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Abstract: The general objective of this study was to examine the determinants of effective value addition in the tea processing sub-chain to Kenya tea export. Specifically, the study investigated the effects of strategic planning, technological competitiveness and marketing competitiveness on effective value addition of the tea processing in Kenya. KTDA is the leading management Agency for the small scale tea farmers in Kenya. The new terms applying to the Agency are contractual agreement with the independent tea companies it manages. The 54 factories at the time of privatization have now grown to 65 representing 560,000 small scale tea farmers spread across the entire country (KTDA, 2015). They are independent private sector companies, which procure management services and expertise from the Agency at an agreed commission of total sales proceeds. In addition to processing and marketing producers’ tea, the Agency also offers other services such as extension, insurance, provision of inputs and financial services. To strengthen the conceptual framework the researcher used theories such as resource base theory and cost leadership theory. The study will use primary data which will be collected through use of questionnaires with respondents at the Kenya Tea Development Agency. The sample size was 195. A modified Likert scale questionnaire will be developed divided into three parts. A pilot study was carried out to refine the instrument. The quality and consistency of the study was further assessed using Cronbach’s alpha. Data analysis was performed on a PC computer using Statistical Package for Social Science (SPSS Version 22) for Windows. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation and the information generated was presented in form of graphs, charts and tables. From the research findings, the study concluded all the independent variables studied have significant effect on value addition as indicated by the strong coefficient of correlation and a p-value which is less than 0.05. The overall effect of the analyzed factors was very high as indicated by the coefficient of determination. The overall P-value of 0.00 which is less than 0.05 (5%) is an indication of relevance of the studied variables, significant at the calculated 95% level of significance. This implies that the studied independent variables namely strategic planning, technological competitiveness, marketing competitiveness and government policy have significant effect on value addition in tea processing export in Kenya. There was a strong positive correlation between the independent variables and dependent variable. The existing strategic planning practices and technological competitiveness practices should be modified towards modern strategic planning practices and technological competitiveness practices in order to improve value addition in the tea processing firms in Kenya. In modifying strategic planning practices, education programs on strategic planning for employees and managers should be given key priority in the tea processing processing firms in Kenya. In modifying technological competitiveness practices, the managers of the tea processing firms in Kenya should incorporate modern sea food processing value addition technologies for the success of the industry.

INTRODUCTION

1.1 Background of the Study
The agricultural sector in Kenya accounts for 18% of total formal employment and is a means of livelihood for most of the rural population. More than one-third of Kenya’s agricultural produce is exported, accounting for about 65% of Kenya’s total exports (Government of Kenya, 2010; Government of Kenya, 2007). The purpose of this study is therefore to determine how value addition of tea products by Kenya Tea Development Agency –KTDA can enhance International competitiveness and earnings of Kenyan tea. Agriculture is the backbone of Kenya’s economy,
contributing 26% of the country’s Gross Domestic Product (GDP) directly and another 25% indirectly.

This study is supported by New Trade Theory, which focuses on the role of increasing returns to scale and network effects, which were developed in the late 1970s and early 1980s. Krugman, (2015) provided reasons why trade can be beneficial and a fundamental insight into globalization. Krugman, (2015) brings increasing returns together with capital and labor migration and transport costs into one model. Krugman, (2015) model has become a workhorse of economic geography and international trade, but, we assume that there are internal economies of scale. Internal economies of scale occur as long as the average cost per unit of output falls as total output increases.

Tea has for long provided a livelihood for small-scale farmers, helping make Kenya one of the world's biggest tea exporters. But ideal weather and bigger harvests, instead of producing bumper earnings, have led to a glut of Kenya's specialty black tea. Farmers have seen prices fall by 40 percent and some now threaten to pull up the bushes. Tea exports are a major dollar earner for Kenya but most of the exports to the world market are in bulk which is mainly used for blending low quality teas from other countries. Consequently bulk tea fetches low prices leading to depressed revenue for tea growers and low foreign exchange for the country (Tea Board of Kenya, 2009b).

The Government of Kenya has recognized the importance of value addition in guaranteeing high prices of locally produced crops. The President of the Republic of Kenya, on 4th June 2012 called on the Ministry of Agriculture to constitute a working group comprising of relevant government departments and other critical stakeholders to coordinate value addition initiatives of locally produced crops in the country. The President while meeting KTDA directors confirmed the Government’s support for value-addition initiatives being undertaken in tea so as to fetch higher returns for farmers, ultimately leading to increased revenue generation for the country (State House, 2012).

Tea is one of the most popular and low cost beverages in the world, coming second after water in popularity (Hicks, 2012); (Groosman, 2013). Millions of livelihoods around the world depend on the production of tea as it is labour intensive thus providing jobs in remote rural areas. It is an important commodity in terms of job creation and export earnings in a number of developing countries (Van der Wal, 2012). This is also evidenced in Kenya where the tea sector plays a very important role in supporting the livelihoods of Kenyans (Ochanda, 2012). The increase in export earnings in 2009 at the global level positively affected rural incomes in all tea-producing countries (Food and Agricultural Organization, 2010).

1.1.1 Global Perspective

According to the 2015 Tea Report of the Food and Agriculture Organization of the United Nations, World Tea production rose by 3.1% from 2010 to 2011, which was down from the 5.7% increase from 2009 to 2010. However, except for unfavourable conditions causing drop in tea production in countries such as Kenya, Sri Lanka and Malawi in 2012, the price of tea has risen continuously since 2010, bolstered by increasing demand in the emerging markets. Tea consumption and production are predicted to continue to sustain (FAO, 2015). For Gibbon and Ponte (2013), African commodities have been subjected to buyer-driven chains guided by international lead firms. These firms assert monopoly power because their size and their ability to define quality standards. The quality standards pose a major entry barrier for many African producers who are unable to maintain predictable supplies of the product at the specified standard, making it impossible for African exporters to guarantee market supply. Thus, African producers face a buyers’ market that demands exacting quality standards that have little direct contact with them. While African-based suppliers have managed to hold their own, much of their success has owned more to private coordination, usually associated with powerful non-African business elites, rather than public action. The case of tea fits well within their description of African commodity chains. For example, the Tropical Commodity Coalition claims that “the buying and retailing end of the [tea] market is dominated by a handful of powerful multinational companies that are in a strong negotiation position and are able to skim off most of the value in the chain” Van, (2010).

However, as shown in the case studies of certified Tanzanian tea, governance also includes the social factors that influence decisions made about sustainable production at the various stages of the value chain. These include trade the many non-governmental organizations that attempt to influence both public and private policies and behaviour concerning sustainable production Guthman, (2014). Some of these non-governmental organizations (e.g., Fair-trade) both set standards for sustainable agriculture, and assess and certify compliance with those standards. This shift represents the shift that we have seen in the agri-food system, that is, a decrease in regulation and an
increase in voluntary forms of governing value and supply chains. In this sense, these case studies are examples of what Islam calls twin-driven commodity chains Islam, (2013) or what Tallontire claims is a form of horizontal governance (Opondo, 2014). In other words, those stakeholders who are not necessarily party to the exchange may govern value chains and the standards used by them (e.g., Fair-trade and Organic value chains), in this way governing power within value chains can extend horizontally as well as vertically.

The fair trade value chain is the most complex of these four chains. Given the values of collaboration and partnership that Fair-trade espouses, it might be expected that the Fair-trade tea value chain would be coordinated through relational governance, where chain drivers coordinate exchange through norms of trust, obligation, and shared expectations Gerefi, (2014). The criteria of Fairtrade – stable supply chain relations, the social premium, and the ‘fairness’ of the transaction – should in theory facilitate relational governance as exchange is predicated on symmetry, ‘partnership,’ and interdependence Marsden, (2014). Yet the reliance on the auction system in much of Fairtrade tea marketing militates against the longer-term buyer commitments and the symmetrical supply chain relations that relational governance implies Dolan, 2013). Moreover, the relatively low percentage of sales to Fairtrade buyers in Tanzania (average 8% of certified production) means that much of the certified product is being sold through traditional marketing channels, thereby reducing some of the Fairtrade sales to market-mediated relationships.

Finally, we return to buyer-drivenness in the case of the Rainforest Alliance where decisions made at the corporate level dictated which certification system to join and facilitated the certification of their own hierarchically governed value chains. Moreover, the ‘demand-driven’ approach that Rainforest Alliance is using to roll out its certification, in addition to the intensive training required by farmers before meeting the certification requirements, militate against the ability of producers to initiate involvement in this value chain and gain access to more lucrative direct sales contracts Niaz, (2016). However, the relational governance relied up by Taylors of Harrogate adds a new layer to the Rainforest Alliance system and presents a case where alternative power relations between value chain actors might develop.

1.1.2 Profile of Kenya Tea Development Agency
The Kenya Tea Development Agency Limited has a history that starts with the formation of a Special Crops Development Authority (SCDA) in 1960 under the Agricultural Act to promote the cultivation of cash crops. This Authority was later replaced by the Kenya Tea Development Authority in 1964 when the Kenya Tea Development Order 1964 was promulgated. Kenya Tea Development Authority was established under Section 191 of the Agricultural Act by Legal Notice 42 of 1964 as a government parastatal soon after Kenya became Independent.

In 1998/99, the Authority embarked on liberalization of the smallholder tea sub-sector which placed its ownership in the hands of about 420,000 smallholder tea farmers. In June 2000, Kenya Tea Development Authority was replaced with an Agency by the same name. The Agency became operational after the authority’s existence was revoked through the Gazette Notice. The new private company, KTDA (Agency), succeeded KTDA (Authority) and took over the assets, liabilities, obligations and the mandate of the Authority, including all its employees. This meant that the government automatically lost its stronghold on the sector.

KTDA (Agency) was mandated to manage all the 54 factories on behalf of the more than 420,000 small scale tea farmers across the country. This was not received well by the tea farmers as it was viewed as having been initiated by the KTDA management as a ploy to remove the government protection and intervention so as to control the management of the farmers’ hard earned sweat. There had been a struggle and debate before the privatization and the farmers had not been for the idea as they felt that government’s involvement protected their interests and checked any attempt to exploit them by the KTDA. But privatization was inevitable according to Session Paper No. 2 of 1999 on liberalization and restructuring of the tea industry in which the government intended to reduce the continued dependence on government subsidy.

KTDA is the leading management Agency for the small scale tea farmers in Kenya. The new terms applying to the Agency are contractual agreement with the independent tea companies it manages. The 54 factories at the time of privatization have now grown to 65 representing 560,000 small scale tea farmers spread across the entire country (KTDA, 2015). They are independent private sector companies, which procure management services and expertise from the Agency at an agreed commission of total sales proceeds. In addition to processing and marketing producers’ tea, the Agency also offers other services such as extension, insurance, provision of inputs and financial services.
KTDA has 5 Subsidiaries which give various services to the farmers namely: The Chai Trading Co Ltd operating from Miritini Warehousing Complex in Mombasa to handle bulk packaging, buying and selling of high quality tea to local and international destinations and customers; Majani Insurance Brokers Ltd (KTDA, 2015). Which started as a Kenya Tea Development Authority Insurance Agency but was later licensed as an insurance brokerage firm; The Kenya Tea Packers (KETEPA) Ltd, registered as a private company to serve the local market only but later allowed to export tea to various destinations around the world; Greenland Fedha Ltd. which offers financial services. In addition, there is the Tea House Ltd housed at The T-Spot Tea Lounge in Nairobi Central Business District.

The farmers are paid two types of prices for their tea, one for the quantity of tea delivered in kilograms per month and another paid at the end of the financial year based on the quality of tea delivered. The quality price is calculated as a balance remaining from the total proceeds from the sale of bulk tea processed after transportation, processing handling and marketing costs have been deducted Niaz, (2016). The percentage of the quality payment is determined by the price received at the end of the auction and efficiency of both the factory and the KTDA Ltd. Although the farmers are the producers and owners of the tea and the factories, the mandate of managing everything rests with KTDA. Determination of what is finally paid to them depends on the Agency. The farmers, therefore, often accuse KTDA of exploiting them by selling the tea at a higher price and paying the farmer a very small percentage of the proceeds (Daily Nation, 29/9/11). This has created a healthy value chain in the tea processing sub-chain.

1.2 Statement of the Problem
Kenya exports its tea to the world market in bulk which is mainly used for blending low quality teas from other countries. Consequently bulk tea fetches low prices leading to depressed revenue for tea growers and low foreign exchange for the country (TBK, 2013) Kenya’s potential to add value to agricultural produce is largely unexploited. This makes the country vulnerable to fluctuating and declining commodity prices and increasingly fierce competition from cheap imports (GoK, 2010).

Kenya has only managed to increase the volume of Value Added Tea sales from under5% to about 12% of total sales over the last few years TBK, (2013). A comparison between Kenya’s and Sri Lanka’s tea export market shows that Kenya exported more tea in volume than Sri Lanka in 2009 but Sri Lanka earned more from its exports than Kenya did. In 2010, Kenya earned USD 1.23 Billion from exports of 362 million Kgs of its own tea as well as re-exports of 79 million Kgs of other origin teas, while Sri Lanka earned USD 1.30Billion from its export of 296.3 million Kgs owing to higher prices and more valued added shipments (Tea Board of Kenya, 2011a). Kenya needs to scale-up activities such as processing, branding, quality certification and accreditation that increase the market value of primary products (Government of Kenya, 2011).

Nyangito, (2011) argues that failing to add value to tea by selling it in bulk limits earnings from exports. He further notes that adding value to tea through branding and packaging can earn up to six times more revenue than unpacked tea. A strategic approach for Kenya’s tea sector is to diversify and add value to tea products for the domestic and international markets (Tea Board of Kenya, 2009b).

Tsala and Theuri (2016) argue that value addition to tea within the tea trade value chain by buyers is influenced by a number of factors including market destination, existing government policies, strategic decisions and personnel skills. They further argue that market destinations indicated to be the main inhibitor; stakeholders need to consider diversifying to new markets. In the course of this, specific attention should be given to new markets that would allow exportation of highly value added tea products rather than the traditional ones that mainly order for bulk tea with minimal or no value addition. This study therefore seeks to establish the effectiveness of value addition in the tea processing sub-chain to Kenyan tea export, the incentives that can encourage increased value addition in Kenya's tea sector and finally propose value addition activities that can contribute to higher earnings.

1.3 Objective of the Study
This study was guided by both general and specific objectives.

1.3.1 General Objective
To examine the determinants of effective value addition in the tea processing sub-chain to Kenya tea export, a case study of Kenya Tea Development Authority.

1.3.2 Specific Objectives
1. To examine the effects of strategic planning on value chain in the tea processing sub-chain.
2. To examine the effects of technological competitiveness on value chain in the tea processing sub-chain.

3. To determine the effects of market competitiveness on value chain in the tea processing sub-chain.

4. To examine the effects of government policy on value chain in the tea processing sub-chain.

1.4 Hypothesis

The objectives of this study were fulfilled by testing the three hypotheses stated both in terms of null (HO₁) and alternative hypotheses (HA₁).

1. **Hypothesis One**
   HO₁: Strategic planning has no significant effect on value addition in the tea processing sub-chain to Kenya tea export
   HA₁: Strategic planning has significant effect on value addition in the tea processing sub-chain to Kenya tea export

2. **Hypothesis Two**
   HO₂: Technological competitiveness has no significant effect on value addition in the tea processing sub-chain to Kenya tea export
   HA₂: Technological competitiveness has a significant effect on value addition in the tea processing sub-chain to Kenya tea export

3. **Hypothesis Three**
   HO₃: Market competitiveness has no significant effect on value addition in the tea processing sub-chain to Kenya tea export
   HA₃: Market competitiveness has a significant effect on value addition in the tea processing sub-chain to Kenya tea export

4. **Hypothesis Four**
   HO₄: Government policy has no significant effect on value addition in the tea processing sub-chain to Kenya tea export
   HA₄: Government policy has a significant effect on value addition in the tea processing sub-chain to Kenya tea export

1.5 Justification of the Study

Value addition has been singled out as one of the ways of guaranteeing high prices of locally produced crops in Kenya. The findings of this research are aimed at encouraging small holder tea farmers who are the major tea producers in the country as well as large-scale tea farmer’s to venture into value addition. Entrepreneurs in agribusiness seeking to go into value addition in the tea sector or other sectors such as horticulture can also benefit from this research. Noting that Kenya’s tea sector undertakes little value addition, this research seeks to identify value addition activities that guarantee high returns in order for the sector to focus on those activities. Value addition efforts have been encouraged by the Government of Kenya and stakeholders in the tea sector. This research will therefore be useful to the Ministry of Agriculture, specifically policymakers within the ministry and the working group constituted to coordinate value-addition initiatives; TBK; KTDA; TRFK; KETEPA; and EATTA among others. This research fills the important knowledge gap on the value addition activities undertaken in Kenya’s tea sector and their relationship with tea earnings. It also seeks to contribute to the existing body of knowledge on value addition.

1.6 Scope of the Study

Value addition varies from one organization to another. This study is guided by specific objectives that are strategic planning, technological competitiveness and market competitiveness. The study is limited to the determinants of effective value addition in the tea processing sub-chain to Kenya Tea Export. The study is conducted within a specified time-period of one semester.

1.7 Limitation of the Study

The respondents took a lot of time in filling in the questionnaires therefore the researcher had to collect the already filled questionnaires to do the analysis because of the time constraints. This made the response rate not to be 100% as expected. The respondents were also not free to give personal information as they considered it of private nature but the researcher assured them the information would be treated confidentially and purely used for academic purposes.

2. LITERATURE REVIEW

2.1 Introduction

Reviewing the existing literature around the topic of research interest is vitally important because it helps in understanding not only the body of knowledge that relates to the research topic but also in developing an argument about the relevance of the research (Bryman & Bell, 2015). This chapter systematically reviewed the related literature to guide the reader in understanding what has already been done by other researchers in as far as the determinants of effective value addition in the tea processing sub-chain to Kenya tea export is concerned; what concepts and theories are relevant in this area of research.
2.2 Theoretical Framework

Theories are formulated to explain, predict, and understand phenomena and, in many cases to challenge and extend existing knowledge within the limits of the critical bounding assumptions. The theoretical framework introduces and describes the theory which explains why the research problem under study exists. A theoretical framework consists of concepts, together with their definitions, and existing theory/theories that are used for the particular study Sekaran, (2015). This study will be anchored on the following theories; Resource based theory and cost leadership theory.

2.2.1 Resource Based Theory

Penrose (2009) established resource based theory that argues firms possess resources which enable firms to achieve competitive advantage and lead to superior long term performance. Valuable and rare resources can lead to the creation of competitive advantage. That advantage can be sustained over longer time periods to the extent that the firm is able to protect against resource limitation, transfer or substitution (Christine, 2010). Information system resources may take on many of the attributes of dynamic capabilities and may be useful to firms operating in rapidly changing environment. Information resources may not directly lead the firm to a position of superior sustained competitive advantage but they may be critical to the firm’s long term competitiveness in unstable environments if they help it develop, add, integrate and release other key resources over time (Wade & Hulland, 2004).

Resources such as adequate finance and competent human resource are crucial for the effectiveness of market entry strategy management practices in a rapidly changing environment (Wade & Hulland, 2004). The dynamic capabilities which consist of the activities and mechanisms of managing resources in the creation of value which enables companies manage its activities for improvement in performance. It is expected that an organization that has adequate resources would have more influence on the value addition of their products. This theory is also relevant to the study as it explains how resources at a firm’s disposal are a critical factor to consider when implementing strategies on export value addition.

2.2.2 Cost Leadership Theory

This theory was developed in 1980 by Michael Porter. Cost leadership theory states that a firm can exploit its resource-capability combinations to effectively attain an efficiency-based competitive advantage that should be able to improve its financial performance compared to competitors by selling more units at the same margin, that is low price or by selling the same number of units at a greater margin that is parity price (Porter, 2015). In either case, it is logical to assume that a firm that attains a competitive advantage, whether in the form of greater benefits at the same cost or the same benefits at lower cost, will be able to improve its performance in ways that its competitors cannot (Wade & Hulland, 2004). Christine (2010) assert that competitive advantage and performance are terms that have been interchangeably used as they are based on the definition of Porter (2015), which asserts that competitive advantage and performance are more or less the same thing.

Porter (2015) identifies three generic strategies for gaining competitive advantage. These generic strategies are cost leadership, differentiation and focus. Value addition has therefore an implication to performance of any organization and further the theory supports the concept of the study as it argues cost leadership, through value addition will lead to superior firm’s performance.

2.3 Conceptual Framework

Mugenda and Mugenda, (2009) defines conceptual framework as a concise description of phenomenon under study accompanied by a graphical or visual depiction of the major variables of the study. According to Young (2009), conceptual framework is a diagrammatical representation that shows the relationship between dependent variable and independent variables. A conceptual framework shows the relationship between independent and dependent variable. In this study, the dependent variable is the determinants of effective value addition while the independent variables are strategic planning, technological competitiveness and market competitiveness as shown in Figure 2.1.
2.3.1 Strategic Planning and Value Addition

Over time the concept and practice of strategic planning has been embraced worldwide and across private and public sectors because of its perceived contribution to organizational effectiveness and to fast track performance. Strategic planning is arguably an important ingredient in the conduct of strategic management. Porter (2015) noted that despite the criticism levied against strategic planning during the 1970s and 80s it was still useful and it only needed to be improved and recast. Greenly (2013) noted that strategic planning has potential advantages and intrinsic values that eventually translate into improved firm performance. It is therefore a vehicle that facilitates improved firm performance. Strategic planning can be considered from content or a process viewpoint. The content relates to the distinct elements of the strategic plan which differ from firm to firm. Process relates to the mechanisms for the development of the strategic plan and its subsequent deployment. Grants (2003) notes that empirical research is strategic planning systems has focused on two areas: the impact of strategic planning on firm performance and the role of strategic planning in strategic decision making. The latter area of research explored the organizational process of strategy formulation.

Berry (2014) defines strategic planning as a management process that combines four basic features; a clear statement of the organization’s mission; the identification of the agency’s external constituencies or stakeholders, and the delineation of the agency’s strategic goals and objectives, typically in a 3-5 year plan; and the development of strategies to achieve them. Perhaps the most definitive description of the strategic planning consists of eight widely recognized steps; an initial agreement or “plan for planning”; identification and clarification of mandates; mission formulation; external environmental assessment; internal resource assessment; strategic issue identification; strategy development, and; development of a description of the organization in the future – its “vision of success” (Bryson, 2009).

The value chain concept can analyse and describe a company’s source of competitive advantage (Nang’ole, et. al., 2011). Horizontally interdependent activities produce added value for the consumer. The cost of this activities and how these activities produce at the profit margin for the

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**Figure 2.1 Conceptual Framework**

- **STRATEGIC PLANNING**
  - Fast trucking performance
  - Sustain competitive advantage

- **TECHNOLOGICAL COMPETITIVENESS**
  - Communication & Coordination
  - Enhance Quality

- **MARKET COMPETITIVENESS**
  - Compliance with tea Standards
  - Stimulate Market dominance

- **GOVERNMENT POLICIES**
  - Rainforest Alliance
  - Enabling environment

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**DEPENDENT VARIABLE**

- Tea Export Revenue
- New Customers
- New Markets

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**INDEPENDENT VARIABLES**

STRATEGIC PLANNING

- Fast trucking performance
- Sustain competitive advantage

TECHNOLOGICAL COMPETITIVENESS

- Communication & Coordination
- Enhance Quality

MARKET COMPETITIVENESS

- Compliance with tea Standards
- Stimulate Market dominance

GOVERNMENT POLICIES

- Rainforest Alliance
- Enabling environment

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- **EFFECTIVE VALUE ADDITION**
  - Tea Export Revenue
  - New Customers
  - New Markets
company are examined in the value chain analysis. It may be related to quality, costs, delivery times, delivery flexibility, innovativeness, etc.; the size of value addition is decided by the end-customer’s willingness to pay. Opportunities for an organization to add value depends on a number of factors such as market characteristics (size and diversity of markets) and technological capabilities of the actors (Simba, et al., 2015).

2.3.2 Technological Competitiveness
Technological competitiveness refers to leading in the ICT sector through having superior technological performance and characteristics as compared to competitors within the same industry (Mwawasi, 2014). According to Gudema, (2016), early adopters frequently achieve a major competitive advantage that isn’t available later when a new, superior technology or modern production process comes along Simba et al., 2015). Technology plays a fundamental role in enhancing the competitive advantage of an organization, but as Whitmire, (2016) stipulates, business must warrant that the money, time and energy spent on technology is properly put. According to Rothaermel, (2015), for a firm to gain competitive advantage, it must have technological competencies that allow it to generate higher perceived value than the competitors or to produce the same products at lower cost, or simultaneously do both. The resource based theory hinges on the resources and capabilities of the firm underlying factor of performance (Simba et al., 2015).

Tea industry in Kenya will benefit a great deal from adoption of information technology because its supply chain has so many actors as discussed earlier. Information technology will improve coordination among the parties encouraging efficiency and effectiveness. According to Lancioni et al., (2015) and Lee and Whang (2014) internet technology offers firms opportunities of reducing costs, increasing their flexibility, increasing their response time and improving customer services. As mentioned earlier, KTDA has already computerized its operations at tea buying centers and this has already started yielding dividends in terms of greater accountability and returns. Networking all the players within the tea supply chain through computerization would yield greater benefits in terms of information access, market access and in operational efficiency.

2.3.3 Market Competitiveness
From an economic perspective, product and service market competition results in improvement of efficiency in firms (de Bettignies, 2015). There are two kinds of market competition relevant to value addition: Competition in the product markets of firm’s owners for example the product and services markets of an institutional investor; and competition in the firm’s product and service markets. Market competition is important in value addition because it influences innovation and productivity, economic efficiency of the firm as well drives out inefficient producers (Simba et al., 2015). Firms nowadays have to differentiate themselves and strive to remain on top of the competitors in the market so as to survive in the business (Warraich et al., 2015).

This is important since it helps the firm to identify opportunities and threats facing the firm. According to Kotler and Keller, (2012) a marketing opportunity is an area of buyer need and interest in which there is high probability that a firm can profitably satisfy that need. An environmental threat is a challenge posed by an unfavorable trend or development that leads, in absence of defensive marketing action, to deterioration of sales or profits. Kotler and Keller, (2012). KTDA on behalf of the small holder farmers should continuously monitor the trends in the marketing environment with the objective of identifying marketing opportunities and threats. For instance KTDA, should be able to exploit such global opportunities as a trend towards a healthier lifestyle and greater emphasis on fitness. The firm should produce green tea that is regarded as having great health benefits. In addition it should promote the health benefits of taking tea. Similarly, to ensure sustainability of the sector the firm should identify threats that are likely to undermine the industry.

Some of the threats facing sector include perception of use of child labor in tea plucking, use of chemical fertilizers, marginalization of women labor, use of wood fuel, pollution of water catchments areas, protection of wildlife, high cost of energy, labor and fertilizer, climate change, frost, and high consumption of cola products by young generation. It is important to note that some of these threats have global dimensions and failure to address them will lead to Kenyan tea being denied access in some global markets. It is imperative for KTDA to address problems relating to the use of child labor, marginalization of women in tea industry, use of wood fuel, and working conditions of tea workers among other issues that have international dimensions. By addressing these challenges KTDA will ensure sustainability of the small holder tea sector in Kenya.

2.3.4 Government Policy
Tea growing in Kenya has developed significantly over the last 80 years in terms of expansion in tea planting, number of growers, production, processing and sales (exports and local sales) with
Kenya maintaining a consistent production of high quality tea thus is the leading exporter in the world accounting for 22% of the global exports (Draft National Tea Policy, 2014). According to the authors of the policy document, the good performance of the industry so far is mainly attributed to Government support, facilitative institutional structure, private sector contribution and growing international demand for Kenyan tea. Primarily therefore, it is the prerogative of the government to create an enabling environment in which production, processing and marketing of tea can thrive optimally for maximum return on investment (Madura, 2006). Thus, the policies that the government put in place can serve to promote or inhibit value addition to tea.

For instance, empirical data shows that the Kenyan government has promoted policies of trade liberalization in the past decade (Kenya information Guide, 2014). While the international financial institutions and Western governments in general tend to support trade liberalization, it may have negative effects for a country like Kenya that depends on agricultural exports in exchange for higher value-added capital imports. If Kenyan manufacturing firms cannot compete with their foreign counterparts, reduction of trade protection measures, such as tariffs, will simply lead to the retardation of the Kenyan industrial sector (Wilson, 1999). The result would be further entrenchment of the agricultural sector in the economy, and thus the prolonging of the unequal trading patterns that sustain the country's severe balance of trade deficit. Similarly, it is the prerogative of the government to cushion Kenyan investors in the tea industry from conditions imposed by the international bodies that tends to disadvantage them. For instance, it is suggested that the European market is imposing 13 extra taxes on Kenya cut flowers (Wilson, 1999). These taxes include standards levy, local authorities levy etc. The only way out seems to lie in the success of the government lobby to be listed as least developed country, a status which will allow Kenyan exports, tea and cut flowers to access the lucrative EU markets without having to meet the stringent conditions already imposed.

2.3.4 Value Addition

Kenya Tea Development agency managed factories should aim at being market oriented by producing tea that consumers need. The agency should conduct marketing research in order to understand market requirements. The agency has been producing semi-processed tea instead of adding value to farmers produce resulting in low prices for the farmers. An analysis of the Sri Lanka tea export market, where there is significant value addition, shows that Kenya exported more tea in volume than Sri Lanka in 2009 by 15 percent but the Sri Lanka earned 76 percent more from its exports than Kenya did (East Africa Tea Trade Association, 2010). Sri Lanka also sells 61 percent of her tea in bulk and 39 percent in value added form (East Africa Tea Trade Association, 2010). Diversifications in the industry need also to be encouraged so as to induce good prices.

2.4 Empirical Literature Review

Lines (2006) in his study on tea value addition and Global market; through cross sectional research design illustrates that with the growth of the supermarkets in Europe and North America, the character of tea buying changed quite dramatically in the 1990s. There has been a centralization of tea buying, increased buying by individual companies and the bypassing of wholesalers through direct links between the tea buyers and tea packers. Leading companies spend a great deal on promotion of their products. In Japan the advertising expenditure was 8%, compared to 4% in the US and 2.5% in the UK. A great amount of money is also spent on trade promotions to retail outlets to try to persuade them to carry their brands, particularly by smaller companies. He further adds that Producing countries currently sell tea most often as a generic without branding and packaging, despite the increase this could mean in prices; branded tea fetches prices six times higher than bulk export. His study concludes that retailers generally seem to add small margins on the tea but make their money from these promotional margin allowances from the packers who practice tea value addition.

Benny (2005), on his study on value added products on green tea seeks to find out the strategies of value addition in Indian tea industry, he notes that value addition is an important step next to standardization and that firms that engaged in value addition have an advantage over those that didn’t. The government of India gives tax exemptions to firms that engage in value addition in order to support and encourage export of value added tea. He concludes that value added products give better results and provide better handling thus increases export potential as well as sell in the domestic market.

Kalegaba, (2013) studied increasing value addition and enhancing tea exports of Sri-Lanka, his findings were that expanding into value addition brings producers the opportunity to gain from production further along the value chain, thus increasing employment opportunities and encouraging growth in linking industries (such as packaging, shipping, banking, transport and advertising).greater value addition will eventually
increases net earnings and stimulates overall economic growth. He further notes that in 2000 the central bank of Sri Lanka reported that value addition activities in tea plantations were responsible for 2.5% of GDP, 16% per cent of total export earnings and 7.3% per cent of total agricultural earnings. He concluded that increasing the export of value added teas would result into macro-economic benefits which included greater employment, increased foreign exchange, and potential for strengthening industrial clusters in the economy via forward and backward integration.

Marete, (2013) in his study on value chain analysis and organizational performance of beer manufacturing companies in Kenya seeks to determine how beer manufacturing firms in Kenya use value chain approach to assess performance and to establish the relationship between value chain analysis and organizational performance in the beer manufacturing industry in Kenya. The study adopted a cross-sectional descriptive survey to establish the activities that constitute the value chain and extent in which these activities affect performance. He argues that the purpose of a value chain is to attain full and seamless interaction among stakeholders to create a win-win situation. Understanding these relationships and various impacts to the value of an organization’s products and services is a critical ingredient to the performance of the organization.

The Food and Agriculture Organization (FAO) United Nations committee on commodity problems (2005) found out that the global economy, including agriculture, is integrating rapidly through trade. The rate of growth in agricultural trade over the past decade has been about 3% per annum, more than three times the rate of agricultural output growth. Developing countries are much less dependent on agricultural exports than they were in the past. In contrast with the growing importance of processed agricultural exports in other developing countries, the LDCs have seen the share of their processed product exports decline from around 30% per cent of total agricultural exports in the 1960s to less than 20% in the 1990s. Advises that value added market offers new opportunities, business prospects incomes additionally.

Nzeki, (2014) in his study the relationship between tea value addition and profitability of exporting companies in the Kenyan tea industry used descriptive design to establish if it does make financial prudence to engage in value addition instead of the traditional bulk tea exports. The study revealed that profitability from companies that engaged in value addition is higher compared to those of companies that did not engage in value addition.

2.5 Critique of the existing Literature

Christine (2010) carried out a study on strategies used by Chai Trading Limited to promote and penetrate the Middle East market. The research design was a case study. An in-depth understanding of the global tea markets was required. Primary data was used in the study and was collected through interviews with senior managers at Chai Trading Limited. The study revealed that the various challenges encountered include stiff competition from established players, business restrictions in some markets such as Iran, thin margins in the industry, foreign exchange fluctuations leading to forex losses and volatile political environments in some countries in the region. The study focused on strategies used by Chai Trading Limited to penetrate Middle East market. However the study focused only on one firm, Chai Trading limited, and failed to link failed to review practices used by similar firms in the same market. The study further failed to link the importance of value addition in market penetration.

Ariyawadana, (2014) in an intensive study on value added tea producers in Sri Lanka examines the sources of competitive advantage and studies how it would relate to the performance of the tea growers. His study provides a deep understanding of this issue from the management point of view but fails to appraise the study from the cost leadership point of view as postulated by Michael Porter. Several studies have focused on target costing in the manufacturing industry.

Biegon, (2014) did a study on challenges facing the Kenyan tea industry in exporting of value-added (Branded) tea. The broad objective of the study was to establish the challenges facing the Kenyan tea industry in exporting of value-added (branded) tea. The target population of the study comprised of 12 tea producers, 136 tea packers, and selected key informants from the Ministries of Agriculture and Trade & Industry, Export promotion council and Tea board of Kenya. To enhance effectiveness of this study in the light of a population of 136 tea packers and 12 tea producers, the researcher used a sample size of 30% of the population of tea packers and a census for the tea producers, which led to a sample of 52 respondents drawn from both categories proportionately. Biegon’s study did not focus on strategic steps required to boost tea value addition.

Simba et. al. (2015), did a study on determinants of value addition of industrial fish processors in the sea food processing sub-chain in Kenya. The broad objective of the study was to assess the effects of strategic management determinants of value addition of industrial fish processors in the sea food processing sub-chain in Kenya. The target
population of the study was 17 industrial fish processing firms in Kenya, with 850 officers from IFPs and 300 Key informants from the ministry of fisheries and 120 from KMFRI totalling to 1,270. To enhance effectiveness of this study the researcher used a a sample size of 10% of the target population, which led to a sample size of 127. Simba et al., (2015) study did not focus on small and home based processors of fish and how they can add value to their fish processes.

De Silva and Herath, (2011) investigate cost leadership as a source of competitive advantage in Sri Lanka Tea industry. It was found that some tea subsectors in the country is adopting a different strategy compared with the other firms in the study. Their business is considered to be in the category of beverage industry rather than tea. The study concentrated on the marketing aspects of value added tea and have moved out of manufacturing and failed to consider the entire value chain drivers. It further focused on general market expansion and failed to link benefits of cost leadership to value addition.

2.6 Research Gap
According to the Tea Board of Kenya (2014), the main reason for lower unit earnings from tea exports by Kenya is due to low export value attributed to selling tea in bulk form. A strategic management approach through market promotions, partnerships, product diversification, cost leadership and technological innovation is needed in the management of the entire Kenyan tea subsector which may be denying the country substantial amounts of revenue that is associated with value added tea exports (Kenya Tea Board, 2014). Studies related to value addition have used domains of technological factors, distribution, cost management, market expansion and branding and have failed to consider management practice domains that boast value addition. Further according to World Bank (2010) most studies in this area have been done in other countries like United States of America and Britain focusing on the contribution of value addition to their economies and very little of such studies has not been done in Kenya.

2.7 Summary
The literature reviewed the determinants of effective value addition in the tea processing sub-chain to Kenya tea export. These include; strategic planning, technological competitiveness and market competitiveness. Review of literature generally agrees that these variables affect value addition. Research has shown that strategic planning is a good management practice that benefits the business financially, lays ground work for developing the strategic capabilities needed for high performance and it’s also deliberate in that management takes a conscious decision to make a radical change by embracing new strategies. Technological and market competitiveness are not only hinged on the sources and costs of resources but also the technology embraced. Cutting edge technologies increase profitability and decrease wastage thus making the organizations to compete competitively. Value addition is an expanding sector in the tea industry especially in the exports markets.

RESEARCH METHODOLOGY

3.1 Introduction
This chapter outlines the research design and methodology that was used to carry out the study. The chapter also deals with the target population, type of data collected, sampling frame, sample and sampling technique, the sample size, data collection procedures, pilot test, validity and reliability of the instrument as well as the data analysis techniques and how eventually data will be presented.

3.2 Research Design
The researcher used descriptive research design. Descriptive study is concerned with finding out who, what, where and how much of a phenomenon, which is the concern of the study. Sekaran, (2015) observes that the goal of descriptive research is to offer the researcher a profile or describe relevant aspects of the phenomena of interest from the individual, organization, industry or other perspective. In addition the design best fit in the ascertainment and description of characteristics of variable in this research study and allows for use of questionnaires, interviews and descriptive statistics such as frequencies and percentages. In addition a descriptive design is appropriate since it enabled the researcher to collect enough information necessary for generalization.

3.3 Target Population
The study targeted 1,943 employees of KTDA in the top, middle level management and unionisable employees. Since the study is descriptive in nature, (Bryman & Bell, 2015) recommend thirty percent of the population. However, (Kothari & Gang, 2014) recommends that a sample size be as large as possible in order to reproduce salient characteristics of the accessible population to an acceptable level as well as to avoid sampling errors. Mombasa port is selected as a case study because of proximity to the researcher, time availability for research and budgetary constraints.
### Table 3.1 Target Population

<table>
<thead>
<tr>
<th>Management Level</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management</td>
<td>24</td>
</tr>
<tr>
<td>Middle Management</td>
<td>480</td>
</tr>
<tr>
<td>Unionsable Workers</td>
<td>1,439</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,943</strong></td>
</tr>
</tbody>
</table>

### 3.4 Sampling and Sampling Technique

Sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire population. Sample is a small group of objects or individuals selected or drawn from a population in such a manner that its characteristics represent population characteristics (Orodho & Kombo, 2012).

Stratified random sampling method is used to select relevant respondents from various departments of KTDA. (Bryman & Bell, 2015) argue that stratified random sampling is where a given number of cases are randomly selected from each population subgroup. It thus ensures inclusion in the sample of subgroup which otherwise could be omitted entirely by other sampling methods. In this case stratification will be based on department from which employees come from.

Stratified sampling enables the population to be divided into five segments (relevant departments within KTDA) called strata. Simple random sample is then drawn from each stratum, and then those sub-samples joined to form complete stratified samples. In addition proportional allocation is done, where each stratum contributed to the sample a number that is proportional to its size in the population.

### Table 3.2 Sample Size

<table>
<thead>
<tr>
<th>Management Level</th>
<th>Population</th>
<th>Percentage</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management</td>
<td>24</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Middle Management</td>
<td>480</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>Unionsable Workers</td>
<td>1,439</td>
<td>10</td>
<td>1,44</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,943</strong></td>
<td>10</td>
<td><strong>195</strong></td>
</tr>
</tbody>
</table>

### 3.5 Sample Size

(Mugenda & Mugenda, 2009) asserts that sampling is that part of the statistical practice concerned with the selection of individual or observations intended to yield some knowledge about a population of concern, especially for the purpose of statistical inferences. They advise that a researcher would have to use 10% of the total target population as a sample for it to be accepted as a good representative sample. The sample size was 195.

### 3.6 Data Collection Instruments

The researcher used structured questionnaires to collect data from KTDA respondents. A questionnaire with high reliability would receive similar answers if it is done again and again or by other researchers (Bryman & Bell, 2015). In addition the questionnaires are convenient for the task in that they can be easily and conveniently administered with the study sample. The use of questionnaire was cost effective, less time consuming as compared to the use of interview. Data collected through the use of well-structured questionnaire is easy to analyze. The questionnaire used Likert scale because it requires respondents to respond to a series of statements by indicating whether he or she agrees to a great extent or no extent. Likert scale is used because it is easy to understand and responses are easily quantifiable and subjective to computation of mathematical analysis (Allen et.al, 2011).

### 3.7 Data Collection Procedure

The researcher used primary and secondary data. Structured questionnaires are used to collect primary data from respondents. The questionnaires were self-administered to the respondents and were collected after three days. Secondary data was obtained from related materials in the internet, procurement journals, white papers, periodicals and books relevant to the study.

### 3.8 Pilot Testing

Cooper and Schindler (2013) indicated that a pilot test was conducted to detect weakness in design and instrumentation and to provide proxy data for selection of a probability sample. Pilot testing provides an opportunity to detect and remedy a wide range of potential problems with an instrument. By conducting a Pilot testing it ensures that appropriate questions are asked, the right data is collected, and the data collection methods works. A pilot study was undertaken on 20 respondents to test the reliability and validity of the questionnaire. The rule of the thumb is that 1% of the sample should constitute the pilot test (Cooper & Schindler, 2013, Creswell, 2013). The proposed pilot test is within the recommendation.

### 3.8.1 Reliability

Testing of the reliability of the scale is very important as it shows the extent to which a scale produces consistent results if measurements are made repeatedly. This will be done by determining the association in between scores obtained from different administrations of the scale. If the
association is high, the scale yields consistent results, thus it is reliable. Cronbach’s alpha will be used to determine the internal reliability of the questionnaire that will be used in this study. Values range between 0 and 1.0; while 1.0 indicates perfect reliability, the value 0.70 is deemed to be the lower level of acceptability (Hair, Black, Barry, Anderson, & Tatham, 2006).

### 3.8.2 Validity

Validity is the degree to which results obtained for the analysis of the data actually represent the phenomena under study. It indicates how accurate the data obtained in the study represent the variables of the study (Mugenda & Mugenda, 2009). The researcher will use the most common internal consistency measure known as Cronbach alpha (α). It may be mentioned that its value varies from 0 to 1 but, satisfactorily value is required to be more than 0.6 for the scale to be reliable (Bryman & Bell, 2015). The recommended value of 0.7 is the cut off of reliability.

### 3.9 Data Processing, Analysis and Presentation

(Kothari & Gang, 2014) argues that data collected has to be processed, analyzed and presented in accordance with the outlines laid down for the purpose at the time of developing the research plan. Data analysis involves the transformation of data into meaningful information for decision making. It will involve editing, error correction, rectification of omission and finally putting together or consolidating information gathered. The collected data will be analyzed quantitatively and qualitatively. Descriptive and inferential statistics will be done using SPSS version 22 and specifically multiple regression model will be applied. Set of data will be described using percentage, mean standard deviation and coefficient of variation and presented using tables, charts and graphs. (Fraenkel & Wallen, 2014) argue that regression is the working out of a statistical relationship between one or more variables. The researcher will use a multiple regression analysis to show the effect and influence of the independent variables on the dependent variables.

The relationship is as follows:

$$ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon $$

- $Y$ = Represents the dependent variable, effective value addition
- $\alpha$ = Constant
- $\beta_1$, $\beta_2$, $\beta_3$ & $\beta_4$ = Partial regression coefficient
- $X_1$ = Strategic Planning
- $X_2$ = Technological Competitiveness
- $X_3$ = Market Competitiveness
- $X_4$ = Government Policy

$\varepsilon$ = error term or stochastic term

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents analysis of the data on the determinants of effective value addition in the tea processing sub-chain in Kenya Tea Export a survey of Kenya Tea Development Agency, Kenya. The chapter also provides the major findings and results of the study and discusses those findings and results against the literature reviewed and study objectives. The data is mainly presented in frequency tables, means and standard deviation.

#### 4.2 Response Rate

The study targeted 195 employees of Kenya Tea Development Agency, Mombasa County, Kenya. From the study, 148 out of the 195 sample respondents filled-in and returned the questionnaires making a response rate of 75.9% as per Table 4.1 below.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent</td>
<td>148</td>
</tr>
<tr>
<td>Non-respondent</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>195</strong></td>
</tr>
</tbody>
</table>

According to (Kothari & Gang, 2014) a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent; therefore, this response rate was adequate for analysis and reporting.

#### 4.2.1 Data Validity

Factor analysis was used to check validity of the constructs. Kaiser-Mayor-Oklin measures of sampling adequacy (KMO) & Bartlett’s Test of Sphericity is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett’s test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.5. Also, the Bartlett’s Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed.
through the study. For Factor Analysis to be recommended suitable, the Bartlett’s Test of Sphericity must be less than 0.05.

The study applied the KMO measures of sampling adequacy and Bartlett’s test of sphericity to test whether the relationship among the variables has been significant or not as shown in below in table 4.2. Factor 1 was based on six items that represented strategic planning; Factor 2 was based on five items that represented technological competitiveness, Factor 3 was based on five items that represented marketing competitiveness, Factor 4 with four items represented measurement of government policy, Factor 5 with three items represented value addition. The Kaiser-Meyer-Olkin measures of sampling adequacy shows the value of test statistic as 0.824, which is greater than 0.5 hence an acceptable index. While Bartlett’s test of sphericity shows the value of test statistic as 0.000 which is less than 0.05 acceptable indexes. This result indicates a highly significant relationship among variables.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach's Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Planning</td>
<td>0.794</td>
<td>6</td>
</tr>
<tr>
<td>Technological Competitiveness</td>
<td>0.816</td>
<td>5</td>
</tr>
<tr>
<td>Marketing Competitiveness</td>
<td>0.773</td>
<td>5</td>
</tr>
<tr>
<td>Government Policy</td>
<td>0.799</td>
<td>4</td>
</tr>
<tr>
<td>Value Addition</td>
<td>0.894</td>
<td>3</td>
</tr>
</tbody>
</table>

The overall Cronbach's alpha for the four categories which is 0.852. The findings of the pilot study showed that all the four scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Mugenda & Mugenda, 2008).

4.3 Background Information

4.3.1 Gender

The study sought to establish the gender of respondents. The study results revealed that 61.5% of the respondents were male and 38.5% were female with a mean score of 1.39 and a standard deviation of 0.488. This shows that the majority of respondents that participated in the study were male as show in figure 4.1 below. This implies that more physical energy is required in the factory where value addition on tea processing is done.

![Figure 4.1 Gender](image)

4.3.2 Working Experience

The study sought to establish the working experience of respondents. The study results revealed that respondents having working
experience of between 1-5 years were 41.2%, between 6-10 years were 22.3% and above 10 years were 36.5% with a mean score of 1.95 and a standard deviation of 0.883. This shows that the majority of respondents that participated in the study have a working experience of between 1-5 years and above 10 years as shown in figure 4.2 below. This implies that tea processing industry has a high staff turnover therefore this explains where majority of the respondents have working experience of between 1-5 years.

![Working experience](image)

**Figure 4.2 Working Experience**

### 4.4 Analysis of Objectives

In the research analysis the researcher used a tool rating scale of 5 to 1; where 5 were the highest and 1 the lowest. Opinions given by the respondents were rated as follows, 5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree and 1= Strongly Disagree. The analyses for mean, standard deviation were based on this rating scale.

#### 4.4.1 Strategic Planning

**Table 4.4 Strategic Planning**

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The vision of the organization is clear and coherent</td>
<td>148</td>
<td>3.68</td>
<td>1.485</td>
</tr>
<tr>
<td>The value addition goals are realistic and attainable</td>
<td>148</td>
<td>3.70</td>
<td>1.488</td>
</tr>
<tr>
<td>The strategic decision on value addition is participative</td>
<td>148</td>
<td>3.93</td>
<td>1.035</td>
</tr>
<tr>
<td>The organizational objectives are clear and coherent in value addition</td>
<td>148</td>
<td>4.29</td>
<td>0.867</td>
</tr>
<tr>
<td>Strategies of value addition exist in our organization</td>
<td>148</td>
<td>4.30</td>
<td>1.073</td>
</tr>
<tr>
<td>Employees are consulted on value addition and their input are incorporated in the decision making process</td>
<td>148</td>
<td>3.83</td>
<td>1.072</td>
</tr>
</tbody>
</table>

The first objective of the study was to establish the effects of strategic planning on value addition in the tea processing sub chain in Kenya tea export. Respondents were required to respond to set questions related to strategic planning and give their opinions. The statement that the vision of the organization is clear and coherent had a mean score of 3.68 and the standard deviation of 1.485. The statement that the value addition goals are realistic and attainable had a mean score of 3.70 and a standard deviation of 1.488. The strategic decision on value addition is participative had a mean score of 3.93 and a standard deviation of 1.035. The statement that the organizational objectives are clear and coherent in value addition had a mean score of 4.29 and a standard deviation of 0.867.
The statement that the strategies of value addition exist in our organization had a mean score of 4.30 and a standard deviation of 1.073. The statement that employees are consulted on value addition and their input are incorporated in the decision making process had a mean score of 3.83 and a standard deviation of 1.072.

4.4.2 Technological Competitiveness

Table 4.5 Technological Competitiveness

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>We use modern technology in value addition</td>
<td>148</td>
<td>4.22</td>
<td>.915</td>
</tr>
<tr>
<td>Staff are technologically competent with sophisticated technical skills and experience in value addition</td>
<td>148</td>
<td>3.89</td>
<td>1.341</td>
</tr>
<tr>
<td>The technology in place helps us to beat our competitors</td>
<td>148</td>
<td>4.50</td>
<td>.655</td>
</tr>
<tr>
<td>The management works to develop training programs to enhance employee performance and improve their technological skills in value addition</td>
<td>148</td>
<td>4.34</td>
<td>.915</td>
</tr>
<tr>
<td>Staff knowledge in value addition and technology has been on the increase</td>
<td>148</td>
<td>4.05</td>
<td>1.329</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>148</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second objective of the study was to establish the effects of technological competitiveness on value addition in the tea processing sub chain in Kenya tea export. Respondents were required to respond to set questions related to technological competitiveness and give their opinions. The statement that we use modern technology in value addition had a mean score of 4.22 and a standard deviation of 0.915. The statement that staff are technologically competent with sophisticated technical skills and experience in value addition had a mean score of 3.89 and a standard deviation of 1.341. The statement that the technology in place helps us to beat our competitors had a mean score of 4.50 and a standard deviation of 0.655. The statement that the management works to develop training programs to enhance employee performance and improve their technological skills in value addition had a mean score of 4.34 and a standard deviation of 0.915. The statement that staff knowledge in value addition and technology has been on the increase had a mean score of 4.05 and standard deviation of 1.329.

4.4.3 Marketing Competitiveness

Table 4.6 Marketing Competitiveness

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition has influenced our value addition activities</td>
<td>148</td>
<td>3.80</td>
<td>1.111</td>
</tr>
<tr>
<td>Our strategic competition is superior to our competitors</td>
<td>148</td>
<td>3.82</td>
<td>1.207</td>
</tr>
<tr>
<td>Value addition is added to tea to conform with different markets</td>
<td>148</td>
<td>4.34</td>
<td>.959</td>
</tr>
<tr>
<td>Our tea products comply with rainforest alliance standard</td>
<td>148</td>
<td>4.06</td>
<td>1.058</td>
</tr>
<tr>
<td>Our numeric strength in the production has helped us be ahead of the pack</td>
<td>148</td>
<td>4.43</td>
<td>.497</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>148</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second objective of the study was to establish the effects of marketing competitiveness on value addition in the tea processing sub chain in Kenya tea export. Respondents were required to respond to set questions related to marketing competitiveness and give their opinions. The statement that competition has influenced our value addition activities had a mean score of 3.80 and a standard deviation of 1.111. The statement that our strategic competition is superior to our competitors had a mean score of 3.82 and a standard deviation of 1.207. The statement that value addition is added to tea to conform with different markets had a mean score of 4.34 and a standard deviation of 0.959. This is in agreement with Simba, et.al, (2015) that organization’s strategies need to be competitive. The statements that our tea products comply with rainforest alliance standard had a mean score of 4.06 and a standard deviation of 1.058. The statement that our numeric strength in the production has helped us be ahead of the pack had a mean score of 4.43 and a standard deviation of 0.497.
4.4.4 Government Policy

Table 4.7 Government Policy

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT on value added teas have a negative effect on value addition of tea</td>
<td>148</td>
<td>3.57</td>
<td>1.453</td>
</tr>
<tr>
<td>VAT on packaging material have negative effect on value addition of tea</td>
<td>148</td>
<td>4.31</td>
<td>0.840</td>
</tr>
<tr>
<td>Procedure on exporting value added tea under EPZ are friendly</td>
<td>148</td>
<td>3.72</td>
<td>1.278</td>
</tr>
<tr>
<td>The government has a good strategy in market penetration for value added tea</td>
<td>148</td>
<td>4.27</td>
<td>0.761</td>
</tr>
</tbody>
</table>

The fourth objective of the study was to establish the effects of government policy on value addition in the tea processing sub chain in Kenya tea export. Respondents were required to respond to set questions related to government policy and give their opinions. The statement that VAT on value added teas have a negative effect on value addition of tea had a mean score of 3.57 and a standard deviation of 1.453. The statement that VAT on packaging material have negative effect on value addition of tea had a mean score of 4.31 and a standard deviation of 0.840. The statement that procedures on exporting value added tea under EPZ are friendly had a mean score of 3.72 and a standard deviation of 1.278. The government has a good strategy in market penetration for value added tea had a mean score of 4.27 and a standard deviation of 0.761.

4.4.5 Value Addition

Table 4.8 Value Addition

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value is added to tea and it's product depending on different markets</td>
<td>148</td>
<td>3.93</td>
<td>1.292</td>
</tr>
<tr>
<td>Value addition processes generates further employment and the much needed foreign currency</td>
<td>148</td>
<td>4.30</td>
<td>0.893</td>
</tr>
<tr>
<td>Tea is exported in its natural form</td>
<td>148</td>
<td>4.61</td>
<td>0.695</td>
</tr>
</tbody>
</table>

The statement in agreement that tea is exported in its natural form had a mean score of 4.61 and a standard deviation of 0.695. The statement that value addition processes generates further employment and the much needed foreign currency had a mean score of 4.30 and a standard deviation of 0.893. The statement that value is added to tea and its product depending on different markets had a mean score of 3.93 and a standard deviation of 1.292.

4.5 Correlation Analysis

To establish the relationship between the independent variables and the dependent variable the study conducted correlation analysis which involved coefficient of correlation and coefficient of determination.

4.5.1 Coefficient of Correlation

Pearson Bivariate correlation coefficient was used to compute the correlation between the dependent variable (value addition) and the independent variables (strategic planning, technological competitiveness, market competitiveness and government policy). According to Sekaran, (2015), this relationship is assumed to be linear and the correlation coefficient ranges from -1.0 (perfect negative correlation) to +1.0 (perfect positive relationship). The correlation coefficient was calculated to determine the strength of the relationship between dependent and independent variables (Kothari & Gang, 2014).
In trying to show the relationship between the study variables and their findings, the study used the Karl Pearson's coefficient of correlation ($r$). This is as shown in Table 4.9 below. According to the findings, it was clear that there was a positive correlation between the independent variables, strategic planning, technological competitiveness, marketing competitiveness and government policy and the dependent variable value addition. The analysis indicates the coefficient of correlation, $r$ equal to 0.782, 0.364, 0.139 and 0.022 for strategic planning, technological competitiveness, marketing competitiveness and government policy respectively. This indicates positive relationship between the independent variable namely strategic planning, technological competitiveness, marketing competitiveness and government policy and the dependent variable value addition.

### 4.5.2 Coefficient of Determination ($R^2$)

To assess the research model, a confirmatory factors analysis was conducted. The three factors were then subjected to linear regression analysis in order to measure the success of the model and predict causal relationship between independent variables (Strategic planning, technological competitiveness, marketing competitiveness and government policy), and the dependent variable (Value Addition).

#### Table 4.10 Coefficient of Determination ($R^2$)

<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>1</td>
<td>.793*</td>
<td>.629</td>
<td>.618</td>
<td>.91244</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Government Policy, Strategic Planning, Marketing Competitiveness, Technological Competitiveness

The model explains 62.9% of the variance (Adjusted R Square = 0.618) on Value Addition. Clearly, there are factors other than the three proposed in this model which can be used to predict savings mobilization. However, this is still a good model as Gaur and Gaur (2009) pointed out that as much as lower value R square 0.10-0.20 is acceptable in social science research. This means that 62.9% of the relationship is explained by the identified three factors namely strategic planning, technological competitiveness, marketing competitiveness and government policy and the dependent variable value addition.
market competitiveness and government policy. The rest 37.1% is explained by other factors in the Value Addition not studied in this research. In summary the four factors studied namely, strategic planning, technological competitiveness, marketing competitiveness and government policy or determines 62.9% of the relationship while the rest 37.1% is explained or determined by other factors.

4.6 Regression Analysis

4.6.1 Analysis of Variance (ANOVA)
The study used ANOVA to establish the significance of the regression model. In testing the significance level, the statistical significance was considered significant if the p-value was less or equal to 0.05. The significance of the regression model is as per Table 4.11 below with P-value of 0.00 which is less than 0.05. This indicates that the regression model is statistically significant in predicting factors of value addition. Basing the confidence level at 95% the analysis indicates high reliability of the results obtained. The overall Anova results indicates that the model was significant at F = 60.561, p = 0.000.

<p>| ANOVAa |  |
|---|---|---|---|---|</p>
<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>1</td>
<td>Regression</td>
<td>201.677</td>
<td>4</td>
<td>50.419</td>
<td>60.561</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>119.053</td>
<td>143</td>
<td>.833</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>320.730</td>
<td>147</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.11 ANOVA

a. Dependent Variable: Value Addition
b. Predictors: (Constant), Government Policy, Strategic Planning, Marketing Competitiveness, Technological Competitiveness

4.6.2 Multiple Regression
The researcher conducted a multiple regression analysis as shown in Table 4.12 so as to determine the relationship between value chain and the four variables investigated in this study.

| Coefficientsa |  |
|---|---|---|---|
| Model | Unstandardized Coefficients | Standardized Coefficients |
| --- | --- | --- | --- |
| 1 (Constant) | 19.944 | 1.210 | 16.479 | .000 |
| Strategic Planning | .356 | .026 | .760 | 13.478 | .000 |
| Technological Competitiveness | .031 | .038 | .051 | 2.95 | .000 |
| Marketing Competitiveness | .081 | .040 | .111 | 4.111 | .000 |
| Government Policy | .021 | .039 | .030 | 3.537 | .000 |

Table 4.12 Multiple Regression

a. Dependent Variable: Value Addition

The regression equation was:

\[ Y = 19.944 + 0.356X_1 + 0.031X_2 + 0.081X_3 + 0.021X_4 \]

Where;

\[ Y = \text{the dependent variable (Value Addition)} \]
\[ X_1 = \text{Strategic Planning} \]
\[ X_2 = \text{Technological Competitiveness} \]
\[ X_3 = \text{Marketing Competitiveness} \]
\[ X_4 = \text{Government Policy} \]

The regression equation above has established that taking all factors into account (Value addition as a result of strategic planning, technological competitiveness, marketing competitiveness and government policy) constant at zero value addition will be 19.944. The findings presented also shows that taking all other independent variables at zero, a unit increase in strategic planning will lead to a
0.356 increase in the scores of value addition; a unit increase in technological competitiveness will lead to a 0.031 increase in value addition; a unit increase in marketing competitiveness will lead to a 0.081 increase in the scores of value addition; a unit increase in government policy will lead to a 0.021 increase in the score of value addition. This therefore implies that all the three variables have a positive relationship with strategic planning contributing most to the dependent variable.

This therefore implies that all the three variables have a positive relationship with savings mobilization with interest rate contributing most to the dependent variable. From the table we can see that the predictor variables of strategic planning, technological competitiveness, market competitiveness and government policy got variable coefficients statistically significant since their p-values are less than the common alpha level of 0.05.

**Hypothesis 1**

Hₐ: There is no effect of strategic planning on value addition in the tea processing sub-chain in tea processing sub chain to Kenya tea export.

\[ \beta_1 = 0, \]

H₁: There is an effect of strategic planning on value addition in the tea processing sub-chain in tea processing sub chain to Kenya tea export.

\[ \beta_1 \neq 0, \]

In relation to the variable strategic planning, the results in Table 4.12 above indicate that strategic planning on value addition in the tea processing sub-chain in Kenya tea export. This is supported by regression analysis t-value of 13.478 which is greater than the critical value 2.0 and a p-value of 0.00 at 95% level of significance which is less than 0.05.

After testing the hypothesis by comparing the scores of calculated t-value and critical t; Calculated t-values was 13.478 for \( \beta_1 \), which is greater than the critical \( t_{36,0.05} = 2.0 \),

The study rejected the null hypothesis that there is no significant effect of technological competitiveness on value addition in the tea processing sub chain in Kenya tea export.

Therefore the study accepted the alternative hypothesis that there is an effect of technological competitiveness on value addition in the tea processing sub chain in Kenya tea export.

**Hypothesis 2**

Hₐ: There is no effect of technological competitiveness on value chain in the tea processing sub chain to Kenya tea export

\[ \beta_1 = 0, \]

H₁: There is an effect of technological competitiveness on value chain in the tea processing sub chain to Kenya tea export

\[ \beta_1 \neq 0, \]

In relation to the variable technological competitiveness, the result in Table 4.12 above indicates that technological competitiveness has a significant influence on value addition. This is supported by regression analysis t-value of 2.95 which is greater than the critical value 2.0 and a p-value of 0.00 at 95% level of significance which is less than 0.05.

After testing the hypothesis by comparing the scores of calculated t-value and critical t; Calculated t-values was, 2.95 for \( \beta_1 \), which is greater than the critical \( t_{36,0.05} = 2.0 \),

The study rejected the null hypothesis that there is no significant effect of technological competitiveness on value addition in the tea processing sub chain in Kenya tea export.

Therefore the study accepted the alternative hypothesis that there is an effect of technological competitiveness on value addition in the tea processing sub chain in Kenya tea export.

**Hypothesis 3**

Hₐ: There is no significant effect of market competitiveness on value addition in the tea processing sub chain in Kenya tea export.

\[ \beta_1 = 0, \]

H₁: There is a significant effect of market competitiveness on value addition in the tea processing sub chain in Kenya tea export.

\[ \beta_1 \neq 0, \]

In relation to the variable market competitiveness, the results in table 4.12 above indicate that market competitiveness has a significant influence on value addition in the tea processing sub chain in Kenya tea export.

This is supported by regression analysis t-value of 4.111 which is greater than the critical value 2.0 and a p-value of 0.00 at 95% level of significance which is less than 0.05.
After testing the hypothesis by comparing the scores of calculated t-value and critical t ; Calculated t-values was, 4.111 for market competitiveness, which is greater than the critical \( t_{36-1} (0.05) = 2.0 \),

The study rejected the null hypothesis that there is no effect of market competitiveness on value addition in the tea processing sub chain to Kenya tea export.

Therefore the study accepted the alternative hypothesis that there is an effect of market competitiveness on value addition in the tea processing sub chain in Kenya tea export

Hypothesis 4

H\(_0\): There is no effect of government policy on value addition in the tea processing sub chain to Kenya tea export.

\( \beta_1 = 0 \),

H\(_1\): There is an effect of government policy on value addition in the tea processing sub chain to Kenya tea export.

\( \beta_1 \neq 0 \),

In relation to the variable information system, the results in Table 4.12 above indicate that government policy have a significant influence on value addition in the tea processing sub chain in Kenya tea export. This is supported by regression analysis t-value of 2.052 which is greater than the critical value 2.0 and a p-value of 0.000 at 95% level of significance which is less than 0.005.

After testing the hypothesis by comparing the scores of calculated t-value and critical t;

Calculated t-values was, 3.537 for government policy, which is greater than the critical \( t_{36-1} (0.05) = 2.0 \), the study rejected the null hypothesis that there is no effect of government policy on value addition in the tea processing sub chain in Kenya tea export.

Therefore the study accepted the alternative hypothesis that there is an effect of government policy on value addition in the tea processing sub chain in Kenya tea export.

**SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS**

5.1 Introduction

The chapter provides the summary of the findings from chapter four, and it also gives the conclusions and recommendations of the study based on the objectives of the study. The chapter finally presents the limitations of the study and suggestions for further studies and research.

5.2 Summary of the findings

The objective of this study was to examine the determinants of effective value addition in the tea processing sub chain in Kenya tea export. The study was conducted on 148 out of 195 that constituted the sample size. To collect data the researcher used a structured questionnaire that was personally administered to the respondents. The questionnaire constituted 22 items. The respondents were the employees of Kenya Tea Development Agency. In this study, data was analyzed using frequencies, mean scores, standard deviations, percentage, Correlation and Regression analysis.

The results revealed that majority of the respondents that participated in the study were male with a working experience of between 1-5 years. Further the results revealed that there was a strong positive correlation between the independent variables and dependent variable. The coefficient of determination was 62.9%. The study rejected the null hypotheses and adopted the alternative hypothesis.

5.2.1 Strategic Planning

The study results revealed that there is a strategy for value addition in the organization. That value addition goals are clear and realistic and attainable and that employees are consulted to give their input in developing strategies that add value in tea processing. Further the study showed that the organization has a short term as well as a long term strategic planning the is implemented according to the stipulated timelines.

5.2.2 Technological Competitiveness

The study results showed that due to competition in the market the organization has been influenced to adopt suitable value addition to improve its efficiency and increase profitability. The organization has adopted rainforest alliance standardization for its products to be marketable worldwide.

5.2.3 Marketing Competitiveness

The study results showed that due to competition in the market the organization has been influenced to adopt suitable value addition to improve its efficiency and increase profitability. The organization has adopted rainforest alliance standardization for its products to be marketable worldwide.
5.2.4 Government Policy
The study revealed that VAT by the central government has had a negative effect on value addition of tea processing. However, the central government has good strategy in market penetration for value added tea processing. Further, the government policy has been that tea processing firms adapt to the rainforest alliance compliance requirements to make the countries tea more competitive in the world market.

5.3 Conclusion
From the research findings, the study concluded all the independent variables studied have significant effect on value addition as indicated by the strong coefficient of correlation and a p-value which is less than 0.05. The overall effect of the analyzed factors was very high as indicated by the coefficient of determination. The overall P-value of 0.00 which is less than 0.05 (5%) is an indication of relevance of the studied variables, significant at the calculated 95% level of significance. This implies that the studied independent variables namely strategic planning, technological competitiveness, marketing competitiveness and government policy have significant effect on value addition in tea processing export in Kenya.

The stepwise multiple regression analysis revealed that two strategic management determinants of value addition namely; strategic planning, technological competitiveness, marketing competitiveness and government policy explained statistically significant portion of the variance associated with the extent of value addition of the tea processing to Kenya Tea in Kenya. The stepwise multiple regressions indicated that among the strategic management determinants of value addition, had more effects on improving value addition strategic planning, technological competitiveness, marketing competitiveness and government policy explained statistically significant portion of the variance associated with the extent of value addition of the tea processing to Kenya Tea in Kenya. This result was an emphasis on the role of strategic planning, technological competitiveness, marketing competitiveness and government policy explained statistically significant portion of the variance associated with the extent of value addition of the tea processing to Kenya Tea in Kenya in providing a suitable environment for developing value addition of the tea processing in Kenya.

5.4 Recommendation
The study recommended that following:

1. The existing strategic planning practices and technological competitiveness practices should be modified towards modern strategic planning practices and technological competitiveness practices in order to improve value addition in the tea processing firms in Kenya.

2. In modifying strategic planning practices, education programs on strategic planning for employees and managers should be given key priority in the tea processing processing firms in Kenya.

3. In modifying technological competitiveness practices, the managers of the tea processing firms in Kenya should incorporate modern seafood processing value addition technologies for the success of the industry.

4. The government should establish various information centres to furnish tea processing firms in Kenya with necessary information for purposes of planning, investment and decision making.

5. The government should develop very clear and elaborate regulatory framework and policies so as to guide the operations of the tea processing firms in value addition.

5.5 Suggestion for further Studies
This study focused on the determinants of value addition in the tea processing sub chain in Kenya. Since only 62.9% of results were explained by the independent variables in this study, it is recommended that a study be carried out on other factors value addition. The research should also be done in other industry or sector such as horticulture and the results compared so as to ascertain whether there is consistency on value addition.

REFERENCES


Canadian Journal of Economics, 39 (3), 948-970.


