Value Addition as a Strategic Management Practice and Determinant of Performance of Tea Industry in Mount Kenya Region

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Abstract

The global tea industry is lucrative and competitive; turning in billions of dollars annually but the prices small holders’ tea producers receive fail to reflect the high quality of their produce. 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 study examined strategic management practices that can determine performance of tea industry in Mount Kenya region so that it can remain competitive. The specific objectives were to determine how value addition related to performance of tea industry in Mt Kenya region in Kenya. The significance of this research is adding information to the existing knowledge and provide a platform for more studies, enhancement of Tea industry performance in Mt Kenya region in Kenya and globally. The study was guided by Value Chain Analysis Theory model and Cost Leadership theories. 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, focus group discussion and document analysis. 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 value addition have a strong positive relationship with financial performance of the tea industry in Mount Kenya region. 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. Tea factories should continue investing in value addition strategies in specific operational areas because they are able to control their costs much better as compared to addition of more collection centers or more field visits. Consumers will realize higher Tea prices through branding which increases loyalty.

**Keywords:** Strategic Management, Value Addition, Performance & Mt. Kenya Region.

1.0 Introduction

1.1 Background of the Study

Strategic management involves endeavours to fit the organization with the changing environment in the most beneficial way (Pearce & Robinson, 2007). It’s a continuous process in which future oriented strategies allow an organization to attain its objectives. This is view of strengths, weakness, threats and opportunities in the business environment. A strategy is designed to ensure that the basic objectives of the organization are achieved through appropriate execution by the management (Velani, 2017; Thompson & Strickland, 2005).

Strategic Management is a concept that concerns making decisions and taking corrective actions to achieve long-term targets and goals of an organization (Bakar et al, 2011). It is a set of decisions and actions that result in the formulation and implementation of plans designed to achieve a company’s objectives (Dess, Lumpkin & Eisner, 2010). Strategic management practices therefore include strategic planning; strategy implementation and strategy evaluation and control, which have in the past studies been seen to influence the competitive positioning of the firm in the industry, thus determine the performance (Johnson, 2009). Generally, strategic management practices can improve efficiency in various organizations (Bakar et al, 2011).

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 Millennium Development Goals (MDGs) (UN, 2000). 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 regained.

1.2 Statement of the problem

In Kenya, performance of the tea industry for the last decade has been at crossroads because the increased production has not been commensurate with earnings due to effects of supply and demand. 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 the farmers used to receive five decades ago (KTDA, 2014). The low earnings has often attracted the wrath of farmers in Mount Kenya region with some uprooting Tea bushes, Tea picking boycotts, destruction of Factory infrastructure, besides threatening the life of factory managers in the region (Munene, 2016).
Moreover, the low earnings has threatened the envisaged leading position of tea industry in employment creation, income generation, and foreign exchange earnings in support of vision 2030 (GoK, 2007). Government intervention in support of Value addition in Sri Lanka has remarkably improved performance of Tea in that Country. Against this backdrop, there is need to identify Value addition as a Strategic management practice and determinant of performance in Tea industry 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 limited to on innovation strategies specifically mechanized harvesting to boost earnings. The major gap revealed in the studies was partial examination of strategies to determine performance of tea industry. This may not provide adequate strategic solutions to the concerning low performance of the tea industry.

There is need for a holistic 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 value addition 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 value addition as a strategic management practice and determinant of performance of tea industry in Mount Kenya region.

1.4 Research Hypothesis

$H_0$: Value addition 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 Theory of Value Chain Analysis

Michael Porter put value chain analysis forward, in 1985 (Kaplinsky & Readman, 2000). Porter describes value chain analysis as a useful tool as the firms seeks to gain competitive advantage. Value chain is depicted as a way of conceptualizing the activities that are needed in order to provide a service or a product to a customer. Porter (1985) introduces a generic value chain model that is set in the context of a traditional manufacturing firm. It includes the primary activities that have direct support and affect the value of service or goods. This include in bound logistics, operations, outbound logistics, marketing, sales, and service. It also includes the support activities such as the infrastructure of the firm, human resource management, technology development and procurement. It demonstrates the way a product gains value as it moves along the route of design, production, marketing, delivery and service to the customer alongside supportive activities in the value chain aimed at gaining competitive advantage. Value chain analysis describes how businesses receive raw materials as input, add value to raw materials through various processes and sell finished products to customers (Capon, 2008). This aims at satisfying customer demands in the wake stiff competition in the business environment. Tea industry is highly competitive to a point where some tea producers such as South Africa, Malawi and an notably Kenya can be edged out from the Tea business world.

Value addition has been identified as a viable strategy to keep a float in Tea business. Tea industry as a manufacturing industry, which fits manufacturing sector, identified in Porter
Value chain analysis. The primary activities in the value chain add value directly to the product especially in the design, production, marketing and delivery to customers blends with value addition variables packaging, blending and branding. Different tea packaging offers customers with various options depending on their buying power and convenience; blending provides customers with various tea qualities, which may increase the market share as well as fetch competitive prices while branding of tea industry is likely to match with consumers changing behaviour, which may be in tandem with customer demands.

Therefore, value chain analysis can be used to examine activities in value addition in the production chain to produce tea products that can withstand the dynamic competitive tea industry. Value chain analysis has been argued to be advantageous because; it is important in relation to detecting organizational, tactical and strategic issues related to business; can assist business to appreciate potential sources of competitive advantage and can be applied in any type of business (Ensign, 2001).

2.1.2 Cost Leadership Theory

Cost leadership theory is part Porter’s (1980) model of generic strategies which addresses practitioners with an analytical technique for gaining understanding of industries and competitors. Porter implies that managers seek to improve the performance of their businesses, advisors to managers, teachers of management, security and analysts or other observers trying to understand and forecast business success or failure, or government officials seeking to understand competition in order to formulate public policy. The cost Leadership strategy represents attempts by firms to generate competitive advantage by achieving the lowest cost in the industry. The focus of firms implementing a cost Leadership strategy is on stringent cost control and efficiency in all areas of operation (Porter, 1980). A company that decides to follow a cost leadership strategy has the objective of being able to realize its offer at lowest possible cost.

The competitive advantage of a company that decides to follow a cost leadership strategy has the objective of being able to realize its offer at lowest possible cost. This is achieved by performing chain activities at lower cost than competitors (Porter, 1985) perform. A firm that pursues cost leadership strategy achieves a low-cost position by emphasizing on aggressive construction of efficient-scale facilities, vigorous pursuit of cost reductions from experience, tight cost and overhead control, avoidance of marginal customer accounts, and cost minimization in areas like research and development (R&D), services, sales force, advertising (Porter, 1980). The cost leadership strategy is therefore important in this study when exploring the cost reduction strategies in tea industry to improve performance.

2.2 Empirical Review

Kemunto (2015) conducted a study on operations management and performance of Kenya Tea Development Agency managed tea factories in Kenya. The study used a descriptive design. The study found that there is a positive significant relationship between supply chain, lean management, value stream mapping, machine maintenance and operational performance. However, the study found a negative relationship between constraints and operational performance of an organization. Burugo and Owour (2017) conducted a study on the influence of strategic management practices on business profitability in Kenya the Case Study of Chai Trading Company Limited. This research adopted a descriptive research design. The results showed that cost leadership, value addition, technological innovation and market diversification influence the profitability of Chai Trading Company Limited.

Herath and De Silva (2011) conducted a study on strategies for competitive advantage in value added tea marketing. Data were gathered through interviews with the founders of nine firms.
using an interview guide and using records at the Sri Lanka Tea Board and the Sri Lanka Customs. The results revealed that brand building, niche marketing, product differentiation, cost leadership, and customer focus were the most prominent strategies adopted by the firms. Kaburu and Theuri (2017) conducted a study to examine the determinants of effective value addition in the tea processing sub-chain to Kenya tea export. The study investigated the effects of strategic planning, technological competitiveness and marketing competitiveness on effective value addition of the tea processing in Kenya. The results established that strategic planning; technological competitiveness, marketing competitiveness and government policy have significant effect on value addition in tea processing export in Kenya.

Tsala and Theuri (2016) conducted a study on factors affecting value addition to tea by buyers within the Kenyan Tea Trade Value Chain. A descriptive survey was adopted. Results showed that a majority of the companies were involved in value addition to tea on small proportions. It were also showed that there is a significant relationship between buyers’ strategic decisions, personnel skills and value addition to tea. Similarly, results showed that government policies, buyers’ strategic decisions and personnel skills influence value addition to tea positively. However, market destination was found to influence it negatively. Omete (2015) conducted a study to establish relationship between tea value addition strategies and performance in the Kenyan tea exporting companies. The research design adopted was cross sectional descriptive design. The study found out that value addition helps the companies create awareness among customers for their products and services but also serves as a useful vehicle in promoting brand image of products and services offered at the target market.

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

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Addition</td>
<td>Performance of Tea Industry</td>
</tr>
<tr>
<td>Branding</td>
<td>Average Tea prices</td>
</tr>
<tr>
<td>Blending</td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td></td>
</tr>
</tbody>
</table>

**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 objectives. 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.
- \( X \) = Value Addition
- \( \beta_1 \) = Coefficient of the variable
- \( \epsilon \) = Error term

### 4.0 Results and Findings

#### 4.1 Descriptive Statistics for Value Addition

The objective of the study was to establish whether value addition strategy influences 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 = strongly disagree, 2 = Disagree 3 = Neutral, 4 = Agree, 5 = strongly agree) was used and the mean response rate from the respondents owners calculated. For the purposes of interpretation 4 & 5 (agree and strongly agree) were grouped together as agree, 1 & 2 (strongly disagree and disagree) were grouped as disagree while 3 was neutral. The results of this study are as depicted in Table 1.
Table 1: Value addition strategy

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a symbol to identify your tea</td>
<td>33.7%</td>
<td>31.4%</td>
<td>12.8%</td>
<td>16.3%</td>
<td>5.8%</td>
<td>2.3</td>
<td>1.3</td>
</tr>
<tr>
<td>There is consumer loyalty for your tea</td>
<td>36.0%</td>
<td>26.7%</td>
<td>9.3%</td>
<td>12.8%</td>
<td>15.1%</td>
<td>2.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Consumers identify with your tea</td>
<td>44.2%</td>
<td>29.1%</td>
<td>11.6%</td>
<td>5.8%</td>
<td>9.3%</td>
<td>2.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Branding ensures quality</td>
<td>40.7%</td>
<td>25.6%</td>
<td>10.5%</td>
<td>12.8%</td>
<td>10.5%</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Branding fetches better prices</td>
<td>38.4%</td>
<td>27.9%</td>
<td>10.5%</td>
<td>12.8%</td>
<td>10.5%</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Local tea is mixed with imported for blending</td>
<td>33.7%</td>
<td>39.5%</td>
<td>9.3%</td>
<td>9.3%</td>
<td>8.1%</td>
<td>2.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Blending improves quality</td>
<td>32.6%</td>
<td>25.6%</td>
<td>18.6%</td>
<td>8.1%</td>
<td>15.1%</td>
<td>2.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Blending fetches better prices</td>
<td>40.7%</td>
<td>25.6%</td>
<td>5.8%</td>
<td>12.8%</td>
<td>15.1%</td>
<td>2.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Blending increases market share</td>
<td>44.2%</td>
<td>26.7%</td>
<td>10.5%</td>
<td>5.8%</td>
<td>12.8%</td>
<td>2.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Your factory has unique packaging</td>
<td>43.0%</td>
<td>24.4%</td>
<td>7.0%</td>
<td>12.8%</td>
<td>12.8%</td>
<td>2.3</td>
<td>1.5</td>
</tr>
<tr>
<td>The packaging is attractive to the customer</td>
<td>39.5%</td>
<td>27.9%</td>
<td>10.5%</td>
<td>12.8%</td>
<td>9.3%</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Packaging has a symbol of brand</td>
<td>39.5%</td>
<td>24.4%</td>
<td>12.8%</td>
<td>12.8%</td>
<td>10.5%</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Size of packaging determines sales</td>
<td>26.7%</td>
<td>36.0%</td>
<td>8.1%</td>
<td>16.3%</td>
<td>12.8%</td>
<td>2.2</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>26.7%</strong></td>
<td><strong>36.0%</strong></td>
<td><strong>8.1%</strong></td>
<td><strong>16.3%</strong></td>
<td><strong>12.8%</strong></td>
<td><strong>2.3</strong></td>
<td><strong>1.4</strong></td>
</tr>
</tbody>
</table>

Sixty-five point one 65.1(33.7%+31.4%) of the respondents disagreed that there is unique symbol to identify the factory tea while 22.1% agreed with the statement. Regarding the statement that there is consumer loyalty for the factory tea, sixty-two point even (62.7%) of the respondents disagreed that there is loyalty for their factories, 27.9% of the respondents agreed that there is loyalty in their tea. The consumer identify with the response tea was a statement in table 1 majority of the respondents who are 73.3.2% of the respondents disagreed that the consumers identify with their tea while 15.1% of the respondents agreed that the consumers identify with their tea. The other question on questionnaire in Table 1 is whether branding ensures quality of the tea, 66.3% of respondents disagreed that branding ensures quality while 33.3% of the respondents agreed.

Further, 66.3% of the respondents disagreed that branding fetches better prices while 33.3% of the respondents agreed that branding fetches better prices. The respondents were also required to answer questions on blending. In table 1, the majority of the respondents who are 73.2% disagreed that local tea is mixed with imported tea for blending while 17.4% of the respondent agreed that the local tea is blended with imported tea. Blending is said to improve the quality but majority of the respondents who are 58.2% of the respondents disagreed that blending improves quality while 23.2% of the respondents strongly agreed that blending that
blending improves quality. Blending fetches better prices was a statement in the questions where 66.3% of the respondents strongly disagreed that blending fetches better prices while 27.9% of the respondents agreed that blending fetches better prices. Blending increases market share but 70.9% of the respondents disagreed that blending increases market share.

In table 1, the respondents were also required to respond on the questions relating to packaging. Majority 67.4% of the respondents indicated that they disagree that their factory has unique packaging while 25.6% of the respondents agreed that their factories have unique packaging. Regarding the statement that issue of packaging attractiveness to customers to the customer, 67.4% of the respondents disagreed that the packaging is attractive to the customers while 22.1% of the respondents agreed that packaging is attractive to the customers. The issue of whether packaging has a symbol of brand was responded, 63.9% of the respondents strongly disagreed that packaging has a symbol of brand but only 23.3% of the respondents who disagreed that packaging has a symbol of brand. Finally, respondents were expected to state whether the size of packaging determines sales or not. Majority of the respondents disagreed that size of the packaging determines sales and this was as per 62.7% of the respondents while 29.1% of the respondents agreed that size of packaging determines the sales of tea.

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 1.4 shows that the responses were spread around the mean response. The findings of this study correspond with the empirical studies that states that Tea branding is one of the fastest growing industries in the agricultural brands development and has an enormous potential for promoting growth in the tea industry (Ping, 2010). Kumar (2013) suggests that the rapid change in consumer behaviour is likely to support branded tea market more than its unbranded segment and this collaborate the findings of this study. This study is agreeing with the view of Kelegama (2010) that argues that branding can play a significant role in increasing sales of value added tea. The composition of a blend, in terms of origins and estates, is a closely guarded commercial secret (Herath and Silva, 2011) and this is as per the findings in this study.

4.2 Correlations Analysis

Results in Table 2 indicated that there was a strong positive association between value addition strategy and performance of tea industry (r=0.732). The results showed value addition 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 Tsalwa and Theuri (2016) who conducted a study on factors affecting value addition to tea by buyers within the Kenyan Tea Trade Value Chain and established that there is a significant relationship between buyers’ strategic decisions, personnel skills and value addition to tea. Table 2: Correlations Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Performance of tea industry</th>
<th>Value addition strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance of tea industry</td>
<td>Pearson Correlation 1.000</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td>Value addition strategy</td>
<td>Pearson Correlation .732*</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
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.

![Test for Normality](image)

The results showed a bell-shaped indicating that the residuals are 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>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value addition strategy</td>
<td>2.26</td>
<td>0.442598</td>
</tr>
<tr>
<td>Mean</td>
<td>1.98</td>
<td></td>
</tr>
</tbody>
</table>

A variance inflation factor test was conducted to test for multicolinearity of the predictors and a value less than 10 is acceptable. Value addition strategy had V.I.F value of 2.26 that is less than 10 implying there is no multicolineerity.

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**

<table>
<thead>
<tr>
<th>Variable name</th>
<th>t-Statistic(adjusted)</th>
<th>P-value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value addition strategy</td>
<td>-3.3960</td>
<td>0.003</td>
<td>Stationary</td>
</tr>
<tr>
<td>Performance of tea industry</td>
<td>-5.6498</td>
<td>0.000</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Results in Table 4 indicated that a p-value of 0.003 for value addition strategy and performance of tea industry respectively which is less than 0.05 implying that data is stationary (i.e. absence of unit roots) at 5% level of significance.

**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**

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.87</td>
<td>0.0510</td>
</tr>
</tbody>
</table>

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 or not 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**

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.433</td>
<td>0.823</td>
</tr>
</tbody>
</table>

From the Table 6 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](image)

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

Value addition 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 53.6%. This means that value addition strategy explain 53.6% of the variations in the dependent variable which is performance of the tea industry in Mount Kenya region. The results are in agreement with Tsalwa and Theuri (2016) who conducted a study on factors affecting value addition to tea by buyers within the Kenyan Tea Trade Value Chain and established that there is a significant relationship between buyers’ strategic decisions, personnel skills and value addition to tea as shown on table 4.
Table 4: Model of Fitness

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.732</td>
<td>.536</td>
<td>.531</td>
<td>.39239</td>
</tr>
</tbody>
</table>

### 4.4.2 Analysis of Variance

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

Table 5: Analysis of Variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>14.948</td>
<td>1</td>
<td>14.948</td>
<td>97.083</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>12.933</td>
<td>84</td>
<td>.154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27.881</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This results is supported with the F-statistic equal to 97.083 and the calculated p-value equal to 0.00<0.05 as shown in table 5.

Table 6: Value addition strategy and financial performance of the tea industry

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.046</td>
<td>.307</td>
<td>.150</td>
<td>.881</td>
</tr>
<tr>
<td>Value addition strategy</td>
<td>.987</td>
<td>.100</td>
<td>.732</td>
<td>9.853</td>
</tr>
</tbody>
</table>

Table 6 showed that there is a strong positive relationship between value addition strategy and financial performance of the tea industry (r=.987). Thus, a unitary percentage increase in value addition strategy leads to an increase in financial performance of the tea industry by 98.7%. The constant unstandardized coefficient of .046 imply that in the absence of value addition strategy, financial performance of the tea industry will be at .046 meaning that there are other could be drivers of financial performance of the tea industry like technology innovation strategy, cost reduction strategy, marketing promotion strategy and strategy implementation. The results showed that value addition strategy is also significant with financial performance of the tea industry (p=.000). This finding is consistent with Tsalwa and Theuri (2016) who conducted a study on factors affecting value addition to tea by buyers within the Kenyan Tea Trade Value Chain and established that there is a significant relationship between buyers’ strategic decisions, personnel skills and value addition to tea. The value addition strategy simple regression model is

\[ Y = \beta_0 + \beta_1 X_1 \]

\[ Y = .046 + .987X_1 \]

Where Y= Financial performance of the tea industry

\[ X_1 = \text{Value addition strategy} \]
The hypothesis was tested using the simple linear regression model as shown in table 6. The study tested the given null hypothesis:

\[ \text{H}_0: \text{Value addition strategy has no significant influence on performance of the tea Industry in Mount Kenya region.} \]

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 9.853 > 1.96, hence, the null hypothesis was rejected. The alternative hypothesis was that accepted that there is a significant relationship between value addition strategy and 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 practises influence performance of tea industry in Mt Kenya region in Kenya positively. The adoption of strategic management practises has a high potential of improving tea industry performance and thus better prices to the farmers. The versatility of strategic management practises 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 practises 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 practises that have enabled factories to be more innovative in their strategies. However, the level of performance remains low compared to the expected results.

6.0 Recommendations

Tea factories should continue investing in value addition strategies in specific operational areas because they are able to control their costs much better as compared to addition of more collection centres or more field visits. Consumers will realize higher Tea prices through branding which increases loyalty. Better prices are attainable not by just increasing the green leaf quantity of tea picked, collected and processed. While bulk handling helps to minimize the cost per unit of service and hence better prices, the stress, fatigue, involved in mass production will compromise quality as much as it negatively affect both man and machine. Tea factories should explore more ways of maximizing their prices by better packaging and blending.

7.0 References


