Effect of Marketing Mix on the Marketing Performance of Grapefruits in Tanzania

SeuleNzowa
mtajesi@gmail.com
Institute of Rural Development Planning, Dodoma, Tanzania

France A. Shayo *(Corresponding Author)*

france.shayo@gmail.com
The Open University of Tanzania, Tanzania

Abstract: *Using the model of the marketing mix, this study assesses the effect of the marketing mix elements on the marketing performance of grapefruits in Tanzania. It was conducted at Hombolo Ward in Dodoma, one of the major grape-producing areas. Using a structured questionnaire, a simple random sample of 142 respondents was taken from a sampling frame of 220 grapefruit growers in the ward. Descriptive statistics and multiple linear regression analysis were used. Results indicate that price, product attributes, and place significantly affect the marketing performance of grapefruits. Promotion aspects on the other hand were found to have no significant effect. This indicates that the promotion is either inadequate or irrelevant, as evidenced by the lack of improved grapefruit marketing performance. This study recommends that an appropriate pricing strategy be implemented because it plays a significant role in grapefruit marketing performance. Since product attributes were found to strongly affect the marketing performance of grapefruits, we recommend that producers should focus on improving product attributes such as quality and packaging. Finally, improvement of distribution infrastructure should be considered, since producers will be able to efficiently store, preserve, and deliver their products to the intended markets.*

Keywords: Product, Price, Promotion and Place

INTRODUCTION

Marketing performance is one of the dimensions of company performance which reflects the managers' ability to effectively manipulate the marketing mix variables. From a marketing perspective, marketers of physical products are guided by the 4P model, comprising of product, price, promotion and place that summarizes key decision responsibilities of marketing managers. Originating from the microeconomic theory as proposed by MCarthy (1964), the marketing mix is used to describe different kinds of choices organizations have to make in the whole process of bringing a product or service to the market. Accordingly, Sudari, Tarofde, Khatibi and Tham (2019) and Othman*et al.* (2019) explain the marketing mix as having positive effects on customer satisfaction which in turn leads to customer loyalty and consequently marketing performance. Harsono (2017) suggests that marketing performance lies in the ability to influence consumers to learn and purchase a company's products and thus increasing the chance of creating a loyal customer. To achieve this goal, companies need to have a good product (Product), offer reasonable prices

(Price) at accessible locations(Place) and effective promotion strategy (Promotion); that is 4Ps. The study was based in Dodoma Tanzania, which is the major grape-producing region. Previous studies suggest that grapefruit is one of the main cash crops in Tanzania (Kaliman`asi *et al,*2014). It was reported that in 2015, farmers were able to cultivate more than 1500 acres of grapefruits (The citizen, 2015). However, one of the greatest challenges facing all grapefruits producers in Dodoma is the marketing of their products once they have been produced (*ibid*.). Currently, the grapefruit farmers in Dodoma rely on two major buyers; Central Tanganyika Wine Company (CETAWICO) and ALKO VINTAGES LTD. Moreover, it was revealed that one of the buying companies failed to purchase more grapes due to challenges related to taxes and the absence of preserving facilities (The Guardian, 2018). As a result, the massive production of grapefruits in Dodoma lacks markets which compelled some farmers to sell their products at relatively lower prices as compared to their counter partsin South Africa (Habari Leo, 2015).

Ministry of Industry, Trade and Marketing (MITM) (2008) noted that Tanzanian farmers were facing several constraints based on product quality, few processing plants, price, low incentives, low output, shortage of purchasing posts, late payment, low productivity of labour, poor harvest and some actors infringed set standard units of weights and product grades. In 2016, it was reported that about 430 tons of grapes remained in vineyards due to a lack of buyers (Mtanzania, 2016). Kaliman`asi *et al*, (2014) revealed further that Hombolo Ward grape producers sold their products on a credit basis and payment took more than six months. It was also indicated that producers experienced a challenge of quality decline due to pests, unreliable demand and an insufficient number of processing firms *(ibid*). The mentioned cases are an indication that something is cooking on in the marketing performance of grapefruits in Dodoma.

Although previous studies such as those by Laswai, Kulwijila & Makindala (2018), MITM (2008), Kaliman`asi *et al* (2014) and Nguni (2013) attempted to address the problem, their focus was not directly related to the effect of the marketing mix on the marketing performance of grapefruits in Tanzania. For example, Laswai *et al.* (2018) focused on the value chain analysis of grapefruit in Dodoma, Kaliman`asi *et al.* (2014) studied small farmers' grape production and marketing. Nguni (2013) concentrated on the supply chain. None of the previous studies looked into the effect of the marketing mix in its totality. Thus, this study focused on establishing how the marketing mix variables could be effectively manipulated to produce meaningful marketing performance of grapefruits in Tanzania by using the 4Ps model.

Literature Review

The Marketing Mix

Chong (2003) pointed out that marketing mix is the product of a single P(Price) of microeconomic theory. This research employed the model of 4Ps of marketing advanced by McCarthy in 1964. The key variables underlying the model of the 4Ps of marketing are based on product, price, promotion and place (distribution).

Product Element

Product specifies goods and services which are offered by the business firm (Eavani & Nazari, 2012). However, the product is characterized by aspects such as size, test, colour and quality which are to be taken into account by the producer for they have a great impact before the eyes of customers. Accordingly, the sellers need to have the right products for the target market. In this research, the product was grapefruits which can be sold when ripe or processed into wine or juice.

Price Element

Price is the amount paid in respect of the product offered by the business firm. It is one of the most significant components of the marketing mix (Eavani & Nazari, 2012). However, the price of the product or service can be determined by the buyer's ability to pay, cost incurred in production, competitors' prices as well as government regulations (*ibid.).* In this study, the price aspect was concerned with what has been charged for the grapefruits.

Promotion Element

Promotion is a term used to describe a company's range of techniques that can be employed to effectively communicate the importance of products or services to its consumers. Advertising, sales promotion, public relations, direct marketing as well as personal sales are the aspects of the promotion mix (CIM, 2004).It encompasses elements such as advertising, publicity, public relations and sales promotion (Kotler and Armstrong, 1999). However, in this research promotion aspect was used to address all techniques employed by grapefruits producers to provide the market with information on the products offered.

Place (Distribution) Element

Distribution is the strategy by which the producer is connected to the consumer. The essential objective of any distribution system is to clear the gap between a product's manufacturer and the user thereof (Raphel, 1999). In this research, the aspect of the place was concerned with a channel on how grapefruits are being distributed to the targeted customers. For example, through direct distribution channels; from the farmers to the customers/consumers or through an indirect distribution system from the producers to the middlemen and from the middlemen to the customers/consumers. However, the 4Ps of the marketing model has been criticized for being much focused on the production definition of marketing rather than customer-centred (Popovic, 2006). Despite such critique, Goi (2009) stressed that the 4Ps model of marketing is still useful in the present World. Kent & Brown (2006) highlighted that regardless of its shortcomings, the 4Ps of the marketing model remaina staple of the marketing mix. The 4Ps of the marketing model has been utilized by Kurtz & Boone (1987), Kellerman, Gordon & Hekmat (1995), Sigh (2012), Rad & Akbari (2014) and Isoraite (2016).Accordingly, the mentioned researchers did not employ the 4Ps of the marketing model to study the marketing performance of grapefruits in Tanzania. Thus, there was a need for this study to be guided by the 4Ps of the marketing model to assess its effects on the marketing performance of grapefruits in Tanzania.

Effectiveness of Place and Marketing Performance of Grapefruits

Distribution is the strategy through which the manufacturer is connected to the consumer. The essential objective of any place is to clear the gap between a producer and the user thereof (Raphel, 1999).Aazadi *et al.* (2016) heightened that road accessibility was one of the factors affecting fruit growers in Pakistan. Accordingly, Nzioki (2013) noted that lack of transport was a challenge facing the marketing of mango fruits in Kenya. Owomoyela, Oyeniy & Ola (2013) noted that effective distribution outlets increase the marketing performance of the product. Based on that knowledge, the study's first hypothesis is:

H1: Place positively affects marketing performance of grapefruits

Price and Marketing Performance of Grapefruits

Price is the amount paid in respect of the product offered by the business firm. It is one of the most significant components of the marketing mix (Eavani & Nazari, 2012).Nzioki (2013) researched challenges affecting the marketing of mango fruit in Kenya. It was reported that mango fruits marketing at Masongaleni ward in Kenya was affected by several aspects, price fluctuation being one among them. MITM (2008) identified that price of the product was one of the factors affecting stallholder farming in Tanzania. Gituma(2017) identified that pricing has a positive influence on sales volume. Therefore, the second hypothesis of this study was:

H2: *Pricing positively affects the marketing performance of grapefruits*

Product Attributes and Marketing Performance of Grapefruits

Product specifies goods and services which are offered by the business firm (Eavani & Nazari, 2012). However, the product is characterized by aspects such as size, taste, colour and quality which are to be taken into account by the producer for they have a great impact in the eyes of customers. MITM (2008) identified that product quality and standard units were the factors affecting stallholder farming in Tanzania. Nguni (2013) noted that a poor-quality control system was the challenge encountered by horticultural enterprises in Tanzania. Anand and Negi (2015) revealed that quality and standards affected the supply chain of fruits in India. Gituma (2017) revealed that product quality has a positive effect on sales efficiency. Thus, this study hypothesized that:

H3: Product attributes positively affect the marketing performance of grapefruits

Promotion and Marketing Performance of Grapefruits

Promotion is a term used to describe a company's range of techniques that can be employed to effectively communicate the importance of products or services to its consumers. Advertising, sales promotion, public relations, direct marketing as well as personal sales are the aspects of the promotion mix (CIM, 2004).It encompasses items such as advertising, publicity, public relations and sales promotion (Kotler and Armstrong, 1999).Aazadi *et al* (2016) discovered that packaging was an aspect affecting fruit growers in Pakistan. MITM (2008) suggested that the shortage of buying posts was a challenge facing stallholder farming in Tanzania. On the other hand, Laswai *et al* (2018) revealed that limited access to marketing information was one of the major obstacles along the value chain which contributes to the loss of grapes. So, the study's fourth hypothesis is:

H4: *Promotion positively affects the marketing performance of grapefruits*

Conceptual Framework

The 4Ps have been presented in this model as independent variables whereas the marketing performance of grapefruits has been presented as the dependent variable.

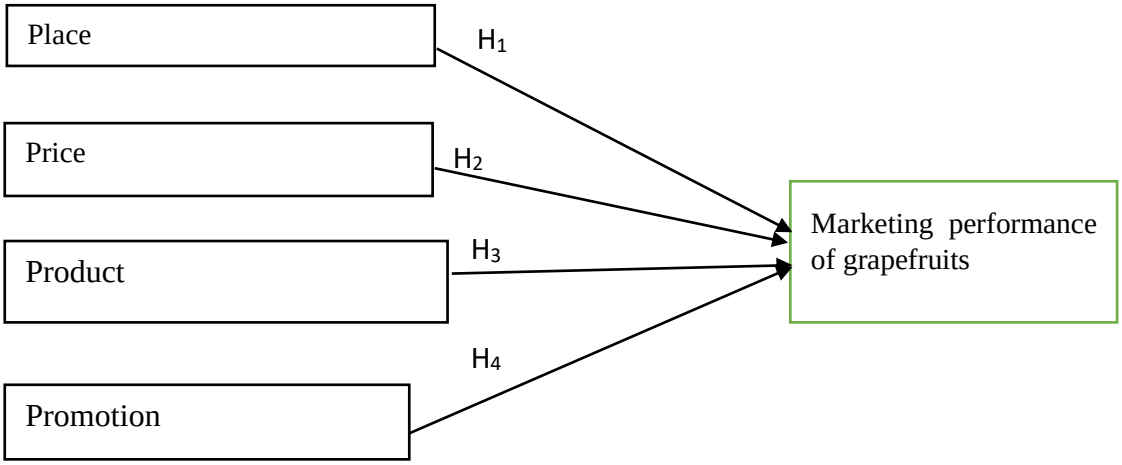

Figure 1: Conceptual Framework

Methodology

This study was done at Hombolo Ward in Dodoma City whereby a sample of 142respondents was selected through simple random sampling. The sampling frame comprised 220 grapefruit producers in Hombolo Ward accessed from Management Associates Limited, 2020. Yamane's (1967) formula was used to calculate the sample size. Data were gathered through a structured questionnaire. Descriptive statistics and Multiple Linear Regression were employed to analyze the gathered data. For the analysis of respondents' information, descriptive statistics were used. Multiple linear regression was used to assess the effect of independent variables (price, product attribute, place and promotion) on the dependent variable (marketing performance of grapefruits) based on the following regression equation:

$$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \acute{\varepsilon}$$

Where; Y = The marketing performance of grapefruits

X_1 =Place,

X_2 = Price,

X_3 = Product,

X_4 = Promotion

$\beta_1, \beta_2, \beta_3$, and β_4 are the regression coefficients

β_o= Constant

$\acute{\varepsilon}$ = Error term

The following assumptions of multiple regression analysis were tested; linearity, in which bivariate scatter plots for all the variables were used to test it. In addition, this study utilized skewness and kurtosis to check for the normality of the data. Finally, homoscedasticity and multicollinearity were checked by using a scatter plot of residuals versus predicted values and Variance Inflation Factor (VIF) respectively.

Variables and Measurement Scale

In this study, the marketing performance of grapefruits was the dependent variable that was measured by using the financial output scale adopted from Clark (2000). This scale comprises three dimensions namely profit, sales revenue and cash flow. Accordingly, Clark (2007) insisted on the use of the financial output scale when measuring marketing performance. Therefore, three (3) items with a five-point Likert-type scale were used to obtain a composite measure of the grapefruit marketing performance. Independent variables of this research included place, price, product attributes and promotion aspects. The STRATADAPT scale adopted from Lages, Abrantes & Lages (2008) was used. This scale comprises four dimensions; promotion, product, price and distribution. Accordingly, the STRATADAPT scale has been utilized by Brei, Avila, Camargo & Engels (2011) as well as by Abdoly & Alinejad (2013). Moreover, 21 items of independent variables were summarized by using a five-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5).

Study Results

Respondents' Demographic Characteristics

This study revealed that the majority 128(90.1%) of the total respondents were males whilst 14(9.9%) were females. This implies that the cultivation and marketing of grapefruits in the Hombolo ward is carried out mainly by males. It was further indicated that nearly half 66(46.5%) of the respondents had a certificate of primary education, 39(27.5%) of the total respondents had secondary education (O level) while 6(4.2%) of the total respondents possessed certificate education. Accordingly, it was reported that 8(5.6%) of the total respondents possessed diploma education, 19(13.4%) of the total

respondents were graduates of bachelor's degrees while a small number of the total respondents were graduates of master's degrees. These findings imply that to a great extent production and marketing of grapefruits in the Hombolo ward is done by a majority of people with primary level of education. Additionally, the results of this study indicated that 19(13.4%) of the total respondents had between 0 and 4 years of experience in grapefruit cultivation and marketing, while 109(76.8%) of the total respondents had between 5 and 9 years of experience in grapefruit cultivation and marketing. Accordingly, it was reported that 13(9.2%) of the total respondents had 10 to 14 years of experience in grapefruits cultivation and marketing while 1 (0.7%) of the total respondents indicated that they had more than 15 years of experience in grapefruits cultivation and marketing. These results indicate that a lot of respondents had sufficient experience in the production and marketing of grapefruits.

Results from Reliability Analysis

Cronbach Alpha was used to measure reliability statistics. The research results indicated that the values of the Cronbach Alpha coefficient ranged between 0.736 and 0.792.This indicates that the measurement instrument had a greater internal consistency. Accordingly, these findings are supported by the argument of Santos (1999) that a construct with Cronbach's Alpha coefficient of 0.7 or higher tends to have good internal consistency. The results of reliability statistics are summarized in Table 1.

Table 1: Reliability Analysis

	Cronbach's Alpha	N of Items
Place	0.774	5
Price	0.759	6
Product attributes	0.736	5
Promotion aspects	0.762	5
Marketing Performance	0.792	3

Testing for Multiple Linear Regression Assumptions

Multicollinearity Test

According to Pallant (2013) multicollinearity occurs when independent variables are highly correlated. In this study, multicollinearity was checked by using Variance Inflation Factor (VIF) and Tolerance values. Tsagris and Pandis (2021) pointed out that the values for VIF should be less than 5 and tolerance values should be above 0.1 otherwise multicollinearity could be a problem. Results of the multicollinearity test for this study show that tolerance values range from 0.873 to 0.941 while VIF values are ranging between 1.063 and 1.145. These findings indicate that the data for this study fulfilled the multicollinearity assumption. Table 2 shows the results from the multicollinearity test.

Table 2: Results of Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Price	.925	1.081
	Product attributes	.941	1.063
	Promotion	.873	1.145
	Place	.936	1.069

a. Dependent Variable: Marketing performance
b. Predictors: Price, Product attributes, Promotion, Place

Normality Test

In this study skewness and kurtosis were used to test for normality. Won *et al.,* (2017) stressed that for normality assumption to be attained, skewness and kurtosis values for the variables are required to be within the range of +2 and -2. Findings from this study indicate that skewness values are within the range of -0.003 and 0.733. Accordingly, the values of kurtosis ranged between -0.146 and 1.066. These findings imply that the study attained the normality assumption. Table 3illustrates the results of the normality test.

Table 3: Results of Skewness and Kurtosis of Variables

	Skewness		**Kurtosis**	
	Statistic	**Std. Error**	**Statistic**	**Std. Error**
Price	.299	.203	-.146	.404
Product attributes	-.003	.203	-.164	.404
Promotion	.733	.203	-.409	.404
Place	.720	.203	1.066	.404

Linearity Test

A linearity test was performed to check whether the relationships between variables were linear. In this study, the linearity assumption was checked by using bivariate scatter plots. According to Pallant (2013), the scatter plot of scores should be in a straight line for the linearity assumption to be met. Findings from this study indicate that title circles follow the straight line. This implies

that the relationships among variables for this study were linear. Figure2displays the result s ofthe linearity test.

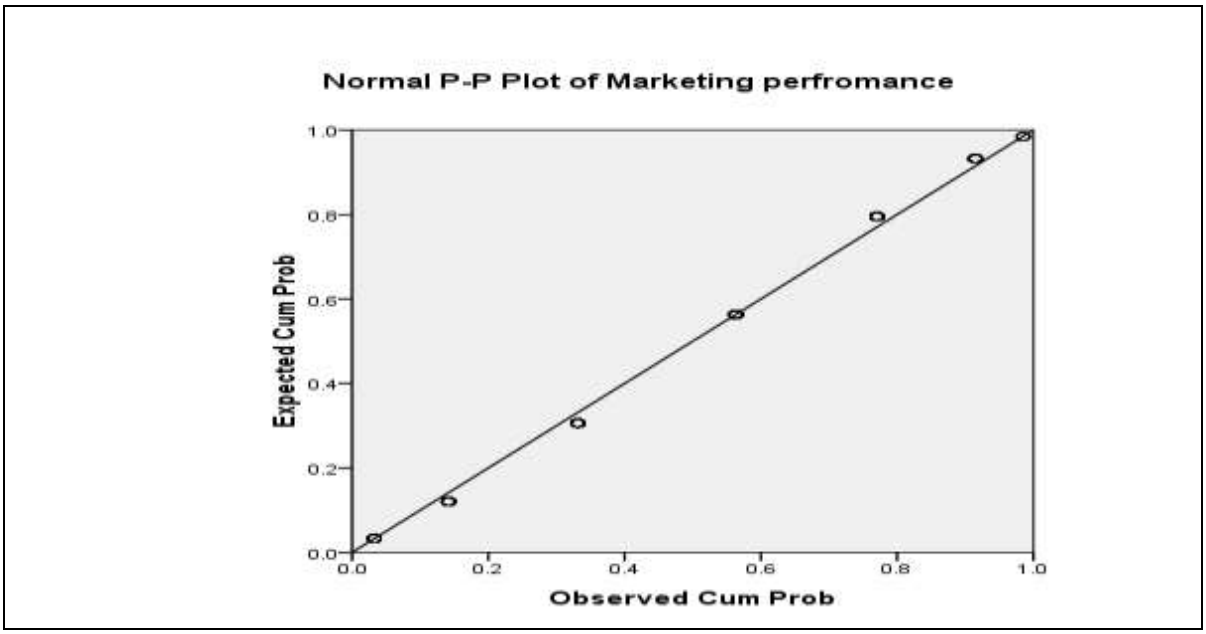

Figure 2: Linearity Test

Homoscedasticity Test

A scatter plot of residuals versus predicted values was used to test for homoscedasticity in the data. This assumption ascertains that variability in scores for variable X should be similar at all values of variable Y. Heteroscedasticity is demonstrated when residuals are not uniformly distributed along the line (Osborne and Waters, 2002). In addition, visual analysis of the plot of standardized regression residuals was used to check homoscedasticity assumptions. The study findings show that residual values are distributed equally below and above zero on the X-axis and to the left and right of zero on the scatterplot of the Y-axis. This means that the study met the homoscedasticity assumption. Figure 3 illustrates the results of the homoscedasticity test.

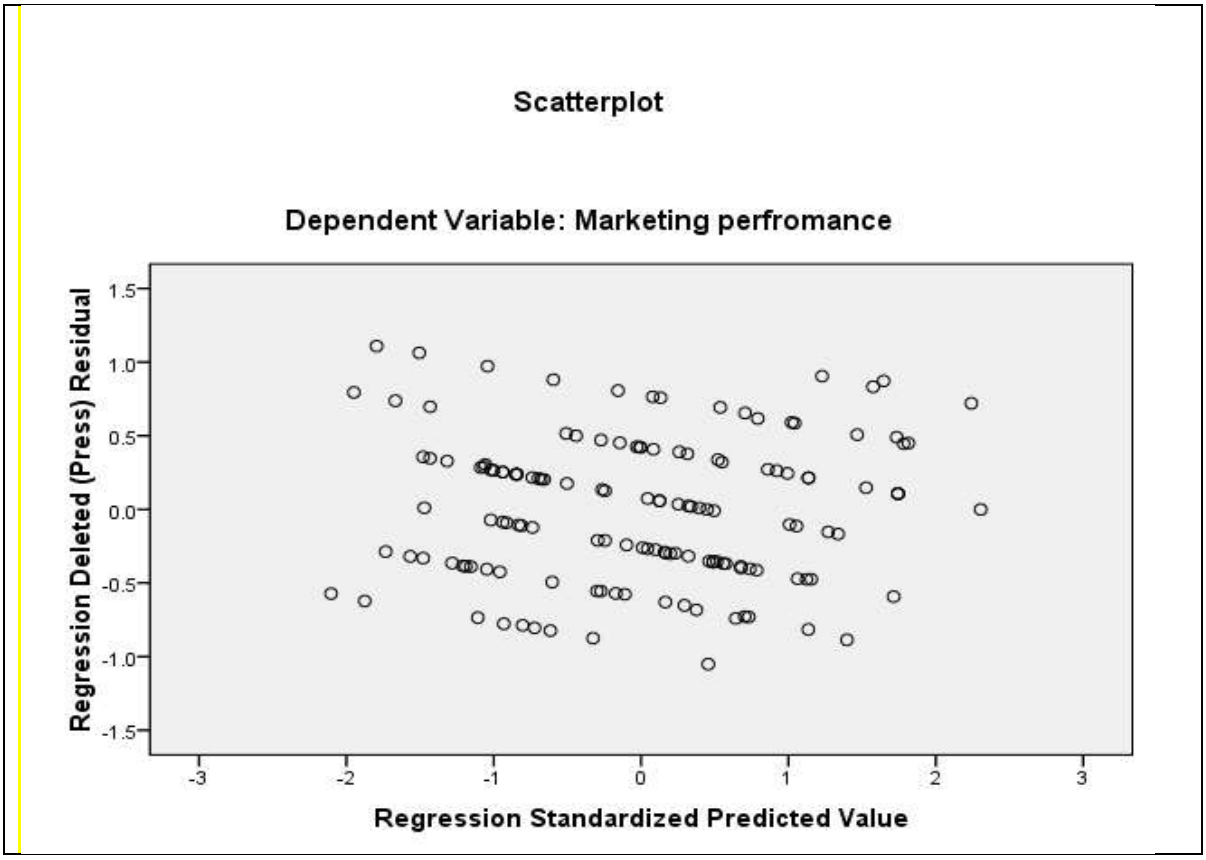

Figure 3: Results of Homoscedasticity Test

Findings from Multiple Linear Regression Analysis

It was found that price had a positive and significant effect on the marketing performance of grapefruits (β= 0.370, p = 0.032). This implies that price was an important variable influencing the marketing performance of grapefruits. Further findings from the study indicated that product attributes positively and significantly affect the marketing performance of grapefruits (β= 0.291, p= 0.003). These findings suggest that product attributes were an important variable influencing the marketing performance of grapefruits.

Furthermore, it was established that place had a positive coefficient and was statistically significant in affecting the marketing performance of grapefruits (β= 0.429, p = 0.007). Thus, distribution was an important item in the marketing performance of grapefruits. Concerning promotion, it was found to have a negative coefficient and not statistically significant in affecting the marketing performance of grapefruits (β = -0.097, p = 0.410). This means that a unit increase in promotion strategies will not lead to any meaningful increase in the marketing performance of grapefruits. These results are captured in Table 4.

Table 4: Findings of Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.135	.481		-.281	.001
	Distribution system	.429	.156	.226	2.745	.007
	Price	.370	.170	.180	2.170	.032
	Product attributes	.291	.095	.251	3.049	.003
	Promotion aspects	-.097	.117	-.071	-.827	.410

Source: Field Data (2020)

a. Dependent Variable: Marketing performance

Results from Hypotheses Testing

This research suggested that a positive effect exists between the effectiveness of the place and the marketing performance of grapefruits. Thus, it was hypothesized that: T*he place positively affects the marketing performance of grapefruits. The f*indings of the study revealed that the effectiveness of the place had regression coefficient values of 0.429and a p-value of 0 .007. This means that the effectiveness of the place is statistically significant and more likely to affect the marketing performance of grapefruits, hence accepting the first hypothesis (H_1) of the study. Furthermore, this study pointed out that there is a positive relationship between price and marketing performance of grapefruits. However, the study found out the price had a regression coefficient of 0.370 and a p-value of 0.032. This implies that the effect of price was statistically significant and positively influences the marketing performance of grapefruits; hence supporting the second hypothesis (H_2) of the study that, *price positively affects the marketing performance of grapefruits*.

Further, this study suggested that there is a positive relationship between product attributes and the marketing performance of grapefruits. Regression results indicated the coefficient value of 0.291 and the p-value of 0.003. This implies that product attributes significantly and positively affect the marketing performance of grapefruits, thereby accepting the third hypothesis (H_3) of the study, that *product attributes positively affectthe marketing performance of grapefruits.* Additionally, it was argued in this research that there is a positive relationship between promotion aspects and the marketing performance of grapefruits. However, the results of regression indicated the coefficient value of -0.097 and p-value of 0.410. This means that promotion aspects are insignificant in affectingthe marketing performance of grapefruits, thereby rejecting the fourth hypothesis (H_4) of this research that, *Promotion aspects positively affectthe marketing performance of grapefruits.*

Discussion of Findings

It was intended for this study to test whether place positively affects the marketing performance of grapefruits. However, it was discovered that the place was positively and statistically significant in affecting marketing performance. The findings of this research are compatible with those of Aazadi *et al* (2016) that road accessibility affected the performance of fruit growers in Pakistan. Additionally, Nzioki (2013) stressed that lack of

transport was a challenge facing the marketing of mango fruits in Kenya. Furthermore, this study was aimed at testing the effect of price onthe marketing performance of grapefruit. The price was found to have a positive and significant effect on the marketing performance of grapefruits. These findings suggest that a better price of grapefruits is important for marketing performance. These findings are consistent with those of MITM (2008) that price was an important aspect of the performance of farmers in Tanzania. On the contrary, the price was not indicated as an important factor affecting the business of fruits in India (Anand and Ngeri, 2015).

In addition, this tested whether product attributes could have a positive effect on the marketing performance of grapefruits. Findings show that product attributes had a strong positive and significant effect on the marketing performance of grapefruits. These findings are in line with those of Nguni (2013) and MITM (2008) that product quality, standards and poor harvest were the factors affecting farmers in Tanzania. Consistently, Dias *et al* (2008) noted that grading and standardization hindered the marketing of agricultural products in Timor Leste. It was further hypothesized in this study that promotion aspects positively affect the marketing performance of grapefruits. However, the results of the hypothesis test revealed promotion had a negative and not statistically significant in affecting the marketing performance of grapefruits. These results are incompatible with the results of Aazadi *et al* (2016) and Laswai *et al* (2018) who suggested that promotion aspects such as packaging, purchasing centres and marketing information significantly affected the marketing of fruits. Promotion was found to be an unimportant aspect ofthe marketing performance of grapefruits in Tanzania due to the ground that, currently grapefruits producers at Hombolo Ward are limited to two potential buyers; Central Tanganyika Wine Company (CETAWICO) and ALKO VINTAGES LTD concentrated at Dodoma city. These buyers used to purchase grapefruits from farmers directly. This ground does not need much utilization of promotion aspects due to the oligopsony nature of the market.

Conclusion

This study concludes that; distribution, price and product attributes are important elements of the marketing mix that have significant influences on the marketing performance of grapefruits in Tanzania. The promotion element was not found to have a bearing on the performance of grapefruits marketing. The reason behind this lack of influence could be because the grapefruit market in Tanzania operates under oligopsony, hence promotion would not bear sufficient impact on the marketing performance.

Recommendations

The findings from this study suggest that grapefruit growers should concentrate their efforts on ensuring the quality of their products as product attributes were found to have a significant effect on marketing performance. This could be made possible through government intervention by providing educational programs through agricultural extension officers. Concerning the price which was found to be an important determinant of marketing performance, this study recommends putting in place programs to attract more buyers which could disrupt the oligopsony nature of the market hence increasing competition among the buyers. The increased competition shall raise the price of grapefruits hence better marketing performance. Finally, we recommend the improvement

of transportation infrastructure since distribution was found to be among the significant determinants of the marketing performance of grapefruits.

Limitations of the Study and Areas for Further Studies

This study concentrated on grapefruits products. However, there is an existence of other fruits which were not covered by this study. Therefore, future studies should focus on other kinds of fruits in an attempt to assess the effect of marketing mix on the marketing performance of those fruits .Also, this study focused on the effect of marketing onthe marketing performance of fruit products. Thus, there is a chance for future studies to be done on other types of agricultural products such as maize and beans. Additionally, the promotion aspect was found to be insignificant in influencing the marketing performance of grapefruits. Hence, further studies may test its significance in assessing the marketing performance of other products or services.

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