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**Technology Innovation as a Strategic Management Practice and Determinant of Performance of Tea Industry in Mount Kenya Region** 

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#### Abstract

In Kenya, Tea industry has not been competitive. As a result, the earnings have not been commensurate with tea production efforts that have often attracted the wrath of farmers to the extent of tea picking boycotts, uprooting of tea bushes, destruction of factory property and even threatening the lives of tea industry managers. This phenomenon is attributed partly to the fact that the small-scale producers market their tea in bulk; semi-processed products and therefore fails to attract premium prices for their produce. As result, strategic interventions are required for the tea industry to remain competitive. The objective of the study was to investigate the influence of technology innovation as a strategic management practice and determinant of performance of tea industry in Mount Kenya region. Technology Acceptance model and Industrial Market Theory guided the study. Mixed methods research design was used. The target population was 117 management team comprised of five regional management team ; regional accountant, operations manager, production manager, auditor, and 112 top management in 16 factories who include, 16 manager 16 production managers 32 accountants 32 training managers and 16 field coordinators sixteen factories that lie in Mount Kenya region. Stratified, simple random sampling was used to select 92 respondents out of 112 based on Krecjie and Morgan Table. Purposive sampling was used to select five regional managers. Data was collected using questionnaires. Reliability was examined using pilot study and internal consistency test. Regression analysis indicated that value



addition strategy have a strong positive relationship with financial performance of the tea industry In Mount Kenya region. Regression results also established that technological innovation and strategy implementation have a strong positive relationship with financial performance of the tea industry in Mount Kenya region. Based on the findings of the study, it was concluded that strategic management practices influence performance of tea industry in Mt Kenya region in Kenya positively. The adoption of strategic management practices has a high potential of improving tea industry performance and thus better prices to the farmers. The study concluded that tea factories should provide incentives for research and development on adoption of newest Technology in the market to support cost reduction and improve quality. Professionals in the tea industry should spend more time, effort and resources towards innovations

Keywords: Strategic Management, Technology Innovation, Performance & Mt. Kenya Region.

# **1.0 Introduction**

# **1.1 Background of the Study**

Agriculture is the main driver of economic growth of developing countries. It accounts for one third of the growth and 81% of worldwide reduction in rural poverty (World Development Report, 2008). Indeed, agriculture was earmarked as strategic to poverty reduction envisaged in the Sustainable Development Goals (SDGs) (UN, 2015). Despite the significance of agriculture to the world economy, earnings from agriculture have continued to plummet especially due to stiff competition; globalization as well as climate change (Cervantes-Godoy & Dewbre, 2010). As a result, the contribution of agriculture to GDP as well as direct and indirect employment has declined significantly over the years. There is need for organizational strategic alignment to cope up with the dynamic changes in the agribusiness environment if the position of agriculture in poverty reduction and economic development is to be realized.

Tea is one of the most popular non-alcoholic beverage drinks in the world and its production is the mainstay of millions of people worldwide (Nasir & Shamsuddoha, 2011). The main tea producing countries globally are Burundi, Kenya, Malawi, Rwanda, Tanzania, Uganda and Zimbabwe in Africa. In South America Tea is grown in Argentina, Brazil while in the Middle East Iran and Turkey grow Tea. In Asia, Bangladesh, China, India, Indonesia, Sri Lanka and Vietnam are notable producers (FAO 2005). Kenya is one of the world's leading black tea producers, but the income from the industry has remained unresponsive, despite increases in production levels (TBK, 2012). Attempts to promote tea industry have also resulted to adaptation of technological innovations to protect both tangible and intangible assets against erosion of the market (Ongo'nga & Ochieng, 2013). However, technology innovation has often been considered in view of multinational farms. There is need to explore technology innovation in small-scale tea industry under the patronage of KTDA. KTDA has attempted to formulate strategic plans, which form the basis of strategic planning. According to TAM model, technology acceptance is the significant predictor of technology innovation and adaption (Albirini, 2006). Acceptance of technology among the top managers predicts the role played by technology in advancing firms competitive advantage (Yi & Hwang, 2003), determines the amount of resources allocated to technology (Kogan, et al, 2011).

More fundamentally, it determines the aggressiveness in the innovative processes and embedding technology into firm's products and processes (Lee et al, 2003). Technology acceptance has improved performance of Tea industry in countries such as Singapore in processes such as value



addition, e marketing in the face of response to increased competition and demand for quality and efficient customer services (Kelegama, 2010). The theory is thus suitable in the proposed study to examine tea industry management capabilities in riding into new technological trajectories, their appetite for innovations and extent of adapting technology in firm's processes and products at factory level (Maganjo & Kavale, 2015).

# **1.2 Statement of the Problem**

In Kenya, performance of tea industry for the last decade has been at cross roads because the increased production has not been commensurate with earnings due to principle of demand and supply. Although in short- term analysis, tea prices have been rising, long term analysis of performance of tea industry in view of consideration of inflation, in real terms, tea prices have substantially dropped to about half to what farmers used to receive five decades ago (KTDA, 2014). The low earnings have often attracted the wrath of farmers.

In Mt Kenya region, there has been uprooting of tea bushes, tea picking boycotts, destruction of factory infrastructure besides threatening the life of factory managers, once the bonuses are announced year after year (Munene, 2016). Moreover, the low earnings have threatened the envisaged leading position of tea industry in employment creation of tea, income generation and foreign exchange earnings, in Vision, 2030 (GoK, 2007). Against this backdrop there is need to identify significant strategic approaches needed in the management of the entire tea industry to reverse the situation. Technology has been identified as one of the strategies to enhance performance in large scale Tea estates and is largely in use but small scale Tea sector is yet to make giant strides to catch up. This study therefore explored the role of technology as a strategic management practice and determinant of performance in Mount Kenya region.

There have been scholarly attempts to examine strategies that can be employed to improve performance of tea industry. The study by Mbui (2016) was limited to strategies on value addition while the study by Ongo'nga and Ochieng (2013) was focused on innovation strategies specifically mechanized harvesting to boost earnings. A study by Namu and Kiamba (2014) on performance of tea industry in Embu County was limited to cost reduction strategies while Omari (2015) focused on marketing and technology as strategic interventions to improve to export performance of tea industry in large scale tea farming. Similarly, a study by Odhiambo (2014) was restricted to descriptive analysis of strategic implementation and performance of tea industry.

There is need for an innovative approach in which various strategies are scaled to determine their potential to transform tea industry. To bridge this gap, the study will investigate the influence of technology innovation as a strategic management practice and determinant of performance of tea industry in Mount Kenya region.

# **1.3 Objective of the Study**

The objective of the study was to investigate the influence of technology innovation as a strategic management practice and determinant of performance of tea industry in Mount Kenya region.

# **1.4 Research Hypothesis**

**H0**: Technology innovation strategy has no significant influence on performance of the tea Industry in Mount Kenya region



#### 2.0 Literature Review

#### **2.1 Theoretical Review:**

#### 2.1.1 Technology Acceptance Model

Acceptance of technological innovation has been described as an important prerequisite strategy for organizational survival in the face of competition and globalization of business operations (Lazonick,2005). However, effectiveness of technological innovation as a strategy to keep organizational afloat in the competitive world, acceptance has been marked as a significant variable. Davis (1989) developed Technology Acceptance model that seeks to explain and predict the user's acceptance of emerging technologies in organizations. According to Davis as elaborated in Venkatesh, V & Bala, H. (2008). acceptance of technology has two major features; perceived usefulness and ease of use. Perceived usefulness has been defined as users profound attitude to a special and applied application of a system which enhances their performance at work (Lee, *et al*, 2003). Ease of use has also been defined as the extent to which the users's attitude towards the system.

According to TAM model, technology acceptance is the significant predictor of technology innovation and adaption (Albirini, 2006). Acceptance of technology among the top managers predicts the role played by technology in advancing firms competitive advantage (Yi & Hwang, 2003). Determines the amount of resources allocated to technology (Kogan, et al, 2011). More fundamentally, it determines the aggressiveness in the innovative processes and embedding technology into firm's products and processes (Lee et al, 2003). Technology acceptance has improved performance of Tea industry in countries such as Singapore in processes such as value addition, e marketing in the face of response to increased competition and demand for quality and efficient customer services (Kelegama, 2010). The theory is thus suitable in the proposed study to examine tea industry management capabilities in riding into new technological trajectories, their appetite for innovations and extent of adapting technology in firm's processes and products.

#### 2.1.2 Industrial Market Theory

The industrial market theory in Ramsey (2001) was adopted in the early fifties through the writings of Andrews (1952). The concept of Industrial organization theory is about the structure and functioning of the market. The theory is reflected in the structure – conduct performance model, which claims there is a causal link between structures of a market in which a company operates organizational conduct and intern performance in terms of the set organizational goals. Organization focuses on market conditions, analysis internal strengths and weaknesses, which form the pillar for design and adoption of market strategies for to gain competitive advantage.

However, stiff competition from local and international tea industry players plummeting of prices and demand for higher pay from farmers has ignited the need for adoption of competitive a marketing strategy. McCarthy (1960) and Mbithi *et al* (2015) suggest that opening up formerly excluded market sections, new marketing and distribution channels and entering new geographic markets as strategic to competitive advantage. Tea industry especially under KTDA has for a long time relied on brokers without accessing direct markets as well as little attention for local markets (IFC, 2013). The theory will therefore be very relevant to the proposed study as it seeks to explore the position of marketing in the organizational strategy, marketing initiatives in the tea industry to



promote and communicate with customers about the tea products in a bid to establish new markets and retain the existing customer base.

#### 2.2 Empirical Review

Oluoch and Osida (2016) conducted a study on ICT and technological development in advancing tea research in Kenya. A scoring system was used to develop continuous dependent variables that were used in regression models to identify the variables most significantly influencing ICT use. The participants stressed the cost of technology, lack of training, trust level in the ICT system, lack of ICT proficiency and lack of technological infrastructure as challenges for ICT use in advancing tea research. Managers can use these results to promote ICT use in tea research that can lead to more efficient communication and increased demand for the firm's products and services.

Ongong'a and Ochieng (2013) conducted a study on innovation in the tea industry: the case of Kericho Tea. The two-month study that involved correlation analysis investigations and both quantitative and qualitative data was collected from primary and secondary sources. The study revealed that innovative strategies adopted resulted into increased revenues, high productivity levels and reduced costs. Wanjira, Kubaison and Nzomo (2016) conducted a study on the effect of innovation on performance of KTDA-managed factories in Meru County. This study was guided by descriptive survey design. This study concluded that innovation had a positive effect on the performance of KTDA managed factories. The study concludes that there is a positive effect of cost reduction strategies on the financial performance of tea factories. The cost reduction strategies help in minimizing costs of production as well as costs of labour that having a positive impact on the return to the farmer. Automation of key processes in tea processing has led to improved efficiency and reduced costs.

Ondego (2016) conducted a study on lean manufacturing practices and performance of tea processing firms in Kisii, Kenya. The study adopted census survey research design where both cross sectional and longitudinal research design were adopted. The findings of the study indicated automation was the most used lean manufacturing practices in all the tea processing firms in Kisii region together other practices like kaizen, total productive maintenance, and standardized work and bottleneck analysis. Njagi (2012) conducted a study to investigate the impact of automation on the operational performance of the KTDA managed factories. The study used an exploratory research design. The results of the study show that although fully automated factories have higher operational performance compared to partially automated ones, the overall performance is not significantly different. Marusoi (2013) conducted a study to establish the effect Financial Innovation has had in the financial performance in the tea industry in Kenya. The study used a descriptive survey research design methodology. In conclusion, the study established that the introduction and use of the financial innovation process in the tea industry has resulted in a positive effect on financial performance and a better alignment of earnings to turnover and costs.

#### **2.3 Conceptual Framework**

A conceptual framework is a graphic representation of the interrelationship of variables describing a phenomenon within a system of process (Cresswell, 2003). Zikmund (2010) terms conceptual framework as a set of broad ideas and principles taken from appropriate fields of enquiry and users to frame subsequent presentation. According to Kothari and Garg (2014), a conceptual framework is a hypothetical model identifying the model under study and the relationship between dependent and independent variables. Oso and Onen (2009) expounds that a conceptual framework indicates the direction of relationship as well as the effect of independent variable on dependent variable.

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The relationship between dependent and independent variable is diagrammatically presented in figure 1.



# **Figure 1: Conceptual Framework**

#### 3.0 Research Methodology

Research design is the researcher's plan of action that provides the researcher with a framework of operation that steers the inquiry process (Borg & Gall, 1996, Cohen & Manion, 2000). The research process becomes purposeful, meaningful and systematic if the pattern to carry out research blends well with research objective. The study employed mixed methods research design. Mixed methods research refers to procedures of data collection and analysis of both qualitative and quantitative data in the context of a single study. The design emerged from mixed methods from paradigm wars between qualitative and quantitative research approaches to become a widely used mode of enquiry (Terrell, 2012).

The methodology permits a more complete and synergistic utilization of data than do separate quantitative and qualitative analysis (Creswell and Clark, 2011). It further help the researchers meet the criteria for evaluating the "goodness" of their answers better than do the single approach designs (Tashakkori & Teddlie, 1998), help understand contradictions in both qualitative and quantitative data, and reflects researchers point of view (Niglas, 2004). Moreover, mixed methods combine idiographic approaches and nomothetic approaches in an attempt to serve the dual purpose of in- depth understanding from qualitative data, and to gain an overview of social realities from quantitative data (Johnson & Onwuegbuzie, 2004). In the proposed study, the major advantage of using the mixed methods research in this study was that it would enable the researcher to simultaneously answer confirmatory questions as well as explore about the determinants of performance in Tea Industry from close-ended questions.

The target population will be 117 management team comprised of 5 regional management team of regional manager (RM), accountant (AC), operations manager (OP), production manager (PM) auditor (AU) and, 112. Top management in 16 factories who included 16 managers(M), 16 production managers (PM) 32 accountants(AC), 32 training managers(TM) and 16 field coordinators (FC) sixteen factories that lie in Mt Kenya region

The regression model that was used is;

 $Y = \beta 0 + \beta_1 X + \epsilon$ 

Where:



Y = Performance of Tea Industry.

- X = Technology Innovation
- $\beta_1$  = Coefficient of the variable

 $\epsilon$ = Error term

#### 4.0 Results and Findings

#### 4.1 Descriptive Statistics for Technology Innovation

The study objective of the study was to investigate the influence of technological innovation strategy on performance of the tea industry in Mount Kenya region. To achieve the respondents were requested to indicate their levels of agreement on a five point Likert scale. (1 = Never, 2 = Rarely 3 = Sometimes, 4 = frequently, 5 = Always) was used and the mean response rate from the respondents owners calculated. For the purposes of interpretation 4 & 5 (frequently and always) were grouped together, 1 & 2 (Never and rarely) were grouped while 3 remained Sometimes. The results of this study are as depicted in Table 1.

#### **Table 1: Technology innovation**

			Somet	Frequ	Alway	Me	
Statement	Never	Rarely	imes	ently	S	an	SD
The factory has introduced							
modern technology in its							
operations	25.6%	39.5%	14.0%	7.0%	14.0%	2.4	1.3
Technology has reduced cost on							
workforce	22.1%	45.3%	4.7%	18.6%	9.3%	2.5	1.3
Technology has reduced wastage							
in the factory	33.7%	38.4%	7.0%	16.3%	4.7%	2.2	1.2
Technology has improved							
collection of tea	32.6%	33.7%	16.3%	9.3%	8.1%	2.3	1.2
Technology has improved							
weighing of tea leaves	34.9%	38.4%	11.6%	10.5%	4.7%	2.1	1.1
Technology has improved tea							
processing	32.6%	32.6%	11.6%	9.3%	14.0%	2.4	1.4
Technology has to development							
of new tea varieties	27.9%	44.2%	10.5%	11.6%	5.8%	2.2	1.2
Technology has increased market							
accessibility	29.1%	37.2%	11.6%	11.6%	10.5%	2.4	1.3
Technology has improved quality							
of tea	26.7%	39.5%	14.0%	12.8%	7.0%	2.3	1.2
Technology has enhanced							
knowledge	19.8%	44.2%	10.5%	15.1%	10.5%	2.5	1.3
There is heavy investment in							
technology	30.2%	34.9%	12.8%	14.0%	8.1%	2.3	1.3
There are incentives for							
innovations	29.1%	38.4%	8.1%	15.1%	9.3%	2.4	1.3

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#### 2.3

1.3

#### Average

Regarding the statement that the factory has introduced modern technology in its operations, 25.6% indicated never, 39.5% indicated rarely, 14.0% responded sometimes, 7.0% frequently while 14.0% indicated always. On the statement, technology has reduced cost on workforce, 22.1% indicated never, 45.3% indicated rarely, 4.7% responded sometimes, 18.6% frequently while 9.3% always. Regarding the statement that technology has reduced wastage in the factory, 33.7% responded never, 38.4% responded rarely, 7.0% responded sometimes, 16.3% frequently while 4.7% always. On the statement that technology has improved collection of tea 32.6% responded never while 33.7% responded rarely, 16.3% responded sometimes 9.3% frequently while 8.1% always. Regarding the statement that technology has improved weighing of tea leaves, 34.9% indicated never while 38.4% responded rarely, 11.6% responded sometimes, 10.5% responded frequently while 4.7% always.

On the statement technology has improved tea processing, 32.6% indicated never while 32.6% responded frequently, 11.6% indicated sometimes, 9.3% responded frequently while 14.0% responded always. Regarding the statement, technology has to development of new tea varieties, 27.9% indicated never while 44.2% responded rarely, 10.5% responded sometimes, 11.6% responded frequently while 5.8% responded always. On the statement, that technology has increased market accessibility, 29.1% indicated never while 37.2% responded rarely. Further, regarding the statement technology has improved quality of tea 26.7% indicated never while 39.5% responded rarely, 14.0% responded sometimes, 12.8% responded frequently while 7.0% indicated never while 44.2% responded rarely. Regarding the statement, that there is heavy investment in technology 30.2% indicated never while 34.9% responded rarely. Finally, regarding the statement that there are incentives for innovations, 29.1% indicated never while 38.4% responded rarely, 8.1% responded sometimes, 15.1% responded frequently while 9.3% responded always.

The mean score of the responses was 2.3 that show that there was disagreement with the statements on whether value addition and performance of tea industry in Kenya. The standard deviation was 1.3 shows that the responses were spread around the mean response.

This study agrees with the findings that of a study by Fagerberg and Scholec, (2007) that indicates that technology competitiveness is ability to compete successfully in markets for new goods and services and that Technology is critical in enhancing competitiveness of an industry particularly with the rapid globalization process. Wang et al (2007) contend that the recent trend towards globalization and e-commerce has led to utilization of technology and has greatly influenced the competitiveness of industries and this is in line with the findings of this study.

This study finding differs slightly with the results in a study by Fagerburg and Srholec (2007) that has indicated that the deteriorating technology competitiveness is the major constraint to many industries in the developing countries. Like in this study, Castellacci (2008) argues that the focus of economic research has shifted from the analysis of price-and-cost related factors of competitiveness to the important role played by technological change. In addition, Matthyssens and Vandenbempt (2008) argue that companies must break existing rules of the game and reshape the boundaries of the 26 industry in order to regain competitiveness and this correspond with the findings in this study.



#### **4.2 Correlations Analysis**

Results in table 2 indicated that there was a strong positive association between technology innovation strategy and performance of tea industry (r=.748). The results showed technology innovation strategy was significant with performance of tea industry since the p-value is less than 0.05 (p=0.000). The results are in agreement with Oluoch and Osida (2016) that use of information technology use in tea research that can lead to more efficient communication and increased demand for the firm's products and services.

#### **Table 2: Correlation Matrix**

Variable		Performance of tea industry
Performance of tea industry	Pearson Correlation	1.000
	Sig. (2-tailed)	
Technology innovation strategy	Pearson Correlation	.748*
	Sig. (2-tailed)	0.000

#### **4.3 Diagnostic Tests**

The study conducted various tests and these tests included test for normality, test for multicollinearity, unit root test, heteroscedasticity test and test for autocorrelation

#### 4.3.1 Test for Normality

The study sought to establish whether performance of tea industry is normally distributed using the graphical method approach.



**Figure 2: Test for Normality** 



The results showed a bell-shaped indicating that the residuals are normally distributed performance of tea industry is normally distributed as shown in the Figure 2.

#### 4.3.2 Multicollinearity Test

Multicollinearity exists when two or more of the predictors in a regression model are moderately or highly correlated thereby limiting the research conclusions to be drawn. Multicollinearity inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors. Multicollinearity was assessed in this study using the Variance Inflation Factor (VIF) as shown in table 3.

#### **Table 3: Variance Inflation Factor**

Variable	VIF	1/VIF
Technology Innovation	2.06	0.48564
Mean	1.98	

A variance inflation factor test was conducted to test for multicolinearity of the predictors and a value less than 10 is acceptable. Technology innovation strategy had V.I.F value of 2.06 that is less than 10 implying there is no multicolineerty.

#### 4.3.3 Unit Root Test (Stationary Test)

Stationary means that the marginal distribution of the process does not change and its mean level and variance stay steady over time otherwise any violation would mean non-stationarity. Most economic variables are usually non-stationary in nature and prior to running a regression analysis. Unit root tests were thus conducted using the Levin-Lin-Chu (LLC) test to establish whether the variables were stationary or non-stationary. The purpose of this is to avoid spurious regression results being obtained by using non-stationary series. The null hypothesis was that data is not stationary while the alternative hypothesis was data is stationary.

#### Table 4: Unit Root

Variable name	t-Statistic(adjusted)	<b>P-value</b>	Comment
Technology innovation strategy	-3.2408	0.006	Stationary
Performance of tea industry	-5.6498	0	Stationary

#### 4.3.4 Heteroscedasticity Test

Heteroscedasticity refers to circumstance in which the variability of a variable is unequal across the range of values of a second variable that predicts it. In this case, the variability of the dependent variable widens or narrows as the independent variable increases thus the inverse is Homoscedastic within cross-sectional units. However, its variance may differ across units: a condition known as group wise Heteroscedasticity. The Breuch-Pagan test tests for the variability of the model residuals. The null hypothesis was that data has constant variance while the alternative hypothesis was that data has non-constant variance.

#### **Table 5: Heteroscedasticity Results**

Test Statistic	P-Value	
7.87	0.0510	
H <sub>o</sub> : Constant Variance		



The results in Table 5 indicate that the null hypothesis of Heteroscedastic error terms is not rejected as supported by a p-value of 0.0510 that is greater than 0.05 implying there is no Heteroscedasticity. This test suggests that the data is homoscedastic.

#### **4.3.5** Test for Autocorrelation

To establish whether the residuals are serially correlated over time, Breusch-Godfrey test for autocorrelation was conducted. The null hypothesis is that no first order serial or auto correlation exists when the p-value is greater than 0.05.

#### **Table 6: Test for Autocorrelation**

Test Statistic	P-Value	
17.433	0.823	
H <sub>o</sub> : No Serial Correlation		

From the Table 4.16 the null hypothesis of no serial correlation was not rejected given that the p-value was greater than 0.05 (p-value = 0.823) implying that there is no autocorrelation thus residuals are serially correlated.

# 4.3.6 Linearity Test

Figure 3 shows the linearity test for the study.





#### **Figure 3: Linearity test**

The linearity test indicates the relationship between dependent and independent variables. For linear regression to be conducted, the relationship between the independent and dependent variables needs to be linear. The linearity assumption can best be tested with scatter plots and graphs. The linearity test results shows that the data set was exhibiting linear pattern hence we can conduct linear regression.

#### **4.4 Regression Analysis**

# 4.4.1 Fitness of Model

Technological innovation strategy was found to be satisfactory in explaining performance of the tea industry in Mount Kenya region. This is supported by coefficient of determination also known as the R square of 56.0%. This means that technological innovation strategy explain 56.0% of the variations in the dependent variable that is performance of the tea industry in Mount Kenya region. The results are in agreement with Oluoch and Osida (2016) that use of information technology use in tea research that can lead to more efficient communication and increased demand for the firm's products and services as shown on table 4.

#### **Table 4: Model of Fitness**

Model	R	R Square	Adjusted R Square	Std. Error of the
				Estimate
	.748	.560	.555	.38216

#### 4.4.2 Analysis of Variance

The results indicate that the model with the predictor variable (technology innovation strategy) was statistically significant and predicts the dependent variable (financial performance of the tea industry in Mount Kenya region).

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	15.613	1	15.613	106.908	.000
	Residual	12.268	84	.146		
	Total	27.881	85			

#### **Table 5: Analysis of Variance**

This results is supported with the F-statistic equal to 106.908 and the calculated p-value equal to 0.00 < 0.05 as shown in table 5.

Table 6.	Technology	Innovation	Strategy and	l Financial	Performance	of the Tea	Industry
Table 0.	rechnology		Su alegy and	I F Manciai	r er for mance	of the rea	industi y

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.399	.258		1.543	.127
Technology innovation strategy	.887	.086	.748	10.340	.000



Table 6 showed that there is a strong positive relationship between technology innovation strategy and financial performance of the tea industry (r=.887). Thus, a unitary percentage increase in technology innovation strategy leads to an increase in financial performance of the tea industry by 88.7%. The constant unstandardized coefficient of .399 imply that in the absence of technology innovation strategy, financial performance of the tea industry will be at .399 meaning that there are other could be drivers of financial performance of the tea industry like value addition strategy, cost reduction strategy, marketing promotion strategy and strategy implementation. The results showed that technology innovation strategy is also significant with financial performance of the tea industry (p=.000). This finding is consistent with Ongong'a and Ochieng (2013) who conducted a study on innovation in the tea industry and found that innovative strategies adopted resulted into increased revenues, high productivity levels and reduced costs.

 $Y = \beta_0 + \beta_2 X_2$ 

 $Y = .399 + .887 X_2$ 

Where Y= Financial performance of the tea industry

X<sub>2</sub>= Technology innovation strategy

The hypothesis was tested using the simple linear regression model as shown in table 6. The study tested the given null hypothesis:

**H**<sub>01:</sub> Technology innovation strategy has no significant influence on performance of the tea Industry in Mount Kenya region.

The criterion for rejecting null hypothesis is to reject the null hypothesis if the calculated t value is greater than the critical value of 1.96. The results in table 6 show that the calculated value of 10.340>1.96, hence, the null hypothesis was rejected. The alternative hypothesis was that accepted that there is a significant relationship between technology innovation strategy and financial performance of the tea industry in Mount Kenya region

#### **5.0 Conclusions**

Based on the findings of the study, it can be concluded that strategic management practices influence performance of tea industry in Mt Kenya region in Kenya positively. The adoption of strategic management practices has a high potential of improving tea industry performance and thus better prices to the farmers. The versatility of strategic management practices has made their adoption rate to be high among both the factories and their farmers. It may be challenging if the adoption of strategic management practices is only at the factory level without involvement of farmers. Tea industry in Kenya have continued to perform fairly well even when other sectors of the Kenya economy show sluggish performance. This can be explained by the use of strategic management practices that have enabled factories to be more innovative in their strategies. However, the level of performance remains low compared to the expected results.

Strategic management practices was found to have a high prediction power when grouped together in terms of tea pricing using predictive discriminant analysis. It is therefore important for the Kenya tea development authority (KTDA) to consider grouping factories based on their market share of innovations and market leadership to improve their prices. This kind of ranking will provide some competition among tea factories. This will lead to better services to farmers It should also be noted that the performance on the tea industry is not purely and wholly derived



from strategic management practices because there are other drivers of tea industry performance in terms of prices like; regulations, quality of management, level of innovativeness and corporate governance.

#### 6.0 Recommendations

Tea factories should provide incentives for research and development on adoption of newest Technology in the market to support cost reduction and improve quality. Professionals in the tea industry should spend more time, effort and resources towards innovations. This will mean consistent better quality that attracts higher prices for the farmers if the innovations become successful. In Kenya, most small-scale farmers are still poor due to low prices of tea over the years. ICT professionals should explore ways of providing innovative solutions for coming up with better prices that will benefit not only farmers but also the economy. This can result to motivation of farmers for better agronomical practices, stable financial base and development for the country.

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