, and Geita. The company's commitment to ensuring the availability and accessibility of its products has been facilitated through direct delivery to key accounts such as supermarkets and restaurants, ensuring consistent access for households, businesses, and institutions alike.

Packaging plays a vital role in capturing consumer attention, not only serving as a protective barrier but also as a key marketing tool that influences consumer perceptions and encourages repeat purchases (Kolter, 2019; Amad, 2022). The increase in urban population and the impacts of climate change, particularly higher temperatures, have intensified the demand for packaged drinking water. In addition, growing health consciousness and the inadequacy of safe drinking water in some areas have led to increased scrutiny of plastic packaging (Mpandiko, 2022; Nahimana, 2023). While numerous studies have examined product

packaging in the context of fast-moving consumer goods (FMCGs), particularly within the food and beverage industry, limited research has been conducted on packaging in the bottled water sector, especially in developing countries like Tanzania (Mabanda et al., 2021; Martinez et al., 2021; Hwang & Oh, 2020). This gap highlights the need for focused research on the specific context of drinking water packaging in Tanzania, particularly within the rapidly evolving and increasingly competitive market.

This paper aims to fill this gap by investigating the role of product packaging in the Tanzanian bottled water industry, exploring its impact on consumer behavior, brand perception, and the sustainability of packaging materials. Through this focused study, we seek to contribute to the broader discourse on packaging in the African context and offer insights that may guide future industry practices.

2. LITERATURE REVIEW

2.1 Theoretical Framework

This study is grounded in the AIDA Model Theory, which serves as a framework to understand the relationship between consumer purchasing behavior and product packaging. The AIDA model, introduced by American advertising pioneer E. St. Elmo Lewis, provides a structured approach to guiding consumers through the decision-making process. The model emphasizes four key stages: Attention, Interest, Desire, and Action. While Lewis is often credited with popularizing the model, its development was influenced by various contributors over time.

The AIDA model suggests that consumers are logical decision-makers who can be persuaded by marketing messages tailored to their needs and preferences. The model posits that consumers go through a linear progression from Attention to Interest, Desire, and ultimately Action. It provides clarity in understanding consumer behavior and allows marketers to design campaigns that engage potential buyers at each stage of the purchasing journey. Although the AIDA model is often applied across various marketing channels, including digital platforms and social media, it assumes a straightforward progression that does not account for the complexity of consumer behavior, which is influenced by numerous factors beyond the linear framework proposed by the model.

2.2 Empirical Literature Review

Numerous studies have examined the impact of product packaging and consumer behavior across various industries, particularly focusing on the food and beverage sector. For instance, Wan et al. (2019) explored the relationship between product variety and consumer purchase behavior, using a sample of 188 respondents. Their study revealed that while the initial impact of product variety on sales was positive, the effect diminished as product variety increased. The study suggested that offering a diverse range of products could attract a broader customer base and increase overall sales, highlighting the importance of packaging in driving consumer choice.

In the context of Tanzania, Mpandiko (2022) investigated the role of product information and packaging in the marketing of processed maize flour. Using a sample of 96 small and medium-sized millers in Dodoma City, the study found that product information, including packaging material, significantly influenced the marketing of processed maize flour. This study underscores the importance of packaging in influencing consumer perception and purchasing decisions, particularly in emerging markets.

Singh et al. (2019) examined the influence of retail environment components, customer mood, and satisfaction on consumer re-patronage intentions in India, incorporating product quality into the analysis. Their study, which surveyed 367 respondents, revealed that customer satisfaction and loyalty were positively correlated, with product quality playing a significant role in shaping consumer preferences. The findings suggest that packaging, as a component of product quality, can influence customer loyalty and repeat purchases.

Makassy et al. (2020) explored factors influencing Chinese consumers' intentions to patronize restaurants, focusing on the role of service quality. Using a sample of 329 restaurant guests in Jiangsu Province, China, the study found that customer satisfaction, perceived value, and restaurant image were positively correlated with service quality. The findings indicate that packaging, as part of the service offering, can influence consumer behavior and contribute to overall satisfaction. Fatimah (2020) examined the influence of usefulness, ease, trust, and convenience on customer behavior and decision-making in Indonesia, using a

quantitative research approach. The study found a positive relationship between these factors and customer behavior, emphasizing the role of convenience in driving consumer choices. While not directly related to packaging, this study highlights the importance of consumer convenience, which can be influenced by packaging design and functionality.

Sudirjo et al. (2023) studied the impact of perceived benefits, ease of use, and sales promotion on consumer decisions to adopt digital wallets. While not directly addressing packaging, their findings suggest that ease, utility, and promotions are significant factors in consumer decision-making. This study reinforces the idea that convenience, a key aspect of packaging, plays a critical role in influencing consumer purchasing behavior. In Spain, Theben et al. (2020) investigated the effect of packaging color and health claims on consumer attitudes and buying intentions. Their study, which included 71 respondents, found no significant evidence that color or health-related claims influenced consumer attitudes toward the product. This finding suggests that while packaging is important, other factors, such as the actual product content and quality, may have a more significant impact on consumer behavior.

Ahmad et al. (2021) explored the influence of packaging components on consumer purchasing decisions in Pakistan, focusing on both food and non-food items. Their study, which included 384 respondents, revealed that packaging components such as color, design, material, printed information, and innovation significantly influenced consumer decisions. This study emphasizes the importance of packaging in driving consumer purchasing behavior across a range of product categories. Mbura et al. (2020) examined the role of social media in influencing youth purchasing behavior in Tanzania, specifically focusing on soft drinks. The study, which involved 80 respondents, found that content and awareness on social media significantly influenced youth purchasing behavior. While not directly related to packaging, the study highlights the importance of product presentation and consumer engagement, which can be influenced by packaging strategies.

2.3 Conceptual Framework

The conceptual framework for this study illustrates the relationship between the independent and dependent variables that underpin the investigation of product packaging

and consumer buying behavior. In this framework, *product packaging* serves as the independent variable, encompassing key elements such as *packaging design* and *convenience*. These aspects are considered critical in influencing consumer perceptions and purchasing decisions.

On the other hand, the *dependent variable* is *consumer buying behavior*, which is influenced by various factors related to packaging. This includes consumer *surveys and feedback*, which reflect consumer attitudes and satisfaction levels regarding the packaging; *purchase choice*, which refers to the decision-making process where consumers select a particular product based on packaging attributes; and *repeat purchase*, which assesses consumer loyalty and the likelihood of purchasing the same product again due to positive experiences with the packaging.

This framework underscores the importance of packaging as a strategic tool that impacts consumer behavior, suggesting that effective packaging design and convenience can positively influence purchase decisions and foster brand loyalty, thereby driving repeat purchases. By examining these relationships, the study aims to provide a comprehensive understanding of how packaging elements influence consumer behavior in the bottled water industry, particularly within the Tanzanian market.

2.4 Research Methodology

2.4.1 Philosophical approach

This study adopted a Positivist Research Philosophy, selected for its appropriateness given the study's scope, which involves a large number of respondents. Positivism was chosen because it aligns with the study's objective of minimizing bias by focusing on objective data collection and analysis rather than subjective assumptions about reality (Saunders et al., 2019).

2.5 Research Design

The quantitative research design was employed to collect data from a large sample, facilitating broader representation and enabling precise measurement and analysis of the variables under investigation. This approach was particularly suited for the study as it allowed for empirical insights into the research questions, which were grounded in measurable and observable data (Kirongo et al., 2020).
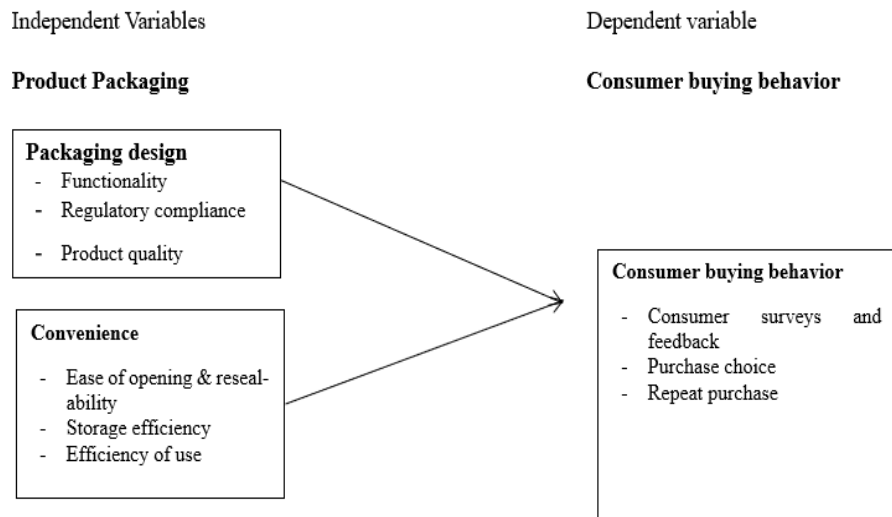
Fig. 1. Conceptual model
Source: Researcher (2024)

2.6 Study Area and Target Population

The study was conducted within Nyegezi Ward in Mwanza City, Tanzania, specifically covering a 100-meter stretch along the road from Kamanga Hospital to Nyegezi Bus Terminal. The choice of this location was based on the high foot traffic volume in the area, which provided an ideal setting for engaging with both consumers and retailers of drinking water. Nyegezi Urban Ward, with a population of 28,454 according to the Tanzania National Census Report (2022), was the focal point for the study. The target population consisted of both consumers and retailers of bottled water within this area, making it a representative sample of the larger community.

2.7 Sample Size and Sampling Technique

The sample size for the study was determined using Krejcie and Morgan's (1970) statistical table, resulting in a sample size of 379 respondents. This sample size was selected to ensure statistical reliability and adequate representation of the target population (Mohajan, 2020). The study utilized a Probability Sampling technique, specifically simple random sampling, to ensure that every member of the population had an equal chance of being selected. This approach minimized sampling bias and improved the generalizability of the study's findings.

2.8 Data Collection Method

Data for the study was collected through structured questionnaires, which were administered to participants to gather relevant and accurate information on consumer buying behavior. The use of questionnaires facilitated the efficient collection of data that aligned with the research goals (Rita et al., 2022).

2.9 Data Analysis

To analyze the data, multiple regression analysis was conducted using SPSS software (version 20.0). This statistical technique was employed to estimate the coefficients of the dependent variable, *consumer buying behavior*, based on the known values of the independent variable, *product packaging*. The regression analysis enabled the study to identify the relationships between packaging attributes and consumer behavior indicators, such as purchase choices and repeat purchases.

3. RESULTS

3.1 Demographic Characteristics

This section presents the socio-economic characteristics of the study's respondents. Data was collected on various demographic factors, including gender, age, marital status, and educational background. The following Table 1 provides a summary of the respondents' demographic information.

This section outlines the socio-economic profiles of the study's 304 respondents, encompassing gender, age, marital status, and educational background (see Table 1).

Table 1. Demographic characteristics

Characteristics	Category	Frequency	Percentage
Gender	Female	160	52.6
	Male	144	47.4
	Total	**304**	**100.0**
Age	Below 25 years	44	14.5
	25-35 years	96	31.6
	36-45 years	118	38.8
	Above 45 years	46	15.1
	Total	**304**	**100.0**
Marital Status	Single	105	34.5
	Married	168	55.3
	Divorced	12	3.9
	Widow	19	6.3
	Total	**304**	**100.0**
Education	No formal education	93	30.6
	Primary education	58	19.1
	Secondary education	52	17.1
	Diploma	32	10.5
	Degree	64	21.1
	Masters	5	1.6
	Total	**304**	**100.0**

Source: Field Data (2024)

Gender: A majority of the respondents were female, comprising 52.6% (160) of the sample, compared to 47.4% (144) male respondents. This indicates a slightly higher female participation rate by 5.2%.

Age: The age distribution revealed that 38.8% (118) of respondents were aged between 36-45 years, making it the largest age group. This was followed by 31.6% (96) aged 25-35 years, 15.1% (46) above 45 years, and 14.5% (44) below 25 years. The predominant participation of the 36-45 age group suggests their significant presence in the consumer base.

Marital Status: Most respondents were married, accounting for 55.3% (168) of the sample. Single individuals comprised 34.5% (105), widows 6.3% (19), and divorced respondents 3.9% (12). The high percentage of married participants reflects the demographic composition of the consumer population in Nyegezi Ward.

Educational Background: Educational attainment varied among respondents, with 30.6% (93) having no formal education, 21.1% (64) holding a degree, 19.1% (58) having primary education, 17.1% (52) with secondary education, 10.5% (32) possessing a diploma, and 1.6% (5) holding a master's degree. The largest group without formal education highlights the diverse educational levels within the consumer market.

Overall, the demographic data indicates a diverse respondent base in terms of gender, age, marital status, and education, providing a comprehensive overview of the consumer landscape for Jambo Drinking Water in Nyegezi Ward, Mwanza City.

3.2 Normality Tests

The normality assumption is fundamental in multiple regression analysis, as it ensures that the residuals of the dependent variable are normally distributed. This assumption facilitates accurate prediction and reliable inference, which are essential for the validity of the regression estimates. Violations of normality can lead to biased coefficients, unreliable standard errors, and invalid significance tests, thereby undermining the overall integrity of the analysis.

To evaluate the normality of the data, the Skewness-Kurtosis test was employed, as detailed in Table 2. This test assesses the symmetry (skewness) and the peakedness (kurtosis) of the data distribution. A normal distribution is characterized by a skewness value close to zero and a kurtosis value around three. Significant deviations from these values indicate departures from normality, suggesting that the data may not meet the necessary assumptions for reliable regression analysis.

Table 2. Normality assumption

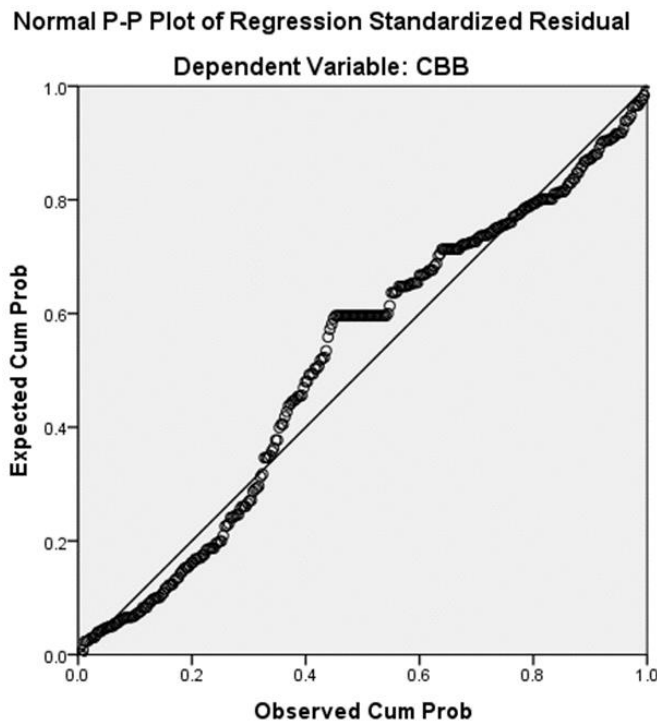|	N	Minimum	Maximum	Skewness		Kurtosis	
	Stat	Stat	Stat	Statistic	Std. Error	Statistic	Std. Error
MI	304	6	15	-.597	.140	.771	.279
PD	304	6	15	-.713	.140	.395	.279
PC	304	7	15	-.651	.140	.209	.279
CBB	304	7	15	-.301	.140	-.378	.279
Valid N (listwise)	304						

Source: Field Data (2024)

Fig. 2. Homoscedasticity Test
Source: Field Data (2024)

Based on the results presented in Table 2, the Skewness-Kurtosis test indicated that all variables were normally distributed, as their values fell within the acceptable range. According to established standards, a Skewness-Kurtosis test is considered acceptable when the values lie within ± 2.58. The data collected in this study confirmed this criterion, as the Skewness-Kurtosis values for all variables were within the recommended range, validating the assumption of normality for the analysis.

3.3 Homoscedasticity Test

The homoscedasticity assumption posits that the variance of errors should remain constant across all levels of the independent variables, ensuring that the spread of residuals is uniform. This assumption is crucial for the validity of regression analysis, as unequal error variance (heteroscedasticity) can lead to inefficient estimates and unreliable statistical inferences.

To test for homoscedasticity, a scatter plot of standardized residuals versus predicted values was generated. This visual assessment allows for the detection of any patterns in the residuals that may indicate non-constant variance. As shown in Fig. 2, the plot confirmed that homoscedasticity was satisfied, with the residuals being randomly scattered around zero, suggesting consistent variance across all levels of the independent variables. This finding supports the reliability of the regression analysis and ensures that the results are not biased by issues of heteroscedasticity.

Table 3. Pearson correlation analysis

		Material Innovation	Packing Design	Convenience	Customers Buying Behavior
Material Innovation	Pearson Correlation	1	.239**	.180**	.226**
	Sig. (2-tailed)		.000	.002	.000
	N	304	304	304	304
Packing Design	Pearson Correlation	.239**	1	.539**	.252**
	Sig. (2-tailed)	.000		.000	.000
	N	304	304	304	304
Packaging Convenience	Pearson Correlation	.180**	.539**	1	.342**
	Sig. (2-tailed)	.002	.000		.000
	N	304	304	304	304
Customers Buying Behavior	Pearson Correlation	.226**	.252**	.342**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	304	304	304	304

**. Correlation is significant at the 0.01 level (2-tailed)
Source: Field Data (2024)

The homoscedasticity assumption was statistically validated through the scatter plot, which shows the residuals aligned along the horizontal line. Homoscedasticity is considered satisfied when the residuals are closely clustered around this horizontal line, indicating constant error variance. As observed in Fig. 2, the residuals are indeed close to the horizontal line, suggesting three key points: first, the data exhibit constant variance of errors; second, the mean of the errors is zero; and third, the model effectively captures and represents the relationship between the independent and dependent variables. This confirms the validity of the regression model's assumptions.

3.4 Correlation Analysis

The purpose of correlation analysis in this study was to test the linear relationship between the independent and dependent variables. This assumption is crucial, as a linear relationship between the variables ensures the validity of regression analysis; any deviation from linearity could result in biased regression estimates, such as incorrect coefficients, standard deviations, and significance tests. To assess the linearity of the relationship, Pearson correlation was computed. This statistical method helped to establish the strength and direction of the relationship between the independent and dependent variables, providing key insights into their interdependencies.

From the results presented in Table 3, a very strong relationship is observed between the dependent and independent variables, as indicated by the significant p-values ($p < 0.01$). Specifically, the correlation between customer buying behavior and packaging design is significant ($r(304) = 0.239$, $p < 0.01$), suggesting a relationship between the two. Additionally, customer buying behavior was found to be significantly related to packaging convenience and usability features ($r(304) = 0.180$, $p < 0.01$), indicating that these packaging aspects influence purchasing decisions. Lastly, the relationship between customer buying behavior and other independent variables also showed significance ($r(304) = 0.226$, $p < 0.01$), further supporting the integration of packaging features in shaping consumer behavior.

3.5 Regression Analysis

3.5.1 ANOVA test

Table 4. ANOVA test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.671	3	31.224	17.312	.000[b]
	Residual	541.063	300	1.804		
	Total	634.734	303			

Source: Field Data (2024)

Table 5. Coefficients test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.981	.818		7.313	.000
	Material Innovation	.143	.049	.160	2.910	.004
	Packaging Design	.061	.062	.064	.992	.322
	Packaging Convenience	.270	.061	.279	4.398	.000

Source: Field Data (2024)

3.5.2 Regression test (ANOVA)

An Analysis of Variance (ANOVA) test was conducted in this study to assess the interaction effects between variables within the group and to confirm the validity of further analysis. A one-way ANOVA test was applied, and the results indicated a significant relationship between the variables. The F-test produced a value of 17.312, with a significance level of $p < 0.000$, confirming that the variables in the study are related to one another and that the model is appropriate for further analysis.

3.6 Coefficients

The coefficients section of the regression analysis was conducted to examine the effects of product packaging on customer buying behavior. The findings obtained from this analysis are summarized and presented in Table 5.

From the results presented in Table 5, material innovation was found to have a significant effect on customer buying behavior, with a coefficient of (β = 0.160, p < 0.004). Packaging design, however, showed a weaker relationship (β = 0.064, p < 0.322), indicating no significant impact. On the other hand, packaging convenience and usability features had a strong significant effect (β = 0.279, p < 0.000). These findings suggest that there is an interaction between the independent variables, as all coefficients fall within the acceptable range (0 to 1), indicating valid relationships for further analysis.

4. DISCUSSION OF FINDINGS

The primary aim of this study was to explore the influence of packaging design on consumer buying behavior, specifically focusing on Jambo Drinking Water in Mwanza City, Tanzania. The findings revealed that packaging design plays a critical role in shaping consumer preferences and purchase decisions.

One of the key findings was that 84.8% of respondents affirmed that ease of handling and use significantly impacted their decision to purchase Jambo Drinking Water. This suggests that consumers value packaging that is easy to open, carry, and reseal, which enhances the overall convenience of using the product. Furthermore, 80.6% of respondents highlighted the importance of clear and accurate product information, which enables consumers to make more informed purchasing decisions. This finding supports the idea that consumers today are not only influenced by product quality but also by the clarity and transparency provided through packaging.

In addition to convenience and information, the consistent quality of Jambo Drinking Water, as conveyed through its packaging, emerged as another key factor. A total of 76.3% of respondents reported that the quality of the product, reflected in its packaging, influenced their purchasing decisions. This aligns with previous studies that emphasize the relationship between product quality and consumer perceptions (Sung, 2021; Singh et al., 2019). The data supports the notion that a well-designed package serves not only as a protective barrier but also as a signal of quality, which directly influences consumer confidence and loyalty.

These results are consistent with findings from other studies in various industries. For instance, research by Fatimah (2020) and Mbura et al. (2020) demonstrates that packaging functionality and ease of use are vital factors in shaping consumer behavior. Similarly, Singh et al. (2019), Makassy et al. (2020), and Le et al. (2021) also found that packaging design, including ease of handling and the presentation of information, significantly affects consumer purchasing decisions. This further validates the argument that packaging design is a crucial aspect influencing consumer choices across different industries, not just in the bottled water sector.

5. SUMMARY OF FINDINGS

This study found that packaging design significantly influences consumer buying behavior for Jambo Drinking Water. Three key factors—functionality, regulatory compliance, and consistent quality—emerged as critical drivers in shaping consumer preferences.

Functionality: A substantial proportion of respondents (84.8%) indicated that ease of handling and use enhanced their purchasing decision, emphasizing the importance of convenient packaging features such as easy opening and resealing.

Regulatory Compliance: The study also found that 80.6% of respondents believed that adherence to packaging regulations positively impacted their perception of the product's quality and safety. This highlights the role of packaging compliance in building consumer trust and confidence.

Consistent Quality: The consistency of the product, as reflected in its packaging, was another important factor, with 76.3% of respondents stating that it influenced their purchasing behavior. This suggests that consumers associate packaging with product quality and reliability.

Convenience: Convenience emerged as a central theme in the findings, with 80.9% of respondents affirming that packaging features

such as ease of opening and storage influenced their choice. This is consistent with consumer expectations in today's fast-paced environment, where time-saving features are highly valued.

Overall, the study confirmed that Jambo Drinking Water's packaging design, which focuses on functionality, regulatory compliance, and consistent quality, plays a crucial role in influencing consumer buying behavior. The data underscores the importance of packaging as a powerful marketing tool that shapes consumer perceptions and drives purchasing decisions.

6. CONCLUSION OF THE STUDY

The study concluded that packaging design has a significant and positive impact on consumer purchasing decisions, with functionality, regulatory compliance, and consistent quality being key influencing factors. A substantial portion of respondents (84.8%) recognized that ease of handling and use, coupled with clear product information, significantly enhances their buying decisions. Moreover, the consistent quality of Jambo Drinking Water, as reflected in its packaging, was found to be a critical factor for 76.3% of respondents.

Convenience features, such as ease of opening, portability, and efficient storage, were also important determinants of consumer behavior, with 80.9% of respondents agreeing that these features made Jambo Drinking Water their preferred choice. These findings demonstrate that consumers prioritize packaging that offers convenience and reflects the quality and safety of the product.

The study also revealed that compliance with packaging regulations, which impacts perceptions of product quality and safety, further strengthens consumer confidence in the brand. This indicates that consumers are increasingly aware of the importance of regulatory compliance and environmental sustainability in their purchasing decisions.

7. RECOMMENDATIONS

Based on the findings, several recommendations can be made to enhance Jambo Drinking Water's market appeal:

User-Friendly Packaging Design: Jambo Drinking Water should continue to prioritize convenient and ergonomic packaging features, such as easy handling, resealing, and opening,

which directly influence consumer purchasing behavior. By enhancing the user experience, the brand can differentiate itself in the competitive bottled water market.

Leverage Packaging as a Marketing Tool: The brand should use packaging as a strategic marketing tool by incorporating visually appealing designs, clear and informative labeling, and sustainable packaging materials. This will not only attract new customers but also reinforce brand loyalty among existing consumers.

Highlight Quality and Safety: Marketing efforts should emphasize the consistent quality and safety of Jambo Drinking Water, as these factors significantly influence consumer confidence. Packaging should effectively communicate the brand's commitment to quality, regulatory compliance, and environmental responsibility.

Convenience and Accessibility: Given the importance of convenience in consumer buying behavior, Jambo Drinking Water should optimize packaging for portability, ease of storage, and accessibility. Expanding distribution channels to reach remote areas and offering online purchasing options will further enhance consumer convenience.

Sustainability: As consumers become more environmentally conscious, Jambo Drinking Water should consider using eco-friendly materials in packaging to appeal to the growing demand for sustainable products. Highlighting these efforts in marketing campaigns can help position the brand as a responsible and forward-thinking company.

7.1 Areas for Further Study

While this study focused on Jambo Drinking Water in Mwanza, further research could explore similar consumer behavior patterns in different regions and across other product categories. Future studies could apply qualitative research methods, such as in-depth interviews or focus groups, to gather more nuanced insights into consumer attitudes toward packaging design. Additionally, comparing consumer preferences for bottled water packaging with those of other beverage products would provide a broader understanding of the factors influencing packaging choices.

Another area for future research is to investigate the role of sustainability in packaging design and

how it influences consumer buying behavior in emerging markets. As the global focus on environmental issues increases, understanding the relationship between eco-friendly packaging and consumer decision-making will be crucial for brands aiming to stay competitive in the marketplace.

7.2 Ethical Considerations

Ethical considerations were a priority throughout the research process. To ensure participant privacy, all data collected was securely stored, with access restricted to authorized personnel only. Anonymity was maintained by assigning unique identifiers to participants rather than using personal information in the reporting or dissemination of results. Transparency was upheld throughout the study, with clear communication regarding any affiliations or funding sources. Efforts were made to mitigate any potential biases or conflicts of interest that could influence the research process or outcomes.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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