Application of the 4 Ps Marketing Mix by Micro and Small-Scale Traders in Kenya. Impact on Household Incomes

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Abstract:

This article examines the application of the four Ps marketing mix by micro and small-scale traders (MSTs) dealing in fresh (fruit and vegetable) produce in Kenya. The study was necessitated by the need to explain unimproved living standards of the traders despite thousands of Kenyans doing business in this sector. Survey research design was adopted, and stratified random sampling techniques were employed to draw 150 respondents from among the traders in the residential estates, and the main marketing the city of Nakuru, Kenya. Structured questionnaires were used in data collection. Descriptive statistics and regression modeling were applied in analyzing the data. The results indicate that MSTs in the produce industry in Kenya, pay attention to all the 4 Ps marketing mix, *i.e.*, promotion, place, price and product, and, in that order of increasing importance. Yet among these strategies, price and product are the most important determinants of household income. Additionally, bigger MSTs are more likely to experience increase in household income than their smaller counter parts. Finally, the average MST in the produce industry perceives that their household income has increased because of the business.

Keywords: 4Ps; marketing mix; micro and small-scale traders; fresh produce; marketing strategy; household incomes.

JEL Classification: M31; D91; Q13.

Introduction

The four Ps marketing mix refers to a set of marketing tools or strategies comprising of product, price, place and promotion, that an entity can use to spur response from a target market. A product is a tangible good or intangible service that undergoes a certain life cycle. Product strategies entail packaging design, branding, warranties, product image and trademark. It is important to consider the product life cycle and to plan to maximize profit at each phase of the life cycle, *i.e.,* introduction, growth, maturity, and decline (Boone 2007). Indeed, studies have demonstrated that marketing mix strategies affect consumer behavior including, consumer preferences (Jaminyasa *et al.* 2017), willingness to pay (Ogunleke and Baiyegunhi 2020) and purchases (Nasirun *et al.* 2019).

Price changes quickly and a firm must decide on how to price a product. In making the firm's pricing strategy, it is important to understand the perceived value of the product to avoid under or over pricing. Decision makers ought to consider demand, costs, competitor prices and offers before setting the price (Kotler 2006). The Place aspect of the 4 Ps marketing mix entails distribution and accessibility of the product. Placement or distribution strategy aids in deciding the most appropriate marketing channel suitable for a product. This strategy should be premised on economies of scale which can be achieved by specialization (Weingand 2007). Promotion entails

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communication of the product which includes such aspects as offers, personal selling, public relations, discounts, and advertising (Rijgut 2012). According to Williams (2006), small businesses find the traditional marketing strategies (*i.e*. the 4Ps) vital in the absence of innovative and trendy marketing mechanisms. For example, the traditional four Ps of the marketing mix have been tailored to suit online businesses in the United States (Allen and Fjermestad 2002). Thus, the marketing mix has enabled such businesses to gain more accurate information on customer tastes and preferences, thereby enhancing development of the online customer base. Nigerian small and micro enterprises apply various elements of the four Ps marketing mix in combination (Nneka 2016) as do agribusinesses in Zimbabwe (Ngarava and Mashunje 2019). In Indonesia, both small and medium sized enterprises have implemented the traditional four Ps marketing mix, integrating it with online marketing. The enterprises use plastic packaging, word of mouth and interactive marketing, and mark-up pricing of their products (Sari 2017).

Kenyan businesses dealing in agricultural products rely on the traditional four Ps marketing mix to create sales. Kenyan Micro and Small Enterprises (MSEs) apply various marketing strategies including flexible pricing and discounting (price), personal selling and customer service (promotion), strategic and convenient location (place), and quality control (product) (Atieno 2011). Further, the 4Ps of the marketing mix have been shown to enhance business performance notably among produce export firms (Njuguna 2018).

Most of the businesses in Kenya are either micro or small by scale (Kenya National Bureau of Statistics 2017). This is more so in unprocessed food products (Saskia 1995). Despite this industry being so significant that it employs hundreds of thousands of Kenyans, many of the traders do not seem to improve their living standards. This is exemplified by the case of Kitui where there are many small-scale traders yet reports indicate that about 64% of the population live below the poverty line (Wairimu 2015). In other words, there is little growth experienced by these traders (Kenya Agribusiness and Agro industry Alliance 2016). We envisage this challenge may be attributable to poor marketing strategies. The objective of this study is therefore threefold: to find out if the average MSTs has experienced increase in household income because of their business, to examine the application of the four Ps marketing mix among micro and small-scale produce traders in Kenya, and to examine the effects of this application on house hold incomes of the traders.

This article proceeds as follows: In the next section we review the most relevant literature on the 4 Ps marketing mix with, we then explain the methodology we have adopted for this study and follow with a discussion of the results. The article ends with a conclusion and recommendations of the study.

1. Literature Review

1.1 Marketing Mix Theory

The theory of the marketing mix was proposed by McCarthy (1964). This theory envisions a marketing mix comprising of a cluster of strategic marketing tools that a firm uses to elicit the response it wants from the market it targets. The marketing tools, generally referred to as the 4Ps of marketing, include product, price, promotion and place. Use of these marketing tools should create demand for a company's products and services. Application of the tools should be systematic to be effective in persuading customers. More recently, particularly in the marketing for services, the four Ps have been supplemented with three additional elements: people, processes, and physical evidence (Booms and Bitner 1981, Isoraite 2016).

Bennett (1997) is of the view that the marketing mix is not a theory but merely a conceptual framework that identifies the principal decision-making process of managers. The framework functions by configuring the firm's products or services to suit and satisfy customer needs. The marketing mix theory seems to focus on the internal factors of an organization or firm. Instead, the author developed the five Vs as a criterion for customers' disposition. The five Vs consist of value, viability, variety, volume and virtue. The focus of this article and the related study is on products and on the 4Ps marketing mix as applied in product marketing, specifically in the fresh (farm) produce sector.

1.2 Empirical Review

Several empirical studies have been conducted in relation to the four P's marketing mix and business incomes. The studies reviewed herein relate to the four Ps: product, promotion, place, and price. We did not find any study on the use of the marketing mix among businesses dealing with produce, so this review focuses on Micro, Small, and Medium Enterprises (MSMEs) in general.

Marketing mix is thought to be a crucial set of tools that is employed by marketing managers in designing the process of marketing in a firm. It is assumed that a given combination of the four Ps marketing mix is bound to produce greater level of satisfaction among customers than other combinations (Revathi 2009). Research conducted by Nthenge (2016) examined the relationship between marketing practices and firm performance,

among clothing and footwear SMEs in Makueni County, Kenya. Qestionnaires and interviews were used to collect the data from the owners of the firms. The collected data were analyzed using descriptive statistics, correlation and regression analyses. The findings indicate that only advertising (promotion) had a significant relationship with firm performance. Pricing showed significant effect on firm performance if it was included in product advertisements. The study was limited to clothing and footwear SMEs and not MSEs dealing in produce. Additionally, the marketing practices were linked to firm performance whereas in the current study we attempt to link these to the household incomes of the traders.

In an assessment of distribution strategy on the international tourism demand in Kenya, Kyunguti, Juma and Gathondu (2019) observe that distribution strategy (place) positively and signficantly influenced demand for international tourism in Kenya. Morever, it was noted that distribution strategy ranked top among marketing strategies. Additionally, the study revealed that businesses ought to improve their distribution and logistics in order to diversify the means of getting products to customers.

Acording to Murangiri and Wario (2014) marketing mix plays a role in the performance of microfinance institutions (MFIs) in Kenya. In their study, the authors paid closer attention to the role of promotion as one of the marketing mix components. The analytical results emanating from the data collected using questionnaires is that sales promotion had the highest influence on performance of MFIs, followed by publicity and advertisement. Additionally, the authors found that personal selling and display of products significantly influenced performance of the aforesaud financial institutions albeit to a small extent.

An analysis of the marketing strategies and performance of SMEs in Kenya indicated that customer relationship marketing strategies did not significantly influence performance (Njoroge 2015). The same study noted that innovative marketing strategies had a negative effect on performance of the SMEs.

In a case study of Unga Feeds Limited, Gituma (2017) examined the effects of marketing mix on sales performance, it was revealed that product quality (product) impacted sales performance positively. Brand awareness (product) was also found to influence performance. Additionally, consumer-perceived product quality was found to be influenced by packaging of the products, and product-perceived quality influenced intention to purchase the product or products (Gituma 2017).

It seems that marketing mix is an essential element employed by marketing managers in designing the marketing process. Past studies have focused mainly on SMEs, and MFIs among others. Little attention has been paid to micro and small-scale traders in relation to their application of the marketing mix and the impact of the same on household incomes. Thus, there exists a clear research gap which the present study looked to bridge.

2. Methodology

A survey research design was adopted for the study – we needed to elicit responses on the experiences and views of a sample of MSEs dealing in fresh farm produce (*i.e*., fruits and vegetables), in Kenya. We employed a quantitative approach as the data were mainly numerical in nature**.** Our target population was all the subjects to which the results of the study were generalized (Kothari 2004), that is, MSEs dealing in fresh produce in Kenya. However, the study ordinarily was conducted over a relatively smaller (accessible study) population, *i.e*., the aforesaid traders operating in Nakuru, Kenya. The city is considered to reasonably represent the country because of its central location as well as its blend of urban setting and rural hinterland.

We followed Hair *et al*. (2019, 278-280) and envisaged a sample of at least 100 observations to keep power at 0.8 for regression analysis. As an alternative, the authors propose a minimum ratio 1:5 (15:1 or 20:1 preferred) for observations to variables. For our study, these recommendations called for a sample size between 50 and 200 – we targeted 150 respondents. Stratified random sampling method was used to select the respondents, to minimize sampling bias. We selected about 19 respondents per strata. The strata were made up of estates (residential areas) which included low income areas of Lake View, and Kaptembwa; medium income areas of London, Zakayos, and White House, and high-income areas of Naka and Kiamunyi. We also sampled the market area of Nakuru often referred to as Sokoni.

We used structured questionnaires to collect the data. In tandem with Mugenda and Mugenda (2009), questionnaires are deemed to be the most suitable in collecting data from literate and geographically dispersed respondents. The questionnaire included questions to capture socio-demographic information pertaining to the traders and their businesses, and items to assess the perception of the traders regarding the marketing mix and household incomes. The latter were presented on a 5-point Likert scale, representing 'SA (5): Strongly Agree,' 'A (4): Agree,' 'NAN (3): Neither Agree nor Disagree,' 'D (2): Disagree,' and 'SD (1): Strongly Disagree,' respectively. Validity and reliability tests were conducted on the questionnaire before it was used to collect data for the main study. A total of 39 respondents drawn from a section of micro and small-scale traders in the Nakuru downtown

area participated in a pilot study. These respondents were excluded from the main study. The data collected from this pilot study were used test the validity and reliability of the research questionnaire. Trained research assistants collected the data using a revised questionnaire. Of the150 administered questionnaires, 100 had been filled according to instructions and were selected for processing and analysis, the rest were discarded. The study used a regression analysis model to examine the application of the four Ps marketing mix and its effects on household incomes among the micro and small traders. We used descriptive statistics to explain the composition of the traders. The analysis was carried out using Statistical Package for Social Sciences (SPSS).

3. Empirical Results and Discussion

In this section, we present and discuss the results of the analysis of our study. We first outline the demographic information of the traders and their businesses. This is followed by the descriptive statistics of the 4Ps and their application in the businesses. The regression model results capture the effects of the application of the marketing mix on household incomes. They are presented and discussed at the end of this section.

3.1 Socio-Demographics of Micro and Small Traders

The socio-demographics of the traders we examined include age of the trader, sex, marital status, presence of children (persons below 18 years of age) in the home, age of business, and firm size in terms of cost of goods sold. The results are presented in Tables 1 to 5. Among the traders interviewed, 59% were female while 41% were male (Table 1).

Table 1. Distribution of traders by sex

Gender	Frequency	Percentage
Female	59	59
Male	41	41
Total	100	100

These findings reflect the reality in most of Kenya's low-income areas where women engage in MSEs while the men tend to prefer manual labor (Oxfam 2019). Although there is growing interest in MSEs dealing in produce, among men, the number of women is significantly above that of men. This could be attributed to the conventional and stereotypic belief that such businesses are more suited with women and not men. The change of this narrative is likely to bear benefits to men and households in general since there are opportunities which men can exploit to their advantage and that of their families. Table 2 shows that the majority (53%) of the MSTs were youths, aged 18 to 35, while 42% were persons between 35 and 65 years of age. The remaining (5%) were older than 65.

Table 2. Distribution of traders by age

Age Category	Frequency	Percentage
18-35	53	53
36-65 Years	42	42
Above 65 Years	5	5
Total	100	100

Most Kenyans above the age of 65 do not have demanding family responsibilities and, in fact, they have their children taking care of them in most cases. Therefore, it was expected for such persons to rarely engage in micro and small-scale business. The study results (Table 3) indicate that about a third (29%) of MSTs dealing in produce in were single, while the rest (71%) were married at some point in their lives with those still married accounting for 51%. Among the single traders, 18 (62%) were female while 11(38%) were male; thus, the ratio of female: male traders among the youths was not quite different than for the general population. A substantial 74% of the households in the study had children living with them (Table 3). Among the single traders, 13 (45%) had children living with them, while the remaining 16 (55%) did not.

Table 3. Distribution of traders by marital status and presence of children in the household

Children/Marital Status		Married/Separated/ Widowed/Divorced	Single - never married	Total
Do you have children 18 years or younger living with you?	No	10	16	26
	Yes	61	13	74
Total		71	29	100

Among the rest of the (non-single) traders, 61 (86%) had children living with them. The presence of children in about three quarters of the households, viewed against the backdrop of high unemployment levels in Kenya (estimated at 18.3% as at 2019 (World Bank 2019)) may suggest that most MSTs engage in business as a way of fending for their families.

Table 4. Age of business

Age (years)	Frequency	Percentage
15-20	17	17
7 – 14 years	31	31
1 month – 6 years	52	52
Total	100	100

None of the businesses was older than twenty years (Table 4), 17% had existed for fifteen to twenty years, 31% were between seven and fourteen years old, and 52% were between one month and six years old. These findings show that most of the traders had been in businesses for less than 7 years which makes them relatively young.

Table 5. Firm Size as Indicated by Monthly Purchases of Goods Sold

Monthly Purchases of goods	Frequency	Percentage
20-50	2	2
51-200	41	41
201-500	37	37
> 500	20	20
Total	100	100

Note: Original data were in Kenya shillings (KES). An exchange rate of 103 KES: 1 USD, which existed in 2017 when the data were collected was used to convert Kenya shillings to US dollars (Central Bank of Kenya)

The results shown in Table 5 are estimates (in USD) that the surveyed MSTs spent in a typical month to purchase the goods they sold at their business. Only about 20% of the sampled traders spent more than USD 500 per month. Most traders (80%) spent between USD 20 and USD 500 per month to purchase the goods they sold. This translates to, at most, USD 6000 (KES 618,000) annually. Assuming the businesses had on average, a gross profit margin of 61% (like SMEs in Eldoret, Kenya as reported by Githaigaand Kabiru (2015)), their annual turnover would be at most about USD 9000 (KES 927,000) per year. These results suggest that practically all the surveyed enterprises fall under the micro and small enterprises categories as defined by the Kenya Micro and Small Enterprise Bill 2012 (Wairimu 2015). According to the Bill, the annual turnover of micro enterprises in Kenya does not exceed KES 500,000 while that of small enterprises ranges from KES 500,000 to KES 5 million.

3.2 Descriptive Statistics on Marketing Mix and Socio-Demographic Status of Traders

Micro and small traders dealing in produce were asked about application of the 4Ps marketing mix in their businesses and, about the impact of their businesses on house hold incomes. Their responses were ranked on a 5-point Likert Scale as discussed earlier. In Tables 6 to 10 we present an analysis of their responses with descriptive statistics (percentages, means, and standard deviation). In this discussion we have combined “strongly agree” and “agree” responses to point to concurrence or agreement with the statement (item) in question and, “strongly disagree” and “disagree” responses to indicate disagreement.

The descriptive analysis of the “Product” aspects (Table 6), revealed that at least 90% of the MSTs “pay attention to and try to correct any concerns or complaints . . . customers may have about the products. . .”, and “always consider the features . . . customers desire to see in the product.”

Table 6. Views of the traders on product

Item	SA	A	NAN	D	SD	Mean	Std. Dev
I pay attention to and try to correct any concerns or complaints my customers may have about the products I sell to them.	40.0	54.0	5.0	1.0	0.0	4.33	0.620
I always consider features my customers desire to see in products I sell to them.	37.0	58.0	1.0	3.0	1.0	4.27	0.723
I always try to make my products appealing to my customers.	29.0	55.0	7.0	6.0	3.0	4.01	0.937
I always try to offer my products in different sizes	13.0	59.0	10.0	16.0	2.0	3.65	0.968
Summary (average)	29.8	56.5	5.8	6.5	1.5	4.07	0.812

Additionally, at least 80% of the businesses "always try to make . . . products appealing to (their) customers" and "always try to offer . . . products in different sizes." The mean value for all items on the Product construct is close to 4 ("Agree") with a composite mean of 4.07, and all items on this portion of the marketing mix attracted largely similar opinions (std dev < 1.0). We could therefore presume that the traders overwhelmingly paid attention to the Product aspects of the 4 Ps marketing mix.

The study revealed (Table 7) that at least 90% of the sampled traders "always consider the cost of producing or sourcing [their] products. . ." and at least 80% "always consider the product value as perceived by the customers," when setting the price for their products.

Table 7. Views of the traders on price

Item	SA	A	NAN	D	SD	Mean	Std Dev
When setting the price for my products I always consider the cost of producing or sourcing the product.	30.0	60.0	7.0	2.0	1.0	4.16	0.721
When setting the price of my products I always consider the product value as perceived by the customers.	24.0	60.0	9.0	5.0	2.0	3.99	0.847
Whenever I think that slightly decreasing the product price could significantly increase my market share, I always do so.	23.0	55.0	14.0	7.0	1.0	3.92	0.861
I always try to keep up with the price of my competitors for the same product.	18.0	49.0	16.0	14.0	3.0	3.65	1.029
Summary (average)	23.8	56.0	11.5	7.0	1.8	3.93	0.865

At least 65% of the traders lower their prices"(w)henever (they) think that slightly decreasing the product price could significantly increase (their) market share" and "always try to keep up with the price of . . . competitors for the same product." The mean value for all items on this construct was at least 3.65, with a composite mean of 3.93, implying agreement. Except for the last item (std dev, 1.029), all other items on the Price portion of the marketing mix attracted largely similar opinions (std dev < 1.0). We therefore presume that the traders clearly paid attention to the Price aspects of the 4Ps marketing mix.

As shown in Table 8, the study, revealed that at least 75% of the sampled MSTs felt the "location of . . . business is highly accessible to all (their) customers"; and, that '(t)here were minimal physical obstacles in reaching (their) business premises".

Table 8. Views of the traders on place of business

Item	SA	A	NAN	D	SD	Mean	Std Dev
The location of my business is highly accessible to all customers.	19.0	66.0	7.0	4.0	4.0	3.92	0.884
There are minimal physical obstacles in reaching my business premises.	12.0	63.0	12.0	8.0	5.0	3.69	0.961
Majority of my customers have preference of buying products from small and informal outlets like mine.	7.0	52.0	31.0	6.0	4.0	3.52	0.870
I obtain the produce I sell mostly from farmers	4.0	41.0	16.0	27.0	12.0	2.98	1.155
Summary (average) for all items.	10.5	55.5	16.5	11.3	6.3	3.53	0.968
Summary (average) without the 4th item above	12.7	60.3	16.7	6.0	4.3	3.71	0.905

A smaller but sizable proportion (59%) of the traders were of the view that the "(m)ajority of (their) customers have preference of buying products from small and informal outlets." This is a notable item whose borderline position (3.52 is right in the middle of "agree" and "neither agree nor disagree") may underscore the rising role of the supermarket as a preferred channel for grocery shopping in Kenya, and the competition it presents to SMEs in this industry. The traders were almost equally divided on the item, "I obtain the produce I sell mostly from farmers" – 38% agreed, 45% disagreed while the rest neither agreed nor disagreed - with more slightly disagreeing than agreeing. Further prodding indicated that the traders got their produce from the farmers and/or intermediaries (brokers) in depending on price and availability. This may be a favorable (source diversification) strategy related to reducing the variability of stock and prices. In terms of agreement/disagreement, this item was inconsistent with the rest of the Place portion of the marketing mix and was therefore dropped from further analysis. In the absence of this item, the composite mean for the remaining three items was about 3.71 implying agreement. The items attracted largely similar opinions (std dev < 1.0). It is notable that the one dropped item also suggested the traders' attention to the Place Strategy. We could therefore presume that the traders clearly paid attention to the Place aspects of the 4 Ps marketing mix.

Table 9 shows that most (75% or more) of the traders admitted that they "mostly use word of mouth to promote (their) products; and, "don't have a specific time when (they) promote (their) products."

Table 9. Views of the traders on product promotion

Item	SA	A	NAN	D	SD	Mean	Std. Dev
I sometimes use my regular customers to market my products to prospective customers.	21.0	51.0	9.0	6.0	13.0	3.61	1.254
I mostly use word of mouth to promote my products.	25.0	51.0	2.0	7.0	15.0	3.64	1.337
I never advertise my products	29.0	38.0	5.0	15.0	13.0	3.55	1.388
I don't have a specific time when I promote my products.	22.0	55.0	4.0	8.0	11.0	3.69	1.220
Summary (average)	24.3	48.8	5.0	9.0	13.0	3.62	1.300

More than 65% said they "sometimes use (their) regular customers to market (their) products to prospective customers"; and that they "never advertise (their) products." The mean value for items on this construct is 3.62 suggesting agreement with the items. We therefore presume that the traders clearly paid attention to the Promotion aspect of the 4Ps marketing mix although their application of this marketing mix varied somewhat (std dev between 1.25 and 1.38).

The perspective of the MSTs on the impact of the business on their house hold incomes were also examined. The descriptive results are presented in Table 10. We found that at least 80% of the traders agreed that they "feed (their) households better because of the income (they) get from [their] businesses"; they "able to cater for (their) households better due to increased income"; life "for (them and their) household has improved significantly since (they) started (the) business", their "household income has increased substantially over the last one year"; and "(they) have become a reliable breadwinner in (their) household since starting (the) businesses".

Table 10. Views of the traders on household incomes

Item	SA	A	NAN	D	SD	Mean	Std. Dev
I feed my household better because of the income I get from this business.	21.0	63.0	9.0	6.0	1.0	3.97	0.797
I'm able to cater for my household better due to increased income.	25.0	60.0	8.0	5.0	2.0	4.01	0.847
Life for me and my household has improved significantly since I started this business.	22.0	62.0	8.0	6.0	2.0	3.96	0.852
My household income has increased substantially over the last one year.	39.0	49.0	7.0	3.0	2.0	4.20	0.853
I have become a reliable breadwinner in my household since starting this business.	18.0	64.0	10.0	6.0	2.0	3.90	0.835
Summary (averages)	25.0	59.6	8.4	5.2	1.8	4.01	0.837

The mean value for all items on this construct was around 4 ("agree"). The views of the traders did not vary substantially in respect to the items on this construct; their opinions were largely similar (std dev < 1.0). Overall, the average MST clearly felt their business had contributed to an increase in household income.

Overall, we found that the produce traders pay attention to the 4 Ps marketing mix - all the constructs had composite means in the region of 4.0 –with the order of increasing importance being: Promotion, Place, Price and Product. These results suggest the traders may be more shrewdness than one might expect given the semi-formal nature and small size of their businesses.

3.3 Regression Analysis

To examine the effects of the four Ps marketing mix and socio-demographic factors on household incomes among micro and small produce traders, we regressed these (independent) variables on Household Income. The socio-demographic factors examined include Sex, Age, Marital Status, Presence of Children (in the home), Age of Business, Firm Size. The four Ps include Product, Price, Place and Promotion. The Socio-demographic factors were expressed as dummy (1, Yes; 0, No) variables. For lack of a better indicator of Firm Size, we applied the USD 500 (monthly cost of goods sold) cutoff to divide the firms into small and micro on the one hand and larger firms on the other. More appropriate measures would have been the number of employees, actual stock turnover, or similar factor, but such information was unavailable. We acknowledge that this may not be the best proxy for firm size.

The 4 Ps marketing mix variables as well as Household Income (the dependent variable) were created from summated series (*i.e.* composite means of the Likert Scale items which formed the respective constructs). The pertinent results are presented in Tables 11 to 13. We established as shown in Table 11 that the general correlation between the socio-demographic factors and the 4 P's marketing mix on one hand and Household Income of traders on the other, was positive and strong (R = 0. 623).

Table 11. Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.623	0.389	0.320	0.561

The coefficient of determination (R^2 = 0.389) indicates that the model explains about 39% of the variation in Household Income. The study also tested whether the sample data from a cross-section of 100 traders dealing in produce fitted the proposed multiple regression model, that is,

$$Y= \beta_0 + \beta_1X_1+ \beta_2X_2 + \beta_3X_3+ \beta_4X_4+ \beta_5X_5+ \beta_6X_6+ \beta_7X_7+ \beta_8X_8+ \beta_9X_9+ \beta_{10}X_{10} + \varepsilon \quad (1)$$

The relevant results are presented in Table12 and 13.

Table 12. Model ANOVA results

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	17.814	10	1.781	5.658	0.000***
Residual	28.020	89	0.315		
Total	45.834	99			

Note: *** implies significant at 1%; ** implies significant at 5%; * implies significant at 10%.

The F-value, as shown in Table12 indicate that the model was statistically significant at 5% level of significance ($F_{(9, 90)}$ = 5.658, p = 0.000). Therefore, the sample data used fitted the adopted simple linear regression model, the model was deemed suitable in determining the combined effect of socio-demographic variables and the 4Ps marketing mix on the household incomes of the MSTs. Table 13 provides the results of the overall regression model.

Table 13. Results of the regression model

Variable	Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error			Tolerance	VIF
(Constant)	0.621	0.598	1.039	0.302		
Product	0.106	0.108	0.979	0.330	0.951	1.051
Price	0.489	0.108	4.545	0.000**	0.727	1.375
Place	0.186	0.085	2.187	0.031**	0.795	1.259
Promotion	0.057	0.065	0.869	0.387	0.855	1.169
Sex (1, female; 0, male)	-0.081	0.119	-0.680	0.498	0.916	1.092
Age (1, Youth 18-35 years; 0, otherwise)	-0.003	0.128	-0.020	0.984	0.771	1.297
Marital Status (1, single never married; 0, otherwise)	-0.119	0.150	-0.792	0.430	0.682	1.467
Age of Business (1, 6 years or less; 0, otherwise)	-0.146	0.118	-1.234	0.220	0.904	1.106
Presence of Children (1, Yes; 0, No)	-0.063	0.155	-0.408	0.684	0.68	1.471
Firm Size	0.126	0.076	1.667	0.099*	0.872	1.147
Dependent Variable (Household Income)						

Note: ** implies significant at 5%; * significant at 10%.

The application of the model was assessed for multicollinearity. It was determined that there existed minimal multicollinearity between the independent variables. Minimal multicollinearity means, variance inflated factors (VIFs) below 5 (Salmerón *et al.* 2016). As shown in Table 13, each of the independent variables returned variance inflated factors within the acceptable threshold (VIF < 5). Therefore, we considered the data amenable to multiple regression modeling.

The results (Table 13) demonstrate the influence of the socio-demographic factors and the 4Ps marketing mix on the household incomes of MSTs dealing in produce in Kenya. We found that Price and Place were the only statistically significant variables. Price was the most significant of the 4Ps marketing mix (t = 4.545, p = 0.000) and the most influential on Household Income (β_2 = 0.489). Place was the second most important factor (β_3 = 0.186, t

= 2.187, p = 0.031). These results may imply that firms that pay the most attention to Price and Place experience the greatest improvement in household incomes.

The only socio-demographic factor that was statistically significant (and only at 10% level) is Firm Size (β_{10} = 0.126, t = 1.667, p = 0.099). It is notable that all the firms in the sample were small, with 43% spending as little as USD 20-200 monthly to "purchase the goods (they) sell at (their) premises. Even then, household incomes seemed to increase with firm size, pointing to the positive impact of firm size on the success of these businesses.

It appears that MSTs dealing in fresh produce in Nakuru, Kenya, are mostly young, non-single (married, widowed, separated, or divorced) females with children under their care. These factors particularly age, sex, and the presence of children may have persuaded them to start their business to provide a financial support for their families. Additionally, most businesses are relatively young (below seven years).

In this study, we found that MSTs pay attention to all the 4Ps of marketing but not to the same extent. In increasing order of importance, the MSTs pay attention to Promotion, Place, Price and Product. However, our regression model, Price and Place were the only variables with statistically significant (positive) effects on Household Incomes. In comparison, Kyunguti, Juma and Gathondu (2019) found place strategies to increase the demand for tourism, while Muraguri and Wario (2014) and Gituma (2017) found promotion strategies to increase measures of firm performance among Kenyan firms. Njuguna (2018) found all the 4Ps to enhance the performance of avocado export firms in Kenya. Micro and small-scale traders dealing in produce in Kenya, apply all the four Ps marketing mix strategies in their businesses. These results agree with Atieno (2011) who found this to be true of SMEs in Kenya. On the other hand, pork producers in Zimbabwe considered price and product strategies to be of most importance, practice however, they focused more on product strategies in their business operations (Ngarava and Mushunje 2019, 6-7). The findings of our study suggest that the fresh produce traders in Kenya should be placing the most emphasis on price and place marketing mix strategies to increase their household incomes.

Firm Size had a positive and statistically significant effect on Household Income suggesting that bigger firms are more likely to report an increase in household income since inception of the business. This finding is in line with expectations: all things equal, bigger firms would more easily access capital and benefit from economies of scale and associated higher profits. Given the role that small businesses play in the economy particularly in creating jobs and providing livelihoods, this finding underscores the need for the state and non-profit organizations to support small businesses particularly with capital.

Conclusion

Micro and small-scale traders in the produce industry in Kenya, pay attention to all the 4Ps marketing mix, *i.e.*, promotion, place, price and product, and, in that order of increasing importance. Nevertheless, among these strategies, price and product are the most important determinants of household income for the traders.

We recommend that the MSTs be trained to pay attention to price and place strategies as these have the biggest impact on household incomes. On the price mix, the traders can use such strategies as product diversification, setting low prices on new products (or lines of product) to introduce customers to the same, using attractive packaging to enhance customer perceived value, lowering prices on deteriorating products, using offers and discounts to attract customers, paying closer attention to their competitors' prices, and accepting different forms of payments such as Kenya's popular "Mpesa" (mobile money). Regarding the place mix, the traders can find more cost-effective ways of accessing their products, engage salespersons to assist them with sales (as the business grows) and diversify their distribution channels including such emerging methods as home delivery.

The average MST in the produce industry perceives that their household income has increased because of the business. To support these businesses, we recommend that the local (county) government agencies work to enhance the physical environment in which the MSTs operate including such things as waste disposal, cleanliness and, lighting of the streets. This would increase the profitability of the businesses and the household incomes of the MSTs.

Among the MSTs, bigger firms are more likely to experience increase in household income, possibly due to the ability to exploit economies of scale. We recommend that government and non-profit agencies prioritize supporting the traders, particularly with capital to expand their businesses. The aforesaid changes should result in growing businesses, that work in a better environment and experience increasing household incomes. Ultimately this should contribute to raising the standard of living of the country.

This study was limited to fresh produce traders and did not encompass all micro and small-scale traders in Kenya. Thus, the findings may not be generalized to all the MSTs, or even to MSTs in the agri-food industry. Furthermore, even among the produce MSTs, it is possible that these results may not well represent the entire

country. We recommend that further research be under taken on the application of the marketing mix among MSMEs in the greater Kenyan agri-food industry, and preferably one that samples a wider area of the country.

As discussed earlier, marketing theory has evolved over the years to include other components of the marketing mix: 7Ps and 8Ps. Although these latter aspects are thought to be more relevant to the service industries, it is worth considering what role some, if not all, may play in the marketing of goods, including fresh produce. We recommend that further research be undertaken on this expanded marketing mix and its application in both the produce and, the agri-food industry in Kenya.

References

[1] Allen, E., Fjermestad, J. 2002. E-commerce marketing strategies: An integrated framework and case analysis. *Logistics Information Management,* 14(1/2): 14-23. DOI: http://dx.doi.org/10.1108/09576050110360106

[2] Atieno, C.K. 2011. An empirical investigation of the marketing strategies applied by Micro and Small Enterprises (MSEs) in Maasai Market, Nairobi, Kenya. MBA project, University of Nairobi.

[3] Bennett, A.R. 1997. The five Vs: A buyer's perspective of the marketing mix. *Marketing Intelligence and Planning,* 15(3): 151-156. DOI: https://doi.org/10.1108/02634509710165957

[4] Booms, B.H., and Bitner, M.J. 1981. *Marketing strategies and organizational structures for service firms,* in Donnelly, James H. and George, William R., (eds)., Marketing of Services, Chicago: American Marketing Association, 47-51 pp.

[5] Boone, I. 2007. *Marketing.* Beijing: Posts & Telcom Press.

[6] Githaiga, P.N., and Kabiru, C.G. 2015. Debt financing and financial performance of Small and Medium size enterprises: Evidence from Kenya. *Journal of Economics, Finance and Accounting,* 2(3): 473-481. DOI: http://dx.doi.org/10.17261/pressacademia.2015312967

[7] Gituma, M.M. 2017. *Effects of marketing mix on sales performance: A case of Unga Feeds Limited*. MBA project, United States International University-Africa. Available at: http://erepo.usiu.ac.ke/handle/11732/3664;jsessionid=E00F3B19FBD529CA434DD886ED4002BC

[8] Hair, F. J. Jr., Black, W.C., Babin, B.J., and Anderson, R.E. 2019. *Multivariate Data Analysis*. 8th Edition. Cengage. ISBN: 978-1473756540 1473756545, 813 pp.

[9] Isoraite, M. 2016. Marketing mix theoretical aspects. *International Journal of Research,* 4(6): 25-37. DOI: http://dx.doi.org/10.5281/zenodo.56533

[10] Jaminyasa, I Made, Pulawan, I Made, Martadiani, A.A. Media, and Suniastha Amerta, I Made. 2017. The marketing mix affect on the consumer buying decision (case study of sausage products at PT. Aroma Denpasar). *International Journal of Social Sciences and Humanities,* 1(2): 65-74. DOI: https://doi.org/10.29332/ijssh.v1n2.44

[11] Kothari, C.R. 2004. *Research Methodology: Methods and Techniques.* New Delhi: New Age International Publishers. ISBN: 8122415229, 9788122415223, 401 pp.

[12] Kotler, P. 2006. *A Framework for Marketing Mix on Sales Performance.* Beijing: Peking University Press.

[13] Kyunguti, E. M., Juma, D., and Gathondu, B.G. 2019. Influence of distribution strategy on the international tourism demand in Kenya. *Strategic Journal of Business and Change Management,* 6(1): 75-90. Available at: https://strategicjournals.com/index.php/journal/article/view/1036

[14] McCarthy, E.J. 1964. *Basic Marketing: A Managerial Approach.* New York: Richard D. 978 p.

[15] Mugenda, O.M., and Mugenda, B.G. 2009. *Research Methods - Quantitative and Qualitative Approaches.* Nairobi: Acts Press Publishers.

[16] Murangiri, P.K., and Wario, G. 2014. Role of marketing mix on performance of micro finance institutions in Kenya. *Strategic Journal of Business and Change Management,* 2(33): 642-662.

[17] Nasirun, N., Noor, S.M., Sultan, A.A., and Haniffiza, W.M.H.W.M. 2019. Role of marketing mix and Halal certificate towards purchase intention of agro based products. *International Journal of Modern Trends in Business Research,* 2(7): 37- 46. Available at: http://www.ijmtbr.com/PDF/IJMTBR-2019-07-03-05.pdf

[18] Ngarava, S., and Mushunje, A. 2019. Marketing mix strategy determinants in pork-based agri-businesses: Experiences from Zimbabwe. *Acta Commercii,* 19(2). DOI: https://doi.org/10.4102/ac.v19i2.600

[19] Njoroge, P.M. 2015. *Marketing strategies and the performance of small and medium enterprises in Matuu town, Machakos County, Kenya*. M.S. thesis. University of Nairobi.

[20] Njuguna, N.J. 2018. *Effect of marketing mix strategies on export performance of avocado firms in Kenya.* Master's thesis. Strathmore University.

[21] Nneka, D.M. 2016. Extent of application of marketing mix strategy by small and micro scale enterprises in Osun State, Nigeria. *African Journal of Marketing Management,* 7(2): 16-19. DOI: https://doi.org/10.5897/AJMM2014.0437

[22] Nthenge, D.M. 2016. Relationship between marketing practices and firm performance: Case of clothing and footwear SMEs in Makueni County, Kenya. *Pac University Journal of Arts and Social Sciences,* 1(1): 39-62. Available at: http://dspace.pacuniversity.ac.ke:8080/123456789/575

[23] Ogunleke, A.O., Baiyegunhi, L.J.S. 2019. Households' acceptability of local (Ofada) rice based on quality attributes in South-West, Nigeria. *British Food Journal*, 121(9): 2233-2248. DOI: http://dx.doi.org/10.1108/BFJ-01-2019-0045

[24] Revathi, T. 2009. *A study on the level of satisfaction of consumers in the peri-urban area of Tiruchirappalli on the marketing mix for packet milk.* PhD diss., Bharathidasan University.

[25] Rijgut, M.J. 2012. *Marketing strategies adopted by small and medium enterprises in Nairobi Central Business District.* MBA project, University of Nairobi.

[26] Salmerón G.R., Pérez, J.G., Martín, M.D.M.L., and García, C.G. 2016. Collinearity diagnostic applied in ridge estimation through the variance inflation factor. *Journal of Applied Statistics,* 43(10): 1831-1849. DOI: http://dx.doi.org/10.1080/02664763.2015.1120712

[27] Sari, R.P. 2017. Marketing mix implementation in small and medium enterprises: A study of Gaeristorey Online Business. *Etikonomi,* 16(1): 115-125. DOI: http://dx.doi.org/10.15408/etk.v16i1.3950

[28] Saskia, I.E. 1995. *Tapping the industry channel: Opportunities for FIT for assisting women food processors in Kenya.* Amsterdam: Tool Consult. Available at: http://www.bdsknowledge.org/dyn/bds/docs/276/Everts.pdf

[29] Wairimu, W.W. 2015. *Micro, Small and Medium-Size Enterprises (MSMEs) as suppliers to the extractive industry.* Nairobi: United Nations Development Programme. Available at: https://www.undp.org/content/dam/kenya/docs/Poverty%20Reduction/Supply%20Chain%20Analysis.pdf

[30] Weingand, D.H. 2007. *Future-Driven Library Marketing.* Chicago: American Library Association. ISBN: 978-0838907351, 189 pp.

[31] Williams, A. 2006. Tourism and hospitality marketing: Fantasy, feeling and fun. *International Journal of Contemporary Hospitality Management,* 18(6): 482-495. DOI: http://dx.doi.org/10.1108/09596110610681520

*** Central Bank of Kenya. Foreign exchange rates. HYPERLINK Available at: https://www.centralbank.go.ke/rates/forex-exchange-rates/"

*** Kenya Agribusiness and Agroindustry Alliance. 2016. *Challenges Faced by Small and Medium Enterprises in Kenya.* Nairobi: Kenya Agribusiness and Agroindustry Alliance.

*** Kenya National Bureau of Statistics. 2017. *2016 Micro, Small and Medium Enterprises (MSME) Survey.* Nairobi: Kenya National Bureau of Statistics.

*** Oxfam. 2019. *Gendered patterns of unpaid care and domestic work in the urban informal settlements of Nairobi, Kenya: Findings from a household care survey 2019.* Nairobi: Oxfam. Available at: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620910/rr-nairobi-kenya-household-care-survey-191119-en.pdf

*** World Bank. 2019. *Unemployment, youth total (% of total labor force ages 15-24) (modeled ILO estimate) - Kenya.* Washington D.C.: World Bank Group.