RESEARCH ARTICLE

Exploring Consumer Preferences for Locally Produced Wine in the Tanzanian Market: Evidence from Wine Consumers in Dodoma City

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Abstract: In most grape-producing countries, the local wine industry faces intense competition due to the introduction of new foreign wines into the local market and changes in wine consumption and consumer preferences for wines. The same has been observed in the Tanzanian wine industry. The study aims to explore the dynamics of consumer preferences toward locally-produced wine. Data were collected from 200 respondents in Dodoma town through snowball and convenience sampling. Qualitative and quantitative types of data were used. Primary data were collected in the field using field observations, a key informant interview checklist, and structured questionnaires using KoBoToolbox. Secondary data were collected by reviewing different published and unpublished materials, such as reviews and reports regarding consumer preferences for local wine. The research revealed that most consumers consider color, taste, income, brand, and price attributes when selecting wines. Furthermore, the study observed that age, income, marital status, price, wine color, packaging and taste significantly influenced consumers' preference for purchasing locally produced wines compared to other factors included in the model. However, attributes such as geographical origin, vintage and grape variety were not considered in the selection of the wines. The study recommends that local wine producers consider consumers' preferred attributes to increase sales. Local marketers and brand managers should also formulate and employ several positioning, market segmentation and targeting strategies that can help them compete effectively with imported wines.

Keywords: Consumer preference; Consumer behaviour; Consumer perception; Wine markets; Dodoma; Tanzania

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1. Introduction

Grapes are the most common fruit used for winemaking, although other fruits such as berries, apples, kiwis, peaches, apricots and strawberries can also be used [1]. Grapes are one of the most produced fruit crops in the world, with an annual production of around 75 million tonnes, of which about 35% is used for fresh consumption, 50% for winemaking, and the remainder is dried or consumed as grape juice or preserved as grape must [2]. In 2020, grape production was estimated at 78,034,332 metric tons, with China being the most prominent grape producer, accounting for 18.9% of the global output [3]. South Africa is the leader in wine and grape production in Africa, followed by Egypt and Tunisia [4]. Tanzania is the second largest wine producer in sub-Saharan Africa after South Africa. During the 2022/2023 period, the country produced 16,077 tonnes of grapes, according to the Ministry of Agriculture [4]. Dodoma is the main grape-growing region of the country, but recent research shows that grapes can grow well in other areas of Tanzania, such as Morogoro, Kilimanjaro, Tanga, Tabora and Manyara①

In most grape-producing countries, the local wine industry faces strong competition due to the introduction of new foreign wines into the local market and changes in wine consumption and consumer preferences for different alcoholic drinks [5]. In a constantly competitive and evolving environment, productions are designed to create strategies and products adapted to the nature of existing consumers [6,7]. The presence of diverse consumer groups with enhanced knowledge, extensive choices, and proactive methods to procure products challenges producers to comprehend wine consumers' preferences, purchasing behaviours, attitudes, and desires. This understanding is crucial for identifying market segments and sustaining current and future business profitability [8,9].

Globalization has significantly influenced the world economy through increased interconnections among nations. This interconnectedness has facilitated the dissemination of diverse cultural practices, art, and ideas, thereby enriching the global cultural landscape. Consequently, it has led to a convergence of preferences and tastes across various products, including wines. As a result, consumers in developing nations, such as Tanzania, now seek comparable goods from more developed countries [10–12].

To boost the local wine market and dissuade con-

sumers from preferring foreign wines, the Tanzanian government has endeavoured to create a conducive environment for grape and wine production in the Dodoma region. This initiative has attracted private sector investments in wine production, notably from companies like CETAWICO and ALKO VINTAGE. Despite these endeavours, locally-produced wine continues to compete with imported varieties, leading to lower income for grape farmers.

Numerous studies on consumer preferences in Tanzania have centred around fruits and vegetables (such as oranges, watermelon, banana, tomatoes, and legumes), along with other categories of drinks, such as alcohol (beer and spirits) and soft drinks (soda and juices) [13–16]. However, there is limited literature, particularly in Dodoma, that specifically addresses the factors influencing consumers' preferences for locally produced wine. In this regard, the study aims to bridge this gap by exploring the dynamics of consumer preferences towards locally produced wine. Precisely, the study analyzed the attributes that consumers consider in wine selection, consumer perception toward locally-produced wine, and factors influencing consumer preference for locally-produced wine. The study also aimed to generate information and knowledge for domestic wine manufacturers, exporters, marketers, and other channel actors producing or wishing to initiate wine industries in Tanzania.

Figure 1 shows the conceptual framework for modelling consumer preferences for locally produced wine. This study hypothesizes that the consumer preferences for local wine were influenced by the independent variables: the attributes they consider in wine selection, their perception of local wine and factors such as income, price, geographic origin, packaging, advertisement, taste and vintage.

2. Study Area, Data and Methods

2.1 Location of the Study Area

The study was conducted in the Dodoma region, particularly in the regional capital which is Dodoma city, specifically for urban wine consumers. Dodoma Region is one of Tanzania's 31 administrative regions (Figure 2). The rationale for conducting the study in Dodoma is that Dodoma leads Tanzania in wine production, and a large number of people consume varieties of wine in the area. Additionally, with the relocation of state administrative activities to Dodoma, there has been an increase in urbanites, state officers, and workers, predominantly constituting the middle-

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① TanzaniaInvest. (2020). Tanzania Aims to Boost Grapes and Wine production
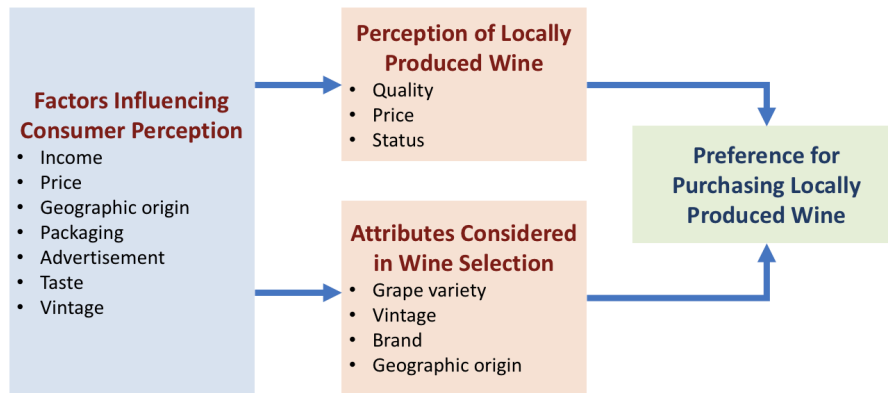
Figure 1. A conceptual framework for consumer preferences on locally produced wine.
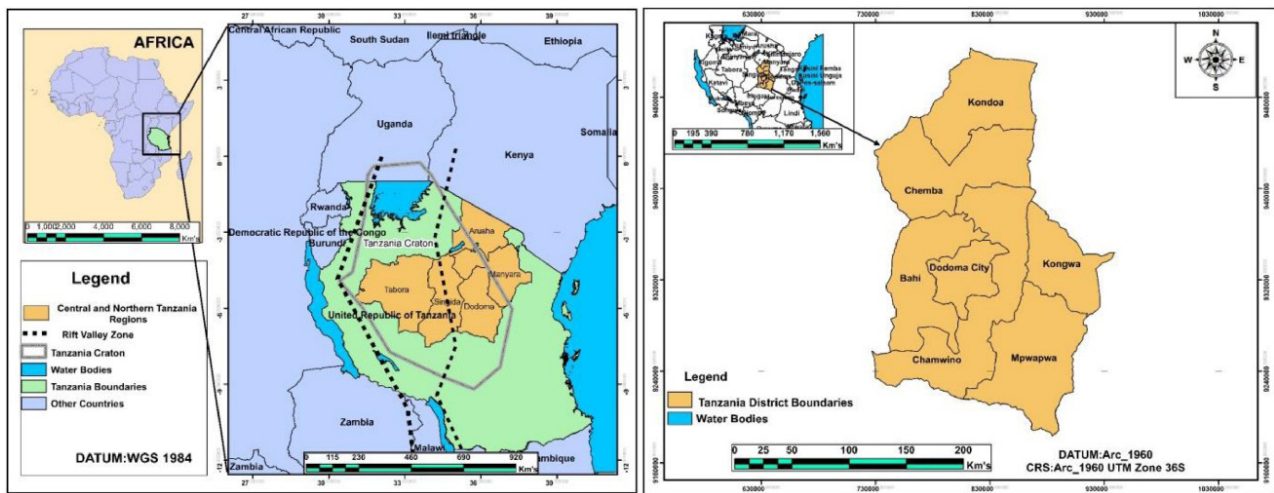

Figure 2. Tanzanian map depicting the geolocation of Dodoma region (left) and districts of Dodoma region (right).

income demographic. Consequently, these groups were anticipated to be significant consumers of wine.

The study area receives an average amount of rainfall of 570 mm per annum, having two seasons: a long dry season, which starts in April and ends in December and a short wet season, which starts in December to mid-April, and the average annual temperature ranges between 20 °C in July and 30 °C in November [18]. The area is favoured by good climatic conditions for grapes and wine production [19]. Different socio-economic activities occur in study areas, such as agriculture, small industries, fishing, and trade. In the study area, various social services are provided, like education, health and infrastructure services like roads, power supply and buildings that support storing and transporting grapes and wine from one place to another.

2.2 Data

The study employed a cross-section design to assess consumer preference for locally produced wines in Dodoma City. This design was selected as it enabled the collection of quantitative and qualitative data from a large population at a single point [21]. Female and male respondents aged 18 years and above who consumed either imported, local or both wines were involved in the study.

The study included qualitative and quantitative data. Both primary and secondary data sources were used. Due to the context of the study, this research used multiple data collection methods, including structured interviews, Focus Group Discussions (FGDs), and document reviews. At first, with the assistance of the Municipal Trade Officer, establishments such as shops, pubs, bars, and liquor stores selling wines (both local and imported) in Dodoma city were purposively identified. Using snowball and convenient sampling, 220 respondents were initially acquired. However, due to incomplete information from 20 respondents, they were excluded, leaving a total of 200 respondents who were used for analysis. A pilot study was undertaken to pre-test the questionnaire for the primary data collected to ensure validity.

2.3 Analytical Methods

The analysis employed both descriptive and inferential statistics to come up with exhaustive conclusions. Descriptive statistics like mean, standard deviation, percentages, frequencies, cross-tabulation, multiple responses, averages, minimum and maximum values and a Likert-scale (five-point) were employed in the study to analyze and compare the social demographic characteristics of respondents. The ordered probit model was employed to examine the factors influencing consumers' perception toward locally produced wine in the study area.

Econometric Model

The study adopted and modified the model used by Hair et al. [20], expressed as follows:

$$P(Y \leq j|X) = \Phi(\alpha j - \beta X)$$

(1)

whereby:

$P(Y \leq j|X)$ = Cumulative probability of the dependent variable Y is less than or equal to category j.

Φ = Standard normal cumulative distribution function (CDF).

αj = Threshold parameters or cut-points that define the boundaries between the ordinal categories.

β = Coefficients for the independent variables X.

The relationship between the variables is shown in the ordered probit model equation below:

$$Y = \Phi*\alpha j - \beta_1 AGE - \beta_2 EDUC - \beta_3 PACK - \beta_4 TASTE - \beta_5 BRAND - \beta_6 TOI - \beta_7 PRI - \beta_8 COL - \beta_9 GV - \beta_{10} ADV - \beta_{11} GO - \beta_{12} ACC - \beta_{13} VINT + \varepsilon$$

(2)

The definition and hypothesis of explanatory variables and dependent variables are summarized in Table 1.

The results obtained from the analysis were interpreted, and the gaps observed were addressed by using information from key informant interviews (KIIs). Open-ended questions and information from KIIs were analyzed using qualitative content analysis. The content analysis was used to create qualitative conclusions and interpretations and conclusions [21].

3. Results and Discussion

3.1 Descriptive Analysis of Respondents' Demographic Characteristics

Based on the information presented in Table 2, almost 55.5% of the interviewed respondents were female, whereas 45% were male. The study findings clearly show that most females select and consume wine over other alcoholic drinks. Likewise, the results show that most of the respondents who drink wine are aged 24–29 (47%). This implies that wine is a product for the younger age group compared to other age groups. The results confirm those of Frank (2022): "*Young people are drinking more wine than any other age group; they are drinking almost twice like baby*

Table 1. Description of independent and explanatory variables in the ordered probit model.

Variables	Code	Measurement of Variable	Expected Significance
Dependent			
Frequency of wine consumption	Y	0 = Rarely, 1 = Occasionally, 2 = Frequently	
Independent			
Age of respondent	AGE	Number of years	+/–
Education level	EDUC	Years of schooling	+
Total income per month	TOI	TZS	+
Packaging of wine	PACK	Dummy (1 = Yes, 0 = No)	+/–
Advertisement of wine	ADV	Dummy (1 = Yes, 0 = No)	+
Taste	TASTE	Dummy (1 = Yes, 0 = No)	+/–
Brand	BRAND	Dummy (1 = Yes, 0 = No)	+
Vintage	VINT	Dummy (1 = Yes, 0 = No)	+
Colour	COL	Dummy (1 = Yes, 0 = No)	+
Accessibility	ACC	Dummy (1 = Yes, 0 = No)	+/–
Grape variety	GV	Dummy (1 = Yes, 0 = No)	+/–
Geographical origin	GO	Dummy (1 = Yes, 0 = No)	+/–
Price	PRI	Dummy (1 = Yes, 0 = No)	–

boomers" [2].

On the other hand, the findings show that most respondents were single (61.5%) compared to those married (38.0%). This implies that those who are single consume more wine than married respondents because they have no family responsibilities and hence find themselves having more alone time compared to married people. Some respondents stated they are likely to consume wine because they are likely to enjoy it with friends and do not have partners who can follow them. People who are never married (Single), divorced or separated are likely to consume alcoholic drinks at a Level related to short-term and long-term risk compared to married people [22].

Regarding education, the findings show that the sample was predominantly made up of those with a university degree and above (60.5%), followed by a diploma/certificate (20.5%). This might imply that wine is a product for those who are well-educated. Professional people are likely to appreciate drinking different types of wine and champagne as they raise their social status compared to non-educated people who enjoy consuming low-class alcoholic drinks and beers [23]. Moreover, most respondents were self-employed (38.5%) as compared to other groups (Table 2). This implies that self-employed respondents have more time to drink and assess the best wine product than those who are fully employed or part-time, where most of their time is limited.

Regarding the income of the respondents, the results show that people with a monthly income of TZS 860,000 and above seem to consume more wine than other income groups. This implies that there is a direct relationship between income level and spending on wine, as its consumption is influenced by its associations with elegance, refinement and health benefits, which consumers seek in wine options.

3.2 Level of Consumer Knowledge of Local Wines

The study findings in Table 3 show the degree of knowledge among wine consumers regarding local wines in Dodoma City. This was determined using the five statements, whereby the mean of the fourth statement (low availability and few varieties) is 4.44, meaning that most respondents strongly agree that there is low availability and few varieties of local wine in the market. The study is in line with the report by Chanzo [3]

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[2] Frank.(2022).Which generation drinks the most wine
[3] The Chanzo. Government in Robust Initiative to Improve Tanzania's Wine Processing Sector

Table 2. Socio-demographic information of respondents (n = 200).

Variable	Category	Frequency	Percent (%)
Gender	Female	111	55.5
	Male	89	44.5
	Total	**200**	**100.0**
Age	18–23	29	14.5
	24–29	95	47.5
	30–35	46	23.0
	36 and above	30	15.0
	Total	**200**	**100**
Marital status	Married	76	38.0
	Single	123	61.5
	Divorced	1	0.5
	Total	**200**	**100.0**
Educational level	Primary level	8	4.0
	Secondary level	29	14.5
	Diploma/certificate level	41	20.5
	Degree level and above	121	60.5
	No formal education	1	0.5
	Total	**200**	**100.0**
Nature of occupation	Self-employment	77	38.5
	Full-time employment	69	34.5
	Part-time employment	23	11.5
	No employment	31	15.5
	Total	**200**	**100.0**
Monthly income level (Tsh)	250,000–below	60	30.0
	260,000–450,000	14	7.0
	460,000–650,000	24	12.0
	660,000–850,000	8	4.0
	860,000–above	94	47.0
	Total	**200**	**100.0**

"Though placed second after South Africa for brewing the best wines within the continent, there were only two wine grape varieties grown in Tanzania, namely, Makutupora Red and Chenin White, thwarting the country's ability to produce many types of wines."

Table 3. Availability and variety of local wines found on the market.

Statements	N	Minimum	Maximum	Mean	Std. Deviation
High availability and wide variety	200	1	5	1.76	0.665
High availability and few varieties	200	1	33	2.53	3.209
Low availability and wide variety	200	1	5	3.41	1.067
Low availability and few varieties	200	1	5	4.44	0.713

3.3 Wine Consumption Habits/Behaviour

According to the findings in Table 4, most respondents (44%) prefer to drink wine fortnightly, followed by those who drink once per week (31.5%). Other respondents stated that they drink wine monthly (10.5%), occasionally (8%) and one or more times per week (6.8%). The analysis revealed that bars and restaurants (41.0%) are preferred for wine purchasing, followed by shops (38.0%). In addition, as for the place of consumption, the majority (41.0%) of respondents favour consuming wine at bars and restaurants; the main reason for selecting that place is easy accessibility (50.0%) and reasonable price (29.0%). Most respondents' last expenditure on wine is below TZS 50,000 (57.5%), implying that consumers are not spending much on wine consumption.

3.4 Profile of Respondents about the Most Preferred Wine

The results presented in (Figure 3), show that the majority of males seem to prefer local wine (53.2%) compared to female respondents (46.7%), while imported wine seems to be preferred by females (51.6%) compared to male (48.3%). The findings also show that respondents aged 24–35 (70.3%) preferred imported wine to locally produced wine, while wine consumers over the age of 65 appeared to prefer domestic wines.[④] The study also revealed that respondents with higher education tend to prefer imported wine(73.3%) to locally produced wine (60%) compared to those with low level of education. Respondents who were self-employed or full-time tended to prefer imported wine (51.5%) over local wine (46.1%), implying that they have the assurance of having money to buy any imported wine despite its high price. The same applied to consumers with higher incomes as compared to those with low incomes.

3.5 Attributes that Consumers Consider in Selecting Local Wines

The findings for major attributes considered in wine

④ Meininger's. (2016).Wine Business international magazine

Table 4. Respondents' wine consumption habits (n = 200).

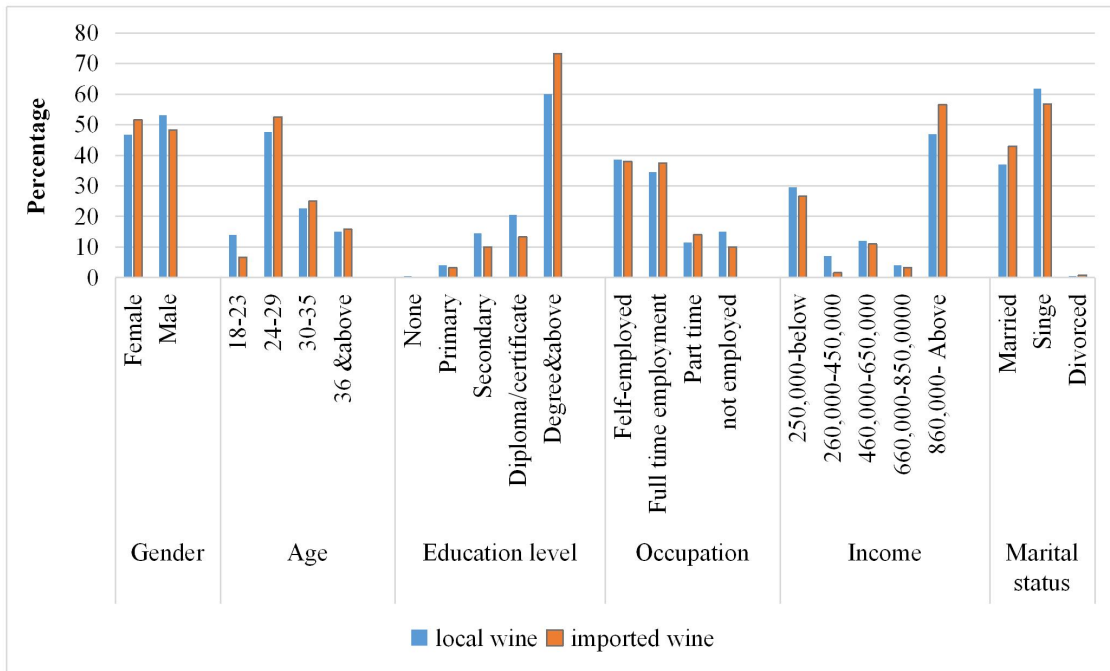| Variable	Category	Frequency	Percent (%)
Wine consumption frequency	Never	0	0
	Monthly	21	10.5
	Fortnight	88	44.0
	Once a week	63	31.5
	One or more times per week	12	6.0
	Occasionally	16	8.0
	Total	200	100.0
Favourite place to purchase wine	Supermarket	26	13.0
	Shops	76	38.0
	Bar and restaurants	82	41.0
	Hotel	2	1.0
	Industry	14	7.0
	Total	200	100
Reason for selecting the place for wine purchase	Accessibility	100	50.0
	Reasonable price	58	29.0
	To meet with friends	8	4.0
	For refreshment	34	17.0
	Total	200	100
Expenditure on wine in the last purchase (TZS)	Below–25,000	79	39.5
	26,000–50,000	36	18.0
	51,000–75,000	61	30.5
	76,000–above	24	12.0
	Total	200	100.0

Figure 3. Profile of participants in relation to the most preferred wine.

selection are presented in Figures 4a and 4b. The wine attributes that are more important for consumers were colour (88.0%), taste (87.5%), price (77.0%), and brand (60.5%). Instead, the wine attributes related to size (41.5%), packaging (41%), geographic origin (26.0%), grape variety (22.0%) and vintage (14.5%) were considered less important by consumers when purchasing a bottle of wine (Figure 4a). Brand and taste are significant attributes that influence purchase decisions in consumers [24–29]. It is regarded that cus-

tomers use brands as a sign to accept quality [30]. Also, certain traditional customers habitually reduce the risk when buying products by sticking to brands they have purchased earlier [31,32].

Furthermore, study findings in Figure 4b revealed that red color wines are more preferred (82%) compared to white wine (40%). Moreover, the study revealed that red wine is preferred by both genders, with females (42%) and males (40%) preferring it. But white colour is preferred by females (13.5%) com-
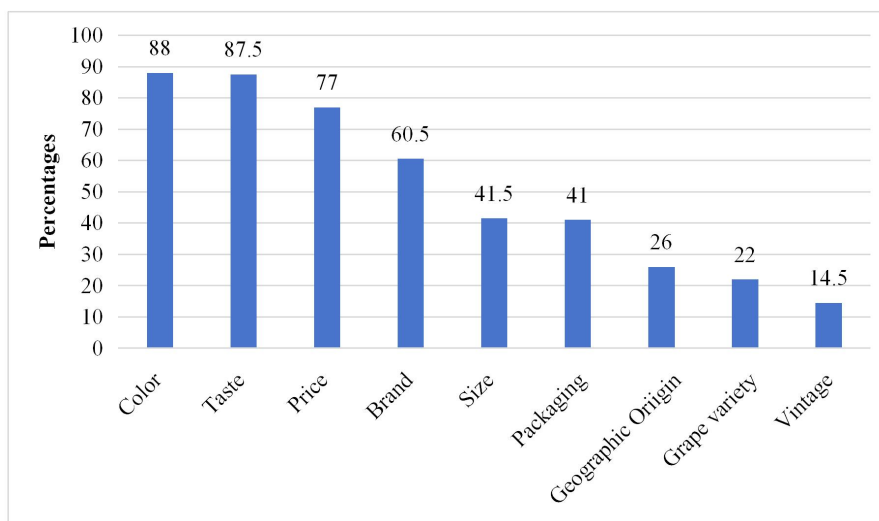

Figure 4a. Attributes that consumers consider in wine selection (%).

Note: *Results are based on multiple responses.

pared to males (4.5%). All genders prefer red wine, but white wine is preferred more by female respondents than other wines [33].

In the taste of wine, "dry" refers to wines that taste slightly on the bitter side, while "semi-sweet" refers to wines with a slightly sweet taste. The taste of wine based on results showed that most respondents preferred sweet wine (69.5%) over dry wine (30.5%). But sweet wine is more preferred by females (47.5%) than males (22%), while dry wine is more preferred by males (22.5%) than females (8%). Though taste preferences differ from one person to another, young wine consumers who started to drink wine prefer sweet wine to dry wine [33].

Regarding wine packages, results in Figure 4b showed that most respondents preferred bottled wine (78%) compared to other package types. However, some respondents indicated that the package is the secondary attribute they consider during wine selection. Attributes such as bottle, cork, and vintage were minor and did not have as much importance in the overall evaluation process [34].

3.6 References Used by Participants When Choosing Local Wine at the Time of Purchase

Results in Figure 5 show that the majority of respondents (82.4%) get information from their friends at a time when they need to purchase wine, followed by a brand of the wine (57.3%), expert review (25.6%) comments on the website and social media (21.1%), and wine review app (19%). This might indicate that friends are playing a major role in wine selection. Millennials bared a noticeable preference for collecting information from friends/family and from reading shelf talkers than elders, while elders depend more on wine stewards, store personnel, and the bottle label and wine selection decisions are made in restaurants, and specifically in the situation of eating a meal together with friends [36,37].

3.7 Consumers' Perception towards Locally Produced Wine

A Likert scale was used to assess consumer perception towards locally produced wines, and the results are shown in Table 5, whereby most respondents
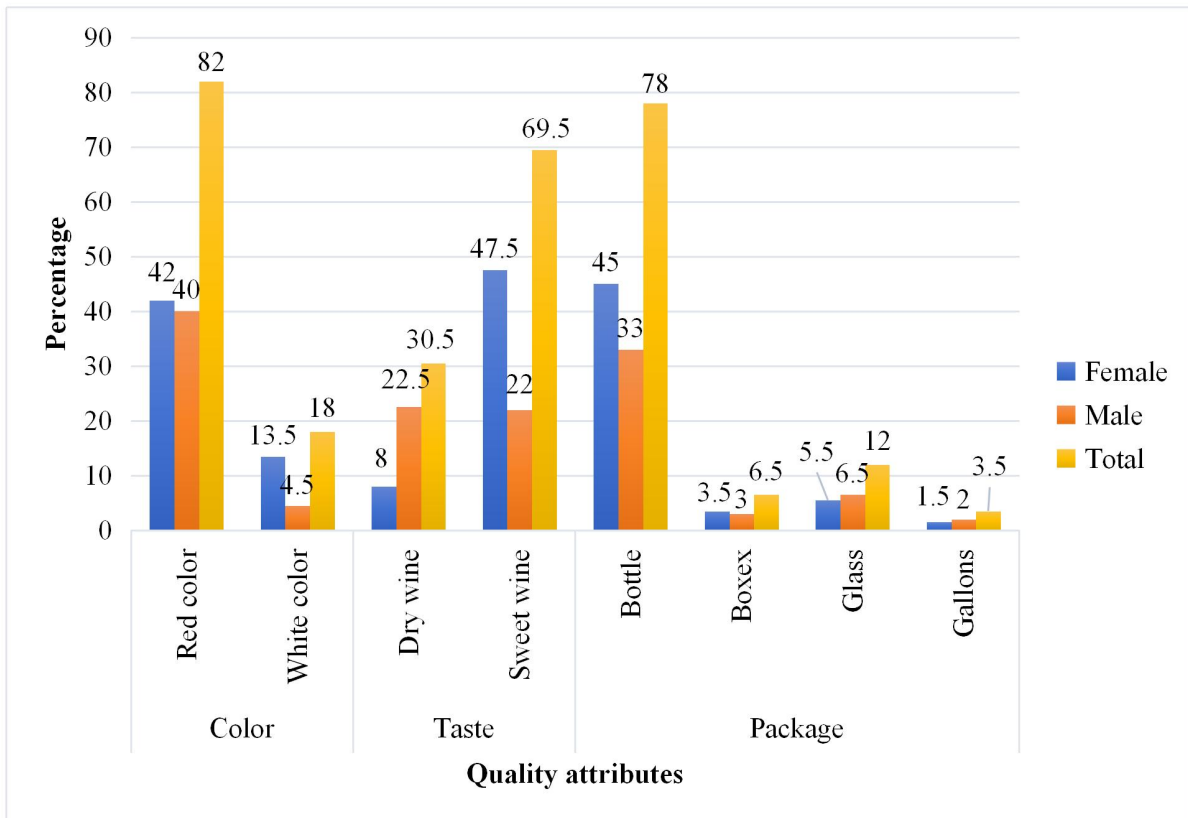

Figure 4b. The quality attributes that consumers consider in wine selection (%).
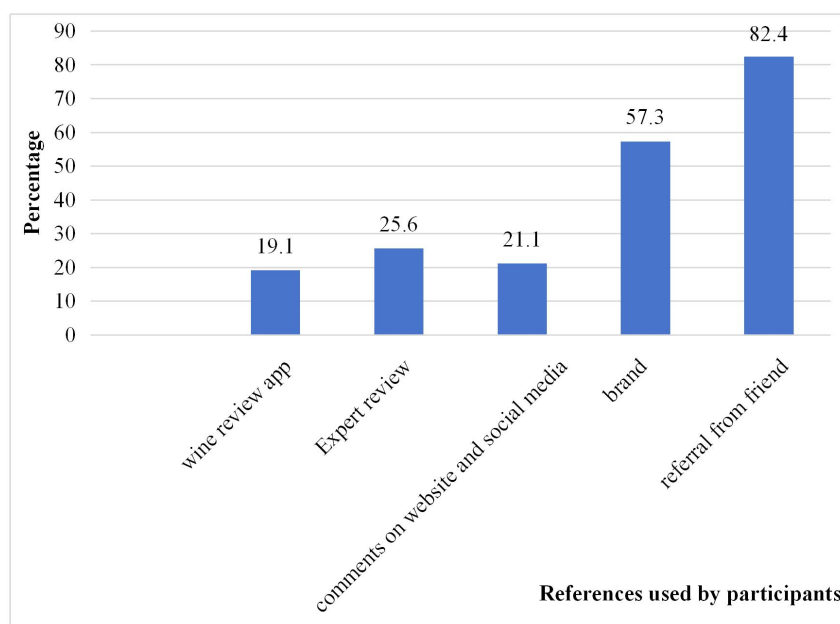
Figure 5. References used by participants when choosing a wine at the time of purchase.

Note: *Results are based on multiple responses.

Table 5. Consumers' perception towards locally produced wine (n = 200).

Statements	N	Minimum	Maximum	Mean	Std. Deviation
Local wine seems to be consistent in taste.	200	1	5	3.49	1.022
The brand of wine that I usually purchase is of high quality.	200	1	5	3.31	0.990
The prices of local wines are reasonable and affordable.	200	1	5	4.45	0.721
Local wine brands have more status compared to imported wine brands.	200	1	5	2.23	1.206

Note: 5 strongly agree, 4 agree, 3 neutral, 2 disagree, 1 strongly disagree.

strongly agreed that the price of local wines is reasonable and affordable. This is evidenced by a respondent who said:

"I am likely to consume locally produced wine as the price is very reasonable and affordable since you can even get a 5,000 TZS wine for 750 MLS or 30,000 TZS per 5-litre gallon. This is quite different with the imported wine."

On the other hand, most respondents disagree that local wine brands have more status than imported wine brands. The finding is in line with the study of Hoskins et al. [38] and López-Lomelí et al. [40] who explained that consumers in developing countries tend to prefer products from economically and technologically advanced countries; they judge the quality from these countries as better than that of products produced in a less-developed country. Also, based on the results, Hoskins et al. [38] found that products from less developed and developing countries were rated lower on quality regardless of brand name.

3.8 Factors Influencing Consumers' Preference towards Purchasing Locally Produced Wine

The study envisaged a further analysis on gauging how different factors influence consumer preference for purchasing local wines. Results from Table 6 indicate that independent variables included in the model were good predictors of consumer preference for purchasing local wines. About 64.4% of the variations in the purchase of local wine were due to variations in independent variables included in the model. Results further indicate that the age of respondents, price of wine, taste of wine, package of wine and colour of wine were statistically significant ($p < 0.05$). This indicates that those variables influence consumer preference for locally produced wine in the study area.

Age, taste, wine colour and packaging were found to have a positive and significant influence on consumer preferences for locally-produced wine, meaning that an increase in these variables will increase the purchase of locally-produced wine. On the other hand, wine price was found to have a negative and significant influence on consumer preferences for locally-produced wine, implying that a unit price increase may decrease the purchase of locally-produced wine. These results are in line with those of Hoskins et al. [38], Liu et al. [39], Migliore et al. [5], Nyonyi [13], and Marius et al. [15].

Table 6. Factors influencing consumer's preferences for purchasing locally produced wines (n = 200).

Variables	Categories	Estimate	S.E	Wald	P-value
Age	18–23	0.847	0.600	1.992	0.158
	24–29	0.958	0.466	4.216	0.040**
	30–35	0.978	0.496	3.897	0.048**
	36 and above	0^a			
Education level	No formal education	21.402	0.000		
	Primary level	−0.675	0.688	0.961	0.327
	Secondary level	−0.002	0.414	0.000	0.997
	Certificate and Diploma	−0.056	0.383	0.022	0.883
	Degree and above	0^a			
Income per month	250,000 and below	3.782E-005	0.408	0.000	1.000
	260,000–450,000	0.110	0.610	0.033	0.856
	460,000–650,000	−0.151	0.488	0.096	0.756
	660,000–850,000	0.396	0.758	0.272	0.602
	860,000 and Above	0^a			
Price of wine	Yes	−0.893	0.447	3.987	0.046**
	No	0^a			
Vintage of wine	Yes	0.758	0.511	2.205	0.138
	No	0^a			
Brand of wine	Yes	−0.282	0.332	0.719	0.397
	No	0^a			
Package of wine	Yes	0.898	0.450	3.987	0.046**
	No	0^a			
Taste of wine	Yes	0.989	0.415	5.676	0.017**
	No	0^a			
Colour of wine	Yes	0.772	0.386	4.011	0.045**
	No	0^a			
Grape variety of wine	Yes	−0.345	0.320	1.161	0.281
	No	0^a			
Advertisements	Yes	−1.312	1.951	0.452	0.501
	No	0^a			
Geographical origin	Yes	0.185	0.422	0.192	0.661
	No	0^a			
Accessibility of wine	Yes	0.207	0.409	0.255	0.614
	No	0^a			

Note: p-value = 1.00; Nagelkerke's R = 0.644; ** Significant at 5%.

4. Conclusions and Recommendations

The study focused on analysing the consumers' preferences for locally produced wine in Dodoma City. The study used both descriptive and inferential statistics in data analysis. The research findings revealed that most consumers consider wine's colour, taste, income, brand, and price attributes when selecting wine. The attributes such as geographic origin, vintage, size and grape variety were not considered during wine selection. Most respondents disagree that local wine brands have more status than imported ones, as most consumers in developing countries prefer imported to local products. However, the study revealed that most respondents positively perceive the price of locally produced wine as reasonable and affordable, on which local wine processors can capitalize. Moreover, the study observed that age, income earned per month, marital status, price, quantity of wine, package, and taste significantly influenced consumer preference for purchasing locally produced wine compared to other factors included in the model.

Based on the findings, the study recommends that wine producers produce wine varieties that satisfy the consumer's needs in terms of taste, colour, and packaging needs, as consumers tend to go for portable packages. Local marketers and brand managers should formulate and employ several positioning, market segmentation and targeting strategies that can help them increase their customer base. The government should also create a conducive environment for wine investors to invest in producing quality local wines; this could help local products compete with imported products.

Author Contributions

Nice Kimaro designed the study and analyzed the statistical data from the study. Shauri Timothy contributed to the data analysis and participated in the literature searches. Yohana James Mgale supervised the entire study and wrote the first draft of the manuscript. All authors have read and approved the final manuscript.

Funding

Acknowledgments

Data Availability

The data supporting this study's findings are available from the corresponding author upon reasonable request.

Conflict of Interest

The authors declare that there is no conflict of interest concerning the publication of this manuscript.

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