INFLUENCE OF ACCESS TO MARKET INFORMATION ON MARKETING CHANNEL CHOICE OF TEA IN ACHIEVING PROFIT MAXIMIZATION AMONG TEA FARMERS: A CASE OF KENYA TEA DEVELOPMENT AUTHORITY (KTDA) ABERDARE REGION, KENYA

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ABSTRACT

This paper investigated how access to market information influences marketing channel choice of tea in achieving profit maximization among Tea farmers in Kenya. The research design methodologies are presented. The made use of the descriptive research design to come up with the relevant data for analysis. The target population of 40 respondents was drawn from the management staff of the Kenya Tea Development Authority (KTDA) marketing subsidiaries. The study employed stratified sampling technique in the selection of the study sample. A sample of 38 respondents was arrived at using the Solvin' formula. Data was collected using questionnaires and analysed using SPSS. The results show that there is no significant relationship between access to marketing information and the marketing function of processed tea in achieving profit maximization among Tea farmers in Kenya. Following this the study recommended that In order enhance profitability of marketing channels, Kenya Tea Development Authority (K.T.D.A) should encourage agricultural group formation for tea farmers so as to exploit social capital in marketing plus knowledge dissemination among the tea farmers.
KEY WORDS: *Market Information, Marketing channel, Tea farmers, Profit Maximization*

INTRODUCTION

Tea, which can be popularly described as a dried leaf–infused drink or beverage produced from a tiny shrub's leaves native to China, has overtaken water as the world's second widely consumed drink, taken by around 3 billion cups daily. In 2017, overall tea output reached a record high of 5.98 million tonnes, with around 35% of that being exported for a total value of USD 8 billion. Tea was cultivated in 48 nations in 2016, with 12 of them having low Human Development Countries popularly known as the LHDCs. Thirteen million people work in the tea industry., Smallholder farmers account for 9 million of them, while the rest labor on tea plantations.; smallholder farmers cultivate the majority of tea in Sri Lanka, China, and Kenya, which produce half of the total tea produced worldwide (Bolton, 2016).

Marketing is crucial for accomplishing overarching goals like food safety, poverty alleviation, and sustainable farming, particularly among small - scale farmers, are all important goals in developed nations. Despite the significance of marketing, smallholder farmers still find it challenging to engage in marketplaces, especially when market liberalization forces are present. Inadequate retail sources and a lack of price knowledge were two reasons that hampered agriculture's commercialization. Contributing concerns that affect tea production and sales are factors affecting marketing channel preference.

MARKETING CHANNEL CHOICE OF TEA

Profitability in agribusiness is highly dependent on the selection of appropriate marketing platforms (Panda, 2012). Tea can be classified into three groups based on the degree of fermenting: oolong tea, green tea, and black tea(Chan et al., 2011). As a consequence of the expanding popularity of varied tastes in the tea industry and a growing consumer base, worldwide tea demand is expected to expand rapidly throughout the projected period,, as well as launch of lemon taste, mint taste, chocolate taste, and more new tea tastes that are available.. The availability of a wide range of flavored

teas around the world is resulting in a growing customer base, which is expected to drive global tea demand growth over the projected era. Associated British Foods, WISSOTZKY TEA, Unilever, Starbucks Corporation, Akbar Brothers Ltd, Nestlé S.A, and Tata Global Beverages are among the top corporations in the global tea industry (Tata Tea Ltd.), The Republic of Tea and DAVIDs TEA (Persistence Market Research, 2019).

According to a report by Euromonitor International for Ostfriesische Tee Gesellschaft (OTG) in Germany, the mostly employed delivery approach in the year 2017 was food retailing and discount stores at 51.5%. The remaining 49.5% was distributed through direct shipment, catering and bulk consumer, tea specialty shops and other distribution channels such as, Turkish Retail Stores in Germany. This was based on total consumption of 19,066 tonnes by source of supply in 2017. This is based distinct factors influencing marketing channel choice of tea. The current marketing channels in Kenya Tea in Kenya are usually traded in four major ways: direct local sales, 3%; factory door sales, 2%; direct sale oversee, 14%; and, Mombasa Auction, 79% (in 2012/2013 year). Several variables impact small scale tea businesses' marketing channel selection.

THE ROLE OF MARKETING INFORMATION IN THE CHOICE OF TEA MARKETING CHANNEL

Smallholder tea growers, according to Antwi and Seahlodi (2011), are greatly inclined to experience the difficulty finding supermarkets that buy their tea as a result of a lack of consumer awareness, resulting in increased information costs. Small scale farmers' failure to compete in markets that trade with huge amount of money continues to be a big issue globally, and it is likely to affect their choice of marketing platform.

Ouma (2010) in a study in Rwanda and Burundi observed that restricted access to local and foreign business intelligence was discovered to be a critical factor influencing market channel selection. Lack of Information with respect to transport costs contributed to indecisiveness among farmers on choice of market channel. In a study by Koech (2015), it was established that market information accessibility was found to determine who the market facilitators are, by smallholder farmers in many tea growing areas in Kenya. The farmer's capacity to access and comprehend market information was used to assess his or her ability to access and comprehend market information. Farmers were questioned about the contact networks that they had ties to. Access to market data was set as a dummy vector, with a farmer who has access to market information getting a worth of one or zero then.

Kenyan tea production is dominated by the Tea Sub-Sector for smallholders, which accounts for roughly 60 percent of the overall output. Regardless of this situation, the cost of producing tea has increased. Even though the Kenya Tea Development Agency (KTDA) has indicated that the percentage return to farmers is increasing, It's unclear how several macroeconomic variables, which, unfortunately, are so beyond her or his ability to manage and are set by KTDA in what is basically a monopolistic business environment, have influenced smallholder tea producers' net earnings, the PESTLE embracing Political, Economic, Social, Technological, Legal and Environmental and the Marketing Mix which comprises Product, Price, Promotion and Price.

OVERVIEW OF THE TEA SUB-SECTOR IN KENYA

Kenya is the world's third biggest supplier of black tea, accounting for 10% of worldwide output, and the world's top exporter, accounting for 22% of total worldwide tea exports. Tea employs 10% of Kenya's population and makes up for 4% of the nation's gross domestic product and 26% of export earnings. The tea industry has also made a major contribution to the country's rural growth (CCP, 2020). With over 80,000 employees working on the estate and the industry employs approximately 3 million people and is the private sector's greatest employer.

Kericho, Nandi, Bomet, Kiambu, Maragua, Thika, Sotik, Muranga, Kisii, Nyambene, Nyamira, Nyeri, Kirinyaga, Meru, Embu, Nakuru, Kakamega, and Trans-Nzoia are among the districts where tea is primarily grown. The crop has 80 percent favorable weather conditions in these regions. As previously said, activity is split between multinational corporations and small-scale farmers. Despite the fact that small-scale yields are lower than those in plantations, which average roughly 1800 kg per hectare, the two segments have benefited from various technological advancements in tea cultivation. Notwithstanding the yield inconsistencies, the market accessible to smallholder tea growers has consistently achieved higher quality expectations, as a result, auction prices are higher.

The Kenya Tea Development Authority, the organization that came after the Kenya Tea Development Agency, was created by an Act of Parliament in 1964 as a parastatal tasked with evolving and promoting the undeveloped and promising small-

scale growers' market. KTDA now has 51 factories spread across 24 counties, serving 19,000 farmers and just 4,700 hectares of tea. About the fact that the tea sector has been completely liberalized, the Tea Board of Kenya (TBK), where the industry's primary stakeholders elect the board of directors directly., maintains government influence (Wambua, 2020).

According to Ron Sandrey (2017), Kenya has produced about 60% of African tea, with its neighbors producing the majority of the remaining. Nyeri County's major economic activity is agriculture. This area is nestled between Mount Kenya and the Aberdare ranges. The county is well-known for its high levels of tea and coffee production, which is primarily for export. Per year, these crops bring in billions of shillings for the farmers. Nyeri farmers earned Sh2.58 billion in tea incentive payments in 2012. Many other people work in grocery stores in the major cities and sell agricultural products at open-air markets. While some small-scale farmers in Nyeri County continue to grow tea, low prices have caused some to uproot their crop in the past, citing frustrations with payments. Kenya Tea Board and Kenya Tea Development Agency, on the other hand, moved to put a stop to the situation, warning errant farmers that if they uprooted their bushes, they would face legal action (Wanjau, 2011).

The Government of Kenya's Sessional Paper No. 2 of 1999 on the liberalization and structuring of Kenya's tea sector offers a desirable tea industry operational framework. The introduction of new marketing platforms resulted from the liberalization of the smallholder tea industry. This means that smallholder farmers may now choose from a variety of market outlets to sell their green leaves. When it comes to selling their green leaf tea, smallholder farmers have a variety of options. Selling to factories that are managed by KTDA, private processors, or intermediaries are common examples (Chepngenoh & Kiprono, 2010). Farmers continue to be unaware of and unappreciative of the prices of services provided by KTDA in comparison to other service providers. Farmers with a higher educational degree have been said to have a better capacity to navigate and comprehend knowledge and technologies, and therefore to use the information to pursue new opportunities, than farmers with a lower educational level, (Elzo, 2010). Farmers in the Mount Kenya area are contemplating alternative/substitute agricultural uses with greater rates of return on investment, putting the smallholder tea industry in jeopardy (Ng'anga, 2015).

STATEMENT OF THE PROBLEM

Kenyan tea intake per capita is currently 0.44kg per year, or around 5% of overall sold tea (Mutai, 2017). Smallholders, on the other hand, find it impossible to compete in markets due to a variety of barriers that limit participation benefits, which could be expressed in hidden costs that make market entry difficult. Farmers in remote areas are in short supply and have limited access to information. Moreover, farmers also have inadequate knowledge of the demand for their products, and are increasingly finding it difficult to develop their marketing strategy. According to Owuor and Wambui (2010) on a study to determine the Ministry of Agriculture's involvement and success in Nyeri South District, established that a majority of farmers also sell their tea leaves at the farm gate to brokers. Despite mistrust, allegations of coercion, and broker unwillingness to sign contracts, this occurs. As a consequence of the lack of entry to markets, tea farmers suffer significant losses and a surplus during peak season. This study, therefore, intends to identify factors influencing market channel choice of processed tea in achieving profit maximization among smallholder farmers in Kenya, and the possible recommendations that addresses them.

OBJECTIVES OF THE STUDY

The objective of the study is to investigate how access to market information influences marketing channel choice of tea in achieving profit maximization among Tea farmers in Kenya.

RESEARCH HYPOTHESIS

The study's goal was to investigate the following hypothesis: -

H_{01}: There is no significant relationship between access to marketing information and the marketing function of processed tea in achieving profit maximization among Tea farmers in Kenya.

LITERATURE REVIEW
Theoretical Framework
The study was supported by the utility theory and the Behavioral Decision Theory
Utility Theory
The Utility Theory, suggested by Neumann Morgeintern in 1944 and based on the intuition of the decision maker, is the most common. Utility Theory and its derivatives have been used in agribusiness to investigate the actions of decision makers in dynamic contexts, but they are mainly applicable to overall farm planning or individual production decisions. Furthermore, both scientific and real-world data

suggest that it is unable to justify human decision-making behaviour. Farmers' decision-making and actions are difficult to assess; as a result, variants have relied on statistical models focusing on Utility Theory. Farmers' decision-making and behavior are influenced by a number of socioeconomic, demographic, and psychological elements in practice. To analyze the influence of different factors on farmers' marketing channel choices, the bulk of research employ qualitative models such as multinomial and binomial logit models. This study explores the many socioeconomic, demographic, and demand aspects that influence tea growers' marketing channel choices and analyses the impact of each element on the final choice utilizing qualitative and quantitative approaches. The utility theory is hereby used on its appropriateness, ease of application, and explanatory power to future scholars who may want to use this research study to further areas under interest in this study.

Behavioral Decision Theory

People do not make decisions based on the maximization of value that takes into account value take-offs among their various targets, according to analytical and experimental Evaluation Decision Theory (Singh & Warder, 2008). Descriptive decision theories arose as a result of this, and thus, the Behavioural Decision Theory, which investigates how individuals make decisions and make the best choices in actual situations, and establishes the fact that people are 'cognitive small knowledge processors (Cohen& Lipshitz, 2011). When conventional decision-making techniques failed to justify people's behaviour in rational decision-making situations, these approaches emerged in the decision-making context. Knowledge collection and sharing, advertising, touch work, matching deals to customers' needs, bargaining, physical delivery, funding, and risk taking are all activities that marketing networks do. Farmers must find new ways to meet their target audiences. Direct marketing platforms, as well as one, two, three, or more intermediary channel levels, are all options. Farmers' wages and livelihoods are heavily influenced by their ability to access remunerative markets. As a result, farmers must be fair in their decisions about which inputs/outputs to use and which marketing channel to use. Not only does the type of marketing medium used have an effect on the manufacturer, but also on the processor and the final user (Berry, 2010).

Farmers could be interested in selling their produce to retailers that deliver the best rates, but their socioeconomic and institutional environments may prevent them from taking advantage of the opportunity. Farmers with access to transportation, however, may be able to transport their produce to markets, as stated by Panda, (2012) among vegetable farmers of India. Growers who own vehicles are able to drive about easily and without having to rely on others to compete in organized markets that are far away. In Kenya, only the exporting channel has official mechanisms; exporters get the goods from the farms; hence, having transportation capabilities may not be a need for farmers to participate in official channels (Panda. 2012). This study delves into various behavioral decision models and how they apply to decision-making. Decision-making techniques come in a variety of shapes and sizes. Condition considerations such as the number of alternatives and characteristics have an effect on decision strategy selection. Many theories have been proposed to describe the psychological mechanisms involved in such a decision-making process. This chapter incorporates several templates that can be used to illustrate KTDA's marketing strategy decision-making processes.

Access to Market Information

Panda (2012) investigated marketing channel selection and marketing effectiveness assessment in agriculture in India's Bargarh region. There were 156 vegetable producers that responded to the survey. The availability of market data is a positive indicator for both official and informal market choices, according to the study, which supports the idea. That is, an increase in market access raises the likelihood that the channel in question will be selected. The availability of information leads to a rise in both public and private market participation. However, Panda's study was on vegetable farmers and not tea farmers, and as such the marketing channel choice may not be the same. In addition, the study in question conducted in a different that has different policies on supportive infrastructure for access to tea markets.

Martey, Annin, Wiredu, and Attoh (2012) explored whether accessibility to market information influenced smallholder yam farmers' choice of marketing channel in Ghana's Brong Ahafo Region. The survey included 250 smallholder yam farmers in total. StataSE 11 was used to analyze the data. Market failure was discovered to be caused by asymmetric or absent information, and farmers' access to market and pricing information was shown to be a vital component in attempts to destroy the poverty cycle. The study also observed that access to among yam growers, the use of a mobile phone was a strong factor of market channel selection. However, the study was carried out among Yam farmers and thus, this limits the generalization of the findings to tea farmers. Moreover, their focus was on breaking the cycle of poverty, while the current

study was on marketing function of processed tea in achieving profit maximization among Tea farmers.

Antwi and Seahlodi (2011) looked at the influence of Proactive Land Acquisition Strategy (PLAS) initiatives on recipients' human capital and livelihood in South Africa's Dr. Kenneth Kaunda area. Farmers seemed to have difficulty finding stores to sell their product, according to the study, due to a lack of market awareness, leading in high information coherence. In South Africa, the incapacity of smallholder farmers to engage in high-value markets is a serious problem. Farmers will definitely avoid marketing channels that are associated such difficulties. However, to this, these farmers need to have access to marketing information. Dr. Kenneth Kaunda area had inaccessible stores, and this forced knowledgeable farmers to seek for channels that do not attract access to market difficulties or limitations.

Fuller et al. (2004) found a favorable association between Farmers that deliver their milk directly to consumers instead of delivering through cooperatives and who have access to market data. Farmers that have access to marketing data are more willing to experiment with new ideas (Fuller et al, 2004). These findings backed up the theory that gaining market information about a specific marketing channel increases a farmer's desire to participate in that channel., which in turn improves output sales through that channel (Otieno et al, 2009). Furthermore, Small-scale farmers do not have access to reliable market information or information about potential partners (Ouma, et al., 2010). In other words, access to Farmers may use market data to make educated decisions about which market channels to use.

According to Martey et al. (2012), farmers who had access to information were more likely to sell to the rural market, which was the opposite of what they expected., indicating that the use of mobile phone ownership as a proxy for information access, stated that, while Farmers may well be eager to sell to the best-paying channels, they are more inclined to sell to the rural market. However, their socioeconomic and institutional context may prevent them from taking advantage of this situation. However, Panda (2012) observed that among Indian farmers, those who own a mode of transportation may be able to transfer their goods to marketplaces. Farmers who own automobiles are able to move around freely and without having to rely on others to participate in official marketplaces that are held in distant locations. According to Panda (2012), only the export channel in Kenya has official structures; exporters collect the goods at the farms, hence owning or not owning transportation means may not be a prerequisite for farmers to engage in official

channels. Given the nature of African marketplaces, where purchasers suppressed information in order to exploit farmers, they reasoned that possessing a phone did not necessarily imply that a farmer had access to market information (Panda, 2012).

Sigei (2014) investigated the factors that influence small-scale pineapple producers in Kenya's Kericho County. To contact 150 respondents, a multistage sampling approach was used. Face-to-face interviews with small-scale pineapple growers were conducted using semi-structured questionnaires. According to the findings, most smallholder farmers have low market involvement due to a lack of market information. This limited access to market data has a detrimental impact on marketing channel selection. The market channels for pineapple, on the other hand, may not be the same as those for tea.

Koech (2015) looked at the elements that influence market facilitator selection and how they affect smallholder horticulture producers' livelihoods. Through the use of a multi-stage sampling process, primary data was obtained utilizing structured questionnaires to reach 396 respondents. Descriptive statistics were used to analyze the data and a propensity score matching methodology. Koech (2015) looked at the elements that influence market facilitator selection and how they affect smallholder horticulture producers' livelihoods. Through the use of a multi-stage sampling process, primary data was obtained utilizing structured questionnaires to reach 396 respondents. Using descriptive statistics, and a propensity score matching methodology the data was evaluated.

RESEARCH DESIGN AND METHODOLOGY
Research Design

The study employed a descriptive survey research design, guided by cross-sectional survey. According to Gay, as quoted by Mugenda and Mugenda (2003), the process of gathering data in order to test hypotheses or answer questions about the current state of a subject in the study is known as descriptive research. Descriptive research, according to Mugenda and Mugenda (2003), determines and recounts the way things are. This sort of study tries to define things like potential behavior, attitudes, values, and qualities. Best and Khan (2000) indicate that there are two types of descriptive survey design, correlation study and direct observation, correlation methodology was adopted in this study because it allows for two sets of data to be collected and relationship between them determined.

Target Population- The study targeted the management staff of the Kenya Tea Development Authority (KTDA). Table 3.1 demonstrates this..

Table 1: Target Population

KTDA Marketing Sub-subsidiary	Respondents			
	Top Level Management	Middle Level Management	Operational Level Management	Target population
Chai Trading Company	1	2	3	6
Majani Insurance Brokers	1	2	3	6
Greenland Fedha Ltd	1	2	3	6
KTDA Power	1	2	3	6
KTDA Management Services Ltd (MS)	1	2	3	6
Kenya Tea Packers Ltd – Not fully owned KTDA	1	2	2	5
KTDA Foundation	1	2	2	5
Total	**7**	**14**	**19**	**40**

Sample Size and Sampling Procedure

The sample size of this study was calculated using a Solvins scientific formula by as outlined below; is used to calculate the sample size (n), considering the fact that the population size (N) and that a margin of error (e).

$n = N / (1+Ne^2)$.
$n = 40/(1+40(0.05 \times 0.05)^2)$
$n = 37.18820862$
37 management staff

Stratified sampling was employed in this study. Stratified sampling is a typical probability strategy that is superior to random sampling in terms of sampling error reduction. A stratum is a subgroup of the population with at least one thing in common. The researcher employed several levels of management as strata in this scenario. The study began by identifying the relevant strata and their actual population representation. Then, to choose a sufficient number of people from each stratum, random sampling was utilized.

Sampling Design

A descriptive survey research design was employed to collect information from 40 marketing units in Kenya. When the universe is small, it is pointless to do a sample survey, according to Kothari (2005). He also mentioned that because of the resources required, this strategy becomes difficult to implement when the field of inquiry is wide.

Data Collection Instruments

Data was collected using questionnaires. Permission to conduct research was sought from the KTDA headquarters. The marketing team completed semi-structured surveys as the main source of primary data about marketing function of processed tea in achieving profit maximization among tea farmers in Kenya. The questionnaire solicited information on how respondents' performance is influenced by access to market information, marketing costs, access to markets, and educational levels.

VALIDITY AND RELIABILITY OF INSTRUMENTS
Validity
The validity of the research tools for this study was determined with the assistance of university supervisors and classmates. Their suggestions were used to improve the devices and bring them up to the acceptable standards.
Reliability
The questionnaire for headteachers was adopted given that the score of 0.768 was higher than the recommended correlation coefficient at 0.7. The reliability results were as provided in Table 3.2.

Table 3. 1: Reliability Statistics for Management Staff' Questionnaire

Cronbach's Alpha	N of Items
.768	34

N refers to the number of questionnaire items, whereby N = 34. The tool for management staff was adopted given that the score of 0.768 was higher than the recommended correlation coefficient at 0.7.

Pilot Testing

The structured ended questionnaires were subjected to a pretest to evaluate its reliability and validity for the research. The pilot study was done in the Nyambene Tea Growing area of Meru County, Kenya. The surveys included particular questions targeted at eliciting particular information from the respondents. Employees were provided these preliminary questionnaires to fill out and return for review. The purpose of the pilot test was to ensure that the questionnaires were reliable and valid in order to obtain accurate findings.

Data Collection Procedure

The information gathered will be examined quantitatively and qualitatively. Because data will be obtained from many sources, triangulation will be used to assess the data from many perspectives in order to put the findings in context. In addition, descriptive statistical methods will be used in data analysis. The information gathered through the questionnaire will be examined on three levels.

Data Analysis and Presentation

Quantitative approaches were used to examine the information gathered. When the data was collected, the researcher edited, coded, categorised, and sorted it. However, because qualitative data was gathered as well, it was evaluated using themes and categories. The data gathered was primarily quantitative, and descriptive analytical techniques were used to evaluate it. The researcher was able to define the data and determine the amount to which it will be used using descriptive statistical techniques such as SPSS. Frequencies and percentages were presented using graphs, tables, and pie charts. In addition, to discover relationships in y, the dependent variable, and other independent variables, inferential statistics using both correlation and multiple regression were used.

The multiple regression equation was assumed to hold that: -

$$Y = c + \beta_1 X_1 + \varepsilon$$

Where:

Y   =   Market channel choice of tea in achieving profit maximization

C   =   Constant

X_1 =   Access to market information

ε   =   Error term

β_1 =   Variable regression coefficient X_1

$\beta_1 - \beta_n$ represents the change in market channel choice of tea for every change in. Tables, bar graphs, and pie charts were used to display the findings.

Ethical Considerations

Informed consent of the respondents was sought while their anonymity and confidentiality of the information collected will be upheld during and after the study. The researcher must follow the concept of voluntary consent, in which respondents must actively engage in the research and the true goal of the study must be given to the respondents. The researcher also sought permission from KTDA – Aberdare regional offices before undertaking data collection.

RESEARCH FINDINGS AND DISCUSIONS
Respondents Response Rate

From the targeted 40 employees 38 questionnaires were properly filled and returned. This represented 95% response rate. The usage of a self-administered questionnaire was credited with the 95 percent response rate. Respondents were also told that the information they submitted would be kept private. According to Babbie (2010), a response rate of 60% is good, 70% is very good, and 50% is suitable for analysis. According to Mugenda & Mugenda (2003), a response rate of 50% is deemed sufficient, 60% is acceptable, and 70% or more is very good. In addition, Bell and Costa (2006) argued that the less the non-response error, the higher the response rate. As a result, the return rate in this case was excellent.

Respondents' Profile

This section covers results related to the background information of the study participants. The section contains results on gender of the respondents, Length of service in the marketing subsidiary of KTDA, and respondents' highest academic qualifications.

Gender

Figure 4.1 shows that males made up 76 percent of the respondents while the rest 24% of the respondents were female. This meant that the bulk of the people who responded were male, thus suggesting a higher representation of males among management staff compared to females. As such, a conclusion can be made that the marketing team at KTDA was male dominated.
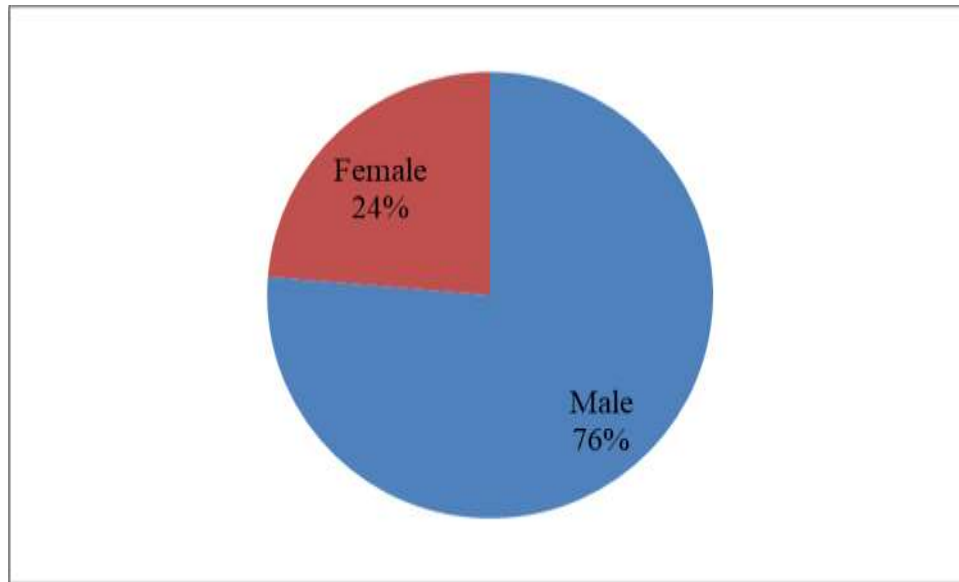
Figure 4.1: Respondents' Gender

Source: Survey data (2020)

Length of service in the marketing subsidiary of KTDA

The results in Table 4.2 show that majority of the respondents representing 86.8% of the respondents had served as employees of KTDA for over three years. 10.5% of respondents had served for less than one year. Finally, 2.6% of the respondents indicated that they had served for 2 to 3 years as such, majority of the respondents had substantial experience working at KTDA, and thus had touch with tea farmers' behavior relative to factors determining choice of marketing channels.

Table 2: Length of service in the marketing subsidiary of KTDA

Response	Frequency	Percentage
0 – 1 Years	4	10.5
1 – 2 Years	1	2.6
Over 3 years	33	86.8
Total	38	100

Source: Survey data (2020)

Respondents' Highest Academic Qualifications

The findings in Table 2 show that majority of the respondents representing 57.90% had business degree level academic qualifications. A further 21.10% had Master's Degree qualifications. 18.40% and 2.60% of respondents had Diploma level and Certificate Level academic qualifications respectively. Hence, the findings support prescriptions by Alzeban and Gwilliam (2012) for rich academic orientation for employees.

.**Table 3: Respondents' Highest Academic Qualifications**

Response	Frequency	Percentage
Certificate in Marketing	1	2.6
Diploma in Marketing	7	18.4
Bachelor's Degree in marketing	22	57.9
Masters Degree in Marketing	8	21.1
Total	38	100

Source: *Survey data (2020)*

DESCRIPTIVE STATISTICS RESULTS FOR STATEMENTS ON ACCESS TO MARKET INFORMATION IN MARKETING CHANNEL CHOICE OF TEA

The mean scores for the statements were as follows. The statement asserting that market information on selling place is easily accessible recorded a mean score of 3.2632. The value was higher than the neutral score of 3.0 (moderate extent). For access to market information on selling place, skewness was = -0.568 with a standard error of 0.383, giving a value for skewness of -0.568 /0.383 = -1.4830. Kurtosis is -1.773 with a standard error of 0.750, giving a value of -1.773 / 0.750 = -2.364. The rule is that if either or both the skewness and kurtosis of these values is 2 or larger, then the assumption of normality is rejected. In this case, the assumption of normality is not rejected as the largest negative skewness is less than a value of 2.0. This shows that farmers were somehow able to access market information on selling place. The finding are in line with those in a study by Roque (2020) who established that market information on selling place was critical in making marketing decisions. Knowing where the majority of the target consumers live will enable tea producers to design appealing targeted ads that are tailored to the requirements and culture of that region.

The statement asserting that market information on type of buyers is easily accessible recorded a mean score of 3.1842. The value was higher than the neutral score of 3.0 (moderate extent). The skewness market information on type of buyers was = -.390 with a standard error of 0.383, giving a value for skewness of -0.390/0.383 = -1.0182. Kurtosis is -1.920 with a standard error of 0.750, giving a value of -1.920 / 0.750 = -2.560. The rule is that if either or both the skewness and kurtosis of these values is 2 or larger, then the assumption of normality is rejected. In this case, the assumption of normality is not rejected as the largest negative skewness is less than a value of 2.0. This shows that farmers were somehow able to market information on type of buyers. Effective marketing begins with a deep understanding of your customers: the type of understanding that allows you to gain unique insights into what they want and how to better serve them than your competitors. The most credible source of fresh customer insights is good marketing data.

The statement asserting that market information on product pricing is easily accessible recorded a mean score of 3.3684. The value was higher than the neutral score of 3.0 (moderate extent). Price is significant to marketers because it reflects their evaluation of the value customers see in a product or service and their willingness to pay for it The skewness for market information on product pricing was = -.621 with a standard error of 0.383, giving a value for skewness of -0.621/0.383 = -1.6214. Kurtosis is -1.267 with a standard error of 0.750, giving a value of -1.267/0.750 = -1.6893. The rule is that if either or both the skewness and kurtosis of these values is 2 or larger, then the assumption of normality is rejected. In this case, the assumption of normality is not rejected as the largest negative skewness is less than a value of 2.0. This shows that farmers were somehow able to access market information on product pricing. The results suggest that not all farmers had access to product pricing information, and this was risky because as Meckes (2018) argues that lack of information on price can result in setting wrong price and this can also negatively influence sales and cash flow. Similarly, according to Crandall, Otieno, and colleagues (2012), farmers' lives can be improved by having access to market pricing.

The statement implying that farmers are provided with market information through phone SMS, recorded a mean score of 3.1053. The value was slightly higher than the neutral score of 3.0 (moderate extent). The skewness for market information through phone SMS was = -0.388 with a standard error of 0.383, giving a value for skewness of -0.388/0.383 = -1.0130. Kurtosis is -1.615 with a standard error of 0.750, giving a value of -1.615/0.750 = -2.1533. The rule is that if either or both the skewness and kurtosis of these values is 2 or larger, then the assumption of normality is rejected. In this case, the assumption of normality is not rejected as the largest negative skewness is less than a value of 2.0. This shows that farmers were somehow able to access market information using SMS. The finidngs are in agreement to those in a report by van According to Vark (2012), mobile phone services improve agricultural productivity and earnings by giving farmers with information on crops, weather, and market pricing However, farmers in rural Kenya have been slow to adopt mobile phones, according to a research by infoDev (2013). This was ascribed to a mismatch between the design of these systems and the views of mobile phones and their advantages among smallholder farmers.

The statement asserting that farmers have access to information on contacts of buyers recorded a mean score of 3.1842. The value was in the range of the neutral score of 3.0 (moderate extent). The skewness access to information on contacts of buyers was = -0.318 with a standard error of 0.383, giving a value for skewness of -0.318/0.383 = -0.8303. Kurtosis

is -1.575 with a standard error of 0.750, giving a value of -1.575/0.750 = -2.100. The rule is that if either or both the skewness and kurtosis of these values is 2 or larger, then the assumption of normality is rejected. In this case, the assumption of normality is not rejected as the largest negative skewness is less than a value of 2.0. This shows that farmers were somehow able to market information on type of buyers. The findings are in agreement to those in a study by Shepherd (2007) who reported that there is great need for that farmers to be keen in identifying buyers and in making initial business contacts. The study concluded that the amount of contact between farmers and buyers was critical in making decisions related to choose of market channels.

The statement asserting that farmers are provided with market information through radio programs recorded a mean score of 3.3684. The value was higher than the neutral score of 3.0 (moderate extent). The skewness for market information through radio programs was = -0.452 with a standard error of 0.383, giving a value for skewness of -0.452/0.383 = -

1.1802. Kurtosis is -1.502 with a standard error of 0.750, giving a value of -1.267/0.750 = -1.6893. The rule is that if either or both the skewness and kurtosis of these values is 2 or larger, then the assumption of normality is rejected. In this case, the assumption of normality is not rejected as the largest negative skewness is less than a value of 2.0. This shows that farmers were somehow able to market information through radio programs. Radio is the primary source of agricultural information for the vast majority of smallholder farmers in Africa, according to the World Food Programme (2014). It is not only inexpensive and accessible to individuals with little or no formal education, but it may also be used in local languages. Most crucially, radio can provide end consumers a voice through participatory radio programs, especially when combined with other ICTs such as mobile phones. However, the findings suggest that many tea growers in the Aberdare Region were not using radio farmers to get market information.

Table 4: Descriptive Statistics Results for Statements on access to market information

	N	Means Stat	Std. Dev. Statistic	Skewness		Kurtosis	
				Stats	Std. Error	Stats	Std. Error
Market information on selling place is easily accessible	38	3.2632	.977	-.568	.383	-1.773	.750
Market information on type of buyers is easily accessible	38	3.1842	.982	-.390	.383	-1.920	.750
Market information on product pricing is easily accessible	38	3.3684	.942	-.621	.383	-1.267	.750
Farmers are provided with market information through phone SMS	38	3.1053	1.007	-.388	.383	-1.615	.750
Farmers have access to information on contacts of buyers	38	3.1579	.855	-.318	.383	-1.575	.750
Farmers are provided with market information through radio programs	38	3.1316	.991	-.452	.383	-1.502	.750
Valid N (listwise)	38						

Source: Survey data (2020)

Profit Maximization as a Function of Marketing Channel Choice of Tea

The results in Table 4.8 show that profit maximization through marketing channels recorded the following mean scores: Supermarkets/Hypermarkets (3.500); Convenience Stores (3.3158), Online Retailers (3.2368), Other Distribution Channels (2.8684),

Brokers and auction (3.1053), and Direct trade (2.9474). All the means except direct trade had means above the neutral score of 3.0, thus implying that profit maximization through the channels was fair. However, for direct trade the rating was poor. The skewnness score was between -0.102 and 0.559, while Kurtosis was between -1.062 and -1.926, all the skewness and

kurtosis were lower than 2 or larger, and thus the distribution was normal. The results show that the best three or profitable channels were convenience stores, online retailers and supermarkets/hypermarkets.

The findings are similar to those of a Liu research (2020) The findings of the experiment demonstrate that 100 percent of customers who buy agricultural items online go to supermarkets or convenience shops, whereas 0 percent of customers go to the wholesale market for agricultural items. Only 32.6 percent of customers choose to shop at a mobile vegetable market, while those who do not choose to shop for agricultural products online prefer to shop at supermarkets or convenience stores. Consumers who prefer the wholesale market for agricultural products trading make up 0% of the total Similarly, Lee, Liu, and Chang (2020) discovered that wholesale marketplaces are the most lucrative marketing method for Taiwanese farmers. The findings support Panda and Sreekumar's (2011) conclusion that farmers' profitability is mostly determined by the marketing decisions they make and the marketing channels via which they sell their products. This is also illustrated in Figure 6.

Table 5: Profit Maximization as a Function of Marketing Channel Choice of Tea

|	N	Mean	Std. Deviation Statistic	Skewness		Kurtosis	
				Stat	Std. Error	Stat	Std. Error
Supermarkets / Hypermarkets	38	3.5000	.95153	-.795	.383	-.841	.750
Convenience Stores	38	3.3158	.90360	-.689	.383	-1.445	.750
Online Retailers	38	3.2368	.97077	-.321	.383	-1.581	.750
Other Distribution Channels	38	2.8684	.90557	.041	.383	-1.350	.750
Brokers and auction	38	3.1053	.95265	-.219	.383	-1.926	.750
Direct trade	38	2.9474	.92845	-.105	.383	-1.427	.750
Valid N (listwise)	38						

Source: Survey data (2020)
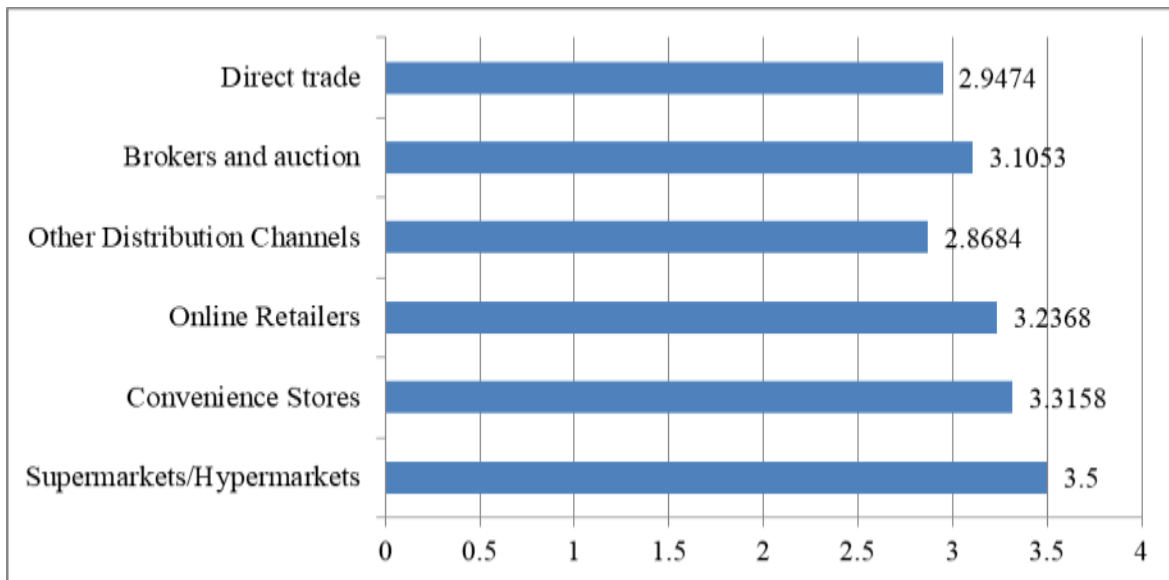
Figure 1: Profit Maximization as a Function of Marketing Channel Choice of Tea
Source: Survey data (2020)

Correlations between Factors influencing Marketing Channel Choice of Tea and Profit Maximization

In Table 6, there was a positive Pearson correlation at r = 0.145; p = 0.386 between access to market information and profitability of marketing channels. The interpretation stems from the understanding that r is usually a score between 0 and 1, where 1 is a perfect correlation and 0 no correlation. In addition, the p value of 0.385 is higher than the test

significant level at 0.05, thus implying that the positive association was statistically insignificant. It is consequently critical that farmers have access to timely and accurate market information. Access to timely information on pricing and quantities, according to FAO (2020), is critical in decreasing the risk of losing money on a market transaction. Market knowledge may stimulate market entrance and make the market more competitive and efficient when the market is imperfect. High risks necessitate high marketing expenses, since large margins are required to cover potential losses. However, the findings imply that, while market knowledge is an excellent predictor of marketing channel profitability, not all smallholder farmers have access to it.

Table 6: Correlations between Factors influencing Marketing Channel Choice of Tea and Profit Maximization

		Profitability of Marketing Channels
Access to Market Information	Pearson Correlation	.145
	Sig. (2-tailed)	.386
	N	38

*. At the 0.05 level (2-tailed)., the correlation is significant
Source: Survey data (2020)

Inferential Statistics
The relationship between access to market information and the profitability of marketing channels.

Model Summary
In Table 7, the R Square, also known as the Determination Coefficient, is 0.052. This means that variability in access to market information account for 5.2 percent of the variation in the profitability of marketing channels. As a result, additional factors not included in the model account for just 94.8 percent of the variation in marketing function performance. As a result, based on Draper, Smith, and Pownell (1966) and Seber Lee (2012), it was determined that at least one of the factors under consideration were good predictors of marketing function performance.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.228a	.052	.026	.77118

a. Predictors: (Constant), Access to Market Information

Analysis Of Variances (ANOVA)
When Sig. (p value) p0.05, predictors are meaningful in the investigation. The p-value was 0.169, according to the data in Table 8. We may infer that the access to market informationwas not impacting tea marketing channel choice in attaining profit maximization among smallholder farmers in Kenya significantly. Our predictions are much better than would be anticipated at random, given the p0.05. This is how it goes: We may infer that the regression is statistically significant since $F (1, 36) = 1.972$; $p = 0.169$.

Table 8:Analysis of Variances (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.173	1	1.173	1.972	.169[b]
	Residual	21.410	36	.595		
	Total	22.583	37			

a. Dependent Variable: Profitability of Marketing Channels
b. Predictors: (Constant), Access to Market Information

Beta Coefficients
Table 9 shows that the beta value for access to Market Information was 0.515 at a p value of 0.01. Since the p value associated with access to marketing information was 0.169, a value higher than the test significance level of 0.05, the null hypothesis ("H_{O1}: *There is no significant relationship between access to marketing information and the marketing function of*

processed tea in achieving among Tea farmers in Kenya.") is accepted. This output suggests that access to marketing information was not a significant predictor to the choice of marketing channel, and had little influence on the marketing function of processed tea in achieving among tea farmers in Kenya. That is to say, access to marketing information significantly influences the performance of the marketing function. The findings are inconsistent with Njeru (2013) and Gtaish *et, al.* (2014) who established access to marketing information was an indispensable determinant of the performance.

Table 9: Beta Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.424	.540		4.487	.000
	Access to Market Information	.225	.160	.228	1.404	.169

a. Dependent Variable: Profitability of Marketing Channels

CONCLUSION

The study concludes that there was there is no significant relationship between access to marketing information and the marketing function of processed tea in achieving profit maximization among Tea farmers in Kenya. Tea farmers experienced challenges in accessing marketing information, and this affected their ability to choose profitable marketing channels.

RECOMMENDATIONS

The following recommendations were made based on the study's findings.

In order enhance profitability of marketing channels, Kenya Tea Development Authority (K.T.D.A) should encourage agricultural group formation for tea farmers so as to exploit social capital in marketing plus knowledge dissemination among the tea farmers.

There was need for the Kenya Tea Development Authority (K.T.D.A) to consider using a variety of social media platforms and phone text messages (sms) for sharing useful information to the tea farmers

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