

**SUPPLY CHAIN MANAGEMENT PRACTICES AND
PERFORMANCE OF TEA FACTORIES IN KENYA**

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OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
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DECLARATION

I affirm that this research project is my work and has not been submitted to any other university for examination or honor of a degree.





Signed..... Date.....1/12/2023.....

Claries Ayuma

D61/10498/2018

Declaration by supervisor:

This Research project has been submitted for Examination with my authority as the University supervisor

Signed  Date 

DR. Gerald Ondiek

DEDICATION

This work is devoted to my family for their support.

ACKNOWLEDGEMENT

I would like to acknowledge God for His blessings. I highly acknowledge my supervisors, Dr. Gerald Ondiek and Dr. Salome Richu, since they guided me tirelessly throughout the journey. Their timely and adept instructions have surely sharpened this proposal. Finally, I would thank the respondents who took part in filling the questionnaires and providing reliable data

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ABBREVIATIONS AND ACRONYMS

SCM Supply Chain Management

SRM Supplier Relationship management

CRM Customer Relationship Management

OTS Outsourcing

SI Supplier Intergration

ABSTRACT

Tea factories play a crucial role in adding value to agricultural products, contributing significantly to the industry's high Gross Domestic Product ranking. The primary focus of this study revolves around examining the productivity of Kenyan tea producers and their strategies for SCM. The objective is to understand how the integration of the SC, outsourcing, supplier relationship management, and information exchange influences the efficiency of Kenyan tea producers. To investigate this, the research adopted a descriptive approach, specifically targeting the 54 tea enterprises governed by the Kenya Tea Development Agency. A census approach was employed due to the subdivided nature of the population. Data gathering involved both primary and secondary sources. Semi-structured questionnaires were utilized for primary data collection, while secondary data was gathered from publications and annual reports from KTDA. The semi-structured questionnaires facilitated the collection of both quantitative and qualitative data, which were analyzed using diverse techniques. Thematic analysis was applied to interpret qualitative data, presenting findings in prose form. For quantitative data, both descriptive and inferential statistics, including regression analysis, were employed with the support of SPSS version 25. Descriptive statistics encompassed frequency distribution, mean, percentages, and standard deviation. The study findings showcased a positive and significant relationship among Supplier Relationship Management (SRM), Outsourcing (OTS), Supply Chain Integration (SCI), Information Sharing (IS), and the Performance of Tea Factories. To compete effectively in both local and global markets, tea factories should establish effective supply chain management systems. Building mutually beneficial relationships with suppliers is crucial, as it enables successful competition, cost reduction, free flow of information, flexibility in handling change, and wise resource consumption. The strategy of process-specific outsourcing significantly enhances organizational performance. For effective integration, tea factory managers should prioritize information and operational integration to improve supply chain outcomes. Relationship integration, grounded in long-term commitments and trust, requires careful handling. The type of information shared should be assessed, and associated risks outlined. Information sharing should be based on principles that promote trust and confidentiality, with management being cautious not to disclose details that may jeopardize the firm's competitive gain.

CHAPTER ONE:INTRODUCTION

1.1 Background Of The Study

The unpredictable variations in business have made supply chain management to emerge a critical factor for performance of any organization (Namusonge, Mukulu and Iravo, 2017). Managers at all levels are recommended to embrace the ideas of leanness, agility, and sustainability to maximize operational efficiency. Barron (2013) notes that the various practices of Supply Chain Management serve as building blocks for improved business performance, competitive advantage, and overall success. Alzoubi (2020) asserts a business that has a thorough and organized system for measuring the enactment of its supply chain is more likely to reap the advantages of faster response times, reduced inventory levels, and cost reduction. However, (Anaja, 2022) argues that the practices of supply chain management applied by a firm, must well align with objectives, for the firms to enjoy their benefits. Firms should also understand two levels of Supply chain management (SCM) practices i.e preparation and application levels in order to succeed.

The concept of SCM is supported by a number of theories. The Resource based view theory aids businesses in growing their SCM agility, adaptability, and alignment. The adoption of technical solutions, green SCM practices, and other phenomena have all been studied using institutional theory, but there are no general measurement scales for institutional forces (Owen, 2013). The transaction cost theory is another theory widely used in discussions concerning supply chain management. It entails the make-or-buy decision that readily aligns with concerns about how firms manage their respective supply chains (Barron, 2013). This study analyzed the above theories.

According to Chebet (2020), tea is a commodity that supports the lives of those involved in growing, picking, and employees at the factory as well as being Kenya's top earner of foreign exchange, contributing around 4% of the nation's GDP (KTDA; 2019). Kenya produces a large amount of tea, which has drawn multinational corporations to the country's tea industry. These companies are working with significant cash and have

increased control over the entire supply chain in the tea industry, which could be for the better or worse. They undoubtedly have a significant impact on Kenya's tea trade and industry as a developing nation (Tora, 2023). There is a need to research, how supply chain has been applied and used by this industry and how the overall process influences how well each Factory performs.

1.1.1 Supply Chain Management Practices

Understanding these practices is crucial for increasing profitability and competing successfully on a worldwide scale (Utami, Sumaji, Susanto, Septina & Pratama, 2019). The term Supply Chain Management (SCM) was developed to formally acknowledge the strategic character of trade partner cooperation. As a powerful tool for competition, its basic purpose is to smoothly integrate material flows and information across the supply chain (Earl, 2012). Ndege (2015) asserts that supply chain management techniques combine businesses with suppliers (also known as upstream SC) and businesses with consumers (also known as downstream SC) through a multi-dimensional architecture. The business may experience this integration, for instance, when departments work together. According to (Sukati, Sanyal & Awaain, 2020), some of the major practices of supply chain management comprise outsourcing, supplier partnerships, data sharing within SC, cycle time, postponement, plus all flows inside the SC, such as the flow of products and information, plus the drift of financial resources.

SCM practices put a premium on examining long-term relationships with all supply chain participants, cross-functional cooperation within the business, forging thorough bonds with suppliers, and supplier participation in activity processes (Wren, 2022). Barron (2013) looked at the practice of SCM, which includes developing information technology, strengthening customer relationships, sharing information in the supply chain, training staff, and internal business operations. In order to accomplish a modest edge in the market, buyers and suppliers can establish alliances and employ supplier relationship management (SRM) to pool their resources (Lankford, 2012). Product design, material assortment, revolution, information sharing, technological savings, and long-term partnership partnerships are also included in SRM (Anaja, 2022).

If the SCM concept is to be applied, for the planning and monitoring procedures in a firm, then information sharing amongst SC practices is also necessary (Feyissa, 2019). For supply chain management to be effective, there need for regular information updating among the chain's participants. Anaja (2022) posits that the readiness to make data available to other supply chain stakeholders is identified as to as information sharing. The uncertainty between supply partners is reduced through sharing of data, such as inventory levels and predictions which improves productivity (Chepkemoi, 2023).

According Keraro (2012) a firm may use outsourcing as a management technique to transfer some non-core responsibilities to more specialized, effective, and efficient service providers, freeing up the company to focus on and carry out its main business operations. Firms from all over the world started looking for more economical resources accessible in various offshore locations as a result of globalization pressures brought on by the need to deal with both possibilities and risks created by global competition (Earl, 2012). The 2007-released Kenya Vision 2030 initiative emphasized Kenya's position on outsourcing. The project was seen as a crucial pillar and a catalyst for social and economic growth. According to Alzoubi (2020), the Kenyan government sought to advance technologically while also modeling itself after successful outsourcing nations like China and India. Customer service administration, Just in Time allocation of goods are additional requirements for supply chain management (Chebet, 2020). Among all other SCM practices, four were used for this study; supplier relationship management, outsourcing, supply chain, integration, and information sharing.

1.1.2 Performance

Heikal (2014) states that performance involves putting prominence on the interior procedure of enumerating the efficacy and competence of a collection of systems measurement. Earl (2012) posit that performance is the criteria used by a company to achieve its aims and purposes. A crucial aspect of performance, according to Heikal (2014), is monitoring the efficacy and efficiency of a given action using a range of measures. A corporation employs organizational performance as a criterion to achieve its financial and market-oriented goals (Earl, 2012). Measurements and indicators replace or have an influence on internal organizational events. The corporate management cycle, a

tool for developing and implementing performance recommendations, is also described in full. They aim to achieve financial and commercial goals. Indicators and metrics are used as substitutes or approximations for organizational events (Lankford, 2012).

Performance metrics are used to support the creation of strategies. Therefore, metrics should inform planners of problems that need to be fixed and give planners the ability to monitor progress towards goals. The purpose of performance measures is to aid in the strategy planning process. Earl (2012) claims that measures should alert planners to issues that need to be addressed and enable planners to track target progress. Monetary and non-financial indicators are the two categories of performance metrics (Ondieki & Oteki, 2015). The non-financial KPI's include may include; timely delivery by suppliers, on time shipping rate and the cycle time of the supply chain.

The prime goal of performance measurement, is to provide accurate and usable information on a company's performance, which can be utilized to improve a corporation's practices and guide decision-making (Heikal, 2014). When evaluating an organization's financial and market performance, many effectiveness pointers, such as market share, income brim on sales, and overall economical position are taken into consideration (Ondiek & Oteki, 2015). According to Heikal (2014), operational efficiency is also key in any industries and it entails aspects such as flexibility, quality, cost and time

This study adopted operational performance indicators which are; production cost, lead time and inventory turnover ratio. These indicators were preferred since they produce data-oriented results which are critical in all business.

1.1.3 Tea Factories in Kenya

Before independence, it was against the law for native Kenyans to plant tea. As independence drew near, the law was overturned so that the native population started to cultivate. The colonial administration established the Special Crops Development Authority (SCDA) in 1960 as a result of this development to encourage Africans to grow tea under the direction of the minister of agriculture. To promote and support tea cultivation on small farms, previously deemed impractical due to knowledge and cost

barriers seen in the plantation industry, the KTDA was established vide legal notice No. 42 of 1964. It assumed the responsibilities of the SCDA (Smallholder Tea Authority). The KTDA transitioned to Kenya KTDA Limited following denationalization and became a private corporation on June 15, 2000, in accordance with Kenyan law (CAP 486). This transformation positioned it as one of the country's largest agency in private sector tea management (KTDA, 2019).

The Ministry of Agriculture of the Kenyan government plays a significant role in the industry, alongside other key factors such as the Kenya Tea Growers Association, Kenya Tea Development Agency (Holdings) Limited, Tea Research, Tea Board of Kenya, Foundation, Nyayo Tea Zone Development Establishment, and East Africa Tea Trade Association (KTDA, 2019). Directors for the tea factories are exclusively chosen from farmers residing within the respective catchment regions of each facility. The Factory Company Boards are accountable for formulating policies related to leaf collection, farmer payments, governance, decision-making, contract management, employee hiring, annual budgeting, and financial expenditure tracking (Keraro, 2012).

With Kenya's GDP reaching approximately 102.43 billion dollars in 2019 (Kosgei, 2016), KTDA significantly contributes to the agricultural sector, constituting 24% of Kenya's annual GDP directly and an additional 27% indirectly (Wren, 2022). The agricultural sector, which includes tea pickers and factory employees, contributes 65% to Kenya's exports totals and sustains over 70% of non-formal engagement in villages (Kosgei, 2016). Thus, the agricultural segment not only propels Kenya's economy but also serves as a crucial source of livelihood for the majority of Kenyans and a significant generator of foreign income.

However, a number of factors are currently exerting pressure on the tea business. The deteriorating trend in tea export prices is the first obstacle (KNBS, 2020). According to KNBS (2020), this export price issue has occurred as a result of rising worldwide tea exports that have surpassed rising global consumption. This is due to the fact that auction prices have been reduced for the past 10 years due to a consistent glut of tea supply on

the global market. Other issues include high labor costs, which make up about 2/3 of ex-factory production costs (Earl, 2012).

1.2 Research Problem

Leading firms are executing supply chain practices to beat competition from their rival companies. It is therefore the mandate of firms to identify practices that suits them and integrate with their working system to enhance their market share and financial performance (Wren, 2022). Farmers who live in Kenya's tea-growing regions must sell their raw tea leaves to the tea factories. Due to the high perishability of tea, it can be difficult for companies to develop supply chain management strategies that effectively integrate headwaters and down waters SC activities. This explains the performance of Kenya in the current tea global market.

The Kenya Tea Industry Report (2023) shows that tea manufacturers' performance is declining (Earl, 2012). For instance, profitability and revenue have considerably decreased as a result of an 8.22-million-kilogram decrease in tea production for the month of February 2023. Tea factories have high operating expenses caused by waste, a weak energy source for manufacturing, and high labor costs. Tea harvesting and the factories' inadequate energy sources are responsible for 68% of production costs. This coupled with low labor productivity has an impact on farmers' returns, necessitating the implementation of automated supply chain management techniques to lower overall production costs (Alzoubi, 2020).

According to a research on the effects of SCM strategies on competitive gain and organizational enactment (Chebet, 2020), SCM practices are complex and encompass both headwater as well as down waters SC accomplishments. However, the study was unable to clearly show how the practices affected an organization's financial success. In his analysis, Keraro (2012) found that KEMSA's principal supply chain management issues include inadequate infrastructure, heavy goods that must be transported, demand uncertainty, inadequate cold-chain maintenance, and a lack of skilled employees. Mbui & Mugambi's (2016) study aimed to determine how strategic management techniques affect

the value addition of Kenyan tea during the export process. The study established that SCM techniques are part of value addition process.

The most notable flaws in these researches is that they primarily concentrated on Fashion Industry, Retail commerce, but not the production industry in Kenya; as a result, their findings are only applicable to those groups. Also, there is literature on SCM practices and performance, but more research is needed because of conflicting findings that have led to a dilemma hence occasioning a research gap. The results provided an answer to the question of; Is there a relationship between Kenyan tea factories' performance and their respective practices of supply chain management?

1.2 Objective of the Study

1.2.1 General Objective

The objective of this study was to establish the effect of supply chain management practices on performance of tea factories in Kenya.

1.2.2 Specific Objectives

- i. To establish the effect of supplier relationship management on performance of tea factories in Kenya.
- ii. To determine the effect of outsourcing on performance of tea factories in Kenya.
- iii. To find out the effect of supply chain integration on performance of tea factories in Kenya.
- iv. To assess the extent to which information sharing affects performance of tea factories in Kenya.

1.4 Value of the Study

The study may assist the tea factories in comparing their best supply chain management techniques to those of other companies. As a result, the decision-makers in these factories were to be better able to execute cutting-edge supply chain management techniques and

increase the efficacy of their supply chains. Policymakers were to be able to recognize the practices that are more crucial than others and give them greater attention as a consequence of this research. The outcomes may also give a more complete representation of the supply chain techniques employed by Kenyan private sector corporations.

The study's results may also be beneficial to the government because tea is a substantial source of foreign currency profits. The government was to be capable of creating the necessary infrastructure and policies to help factories implement the finest SCM practices. The findings of this research were to significantly advance our information of supply chain management performance, especially in tea manufacturers. The study was to significantly advance academic knowledge.

CHAPTER TWO : LITERATURE REVIEW

2.1 Introduction

The theoretical context and literature are all included in this chapter. According to Kothari (2014), a literature review helps the researcher to conduct an extensive investigation and it's carried out in agreement with the learning's goals.

2.2 Theoretical Framework

2.2.1 Resource Bases View Theory

The theory was first industrialized by Penrose (2011), who presented a framework for the effective management of an administration's resources, diversification strategies, and commercial opportunities. The theory states that a company's available resources should be used to develop the supply management process (Tora, 2023). These resources might take many different forms, such as tangible and intangible assets, talents, organizational procedures, or information.

Because it clarifies each of the independent variables, the RBV theory is applicable to this topic. A supply chain connection may take on a more complex relational function in an interdependent setting, even in cases where multiple resources are owned or managed by parallel businesses.

2.2.2 Transaction Cost Theory

Wamalwa, (2014) posits that Ronald Coase introduced the theory in the 1930s, and Williamson later developed it in the mid-1970s. The theory states that within the organizational framework, transactions are resolved in accordance with their individual features. Uncertainty, frequency, asset qualities, and conformance are listed as these traits. The risk of a transaction increases along with the degree of uncertainty and the demand for particular assets. When processing risks are minimal, the least cost-effective management will be selected; but, when risks increase, expenses rise and businesses create new strategies to cut costs (Wren 2022).

The subject is significant to the transaction cost theory since it focuses on transactions or units of exchange. Transactions are involved in supply chain procedures such as outsourcing, supplier relationship administration, and integration. In the supply chain of the tea business, different entities have different cost structures (Tora, 2023).

2.3. Supply Chain management Practices and Performance

Effective SCM has emerged to be a significant method for maintaining market competitiveness and enhancing organizational performance. Ndege (2015) assert that SCM is crucial to a firm's capacity to keep a competitive edge. Owing to its capacity to provide a good or service at the correct place and time, globalization has significantly changed how supply chain management is practiced by enterprises. Organizations are learning that they must have effective supply chain management systems if they want to compete in both local and global markets. The concepts and procedures of SC management must be understood by the organizations if they are to become competitive and improve organizational profitability (Namusonge, Mukulu and Iravo, 2017).

Ngatia (2013) discovered that the supply chain management strategies implemented by the KTDA significantly improved factory productivity. Namusonge, Iravo and Mukulu, (2017) conducted a research on the impact of SC competencies to the success of industrial businesses in Kenya. The conclusion drawn SC expertise, including procurement, inventory management, logistics, and customer service played a crucial role in the operation of Kenyan manufacturing firms. Additionally, Ondieki (2015) researched the consequence of supplier bond administration on the efficiency of SCM in the Kenyan public segment, revealing enhancements in dealer interactions within the industry.

Researchers indicate a clear connection between SCM techniques and organizational performance, however, businesses still need to be aware of the global technological innovation that is taking place to maximize the performance of the production sector in Kenya tea factories.

A thorough strategy for managing a corporation's relationships with the suppliers of the goods and amenities it utilizes is known as supplier relationship management (Lankford,

2012). It is a portion of the SCM information flow component and consists of both business procedures and software. In a research published in 2016, Kosgei examined the buyer-supplier collaboration approach and how it affected buyer performance. The study examined the dynamics of supplier-manufacturing company relationships, with a focus on how these connections affected the financial performance of sixty Spanish manufacturing companies. The study used indices to measure supplier development, mutual dependence, and information sharing between buyers and suppliers. Sector-wise, 1,980 manufacturing businesses from Spain were included in the sample. Three variables—information sharing, supplier development, and mutual reliance—that were taken from the body of current research were used to create an index of supplier collaboration. The findings showed that supplier partnerships and capabilities had a strong positive link with each other and with competitive advantage.

Olendo (2016) looked at how SRM affects Bamburi Cement Limited's supply chain efficiency in Mombasa. According to the study, value creation has increased market shares and capabilities, facilitated customer intimacy and understanding, and generated enduring partnerships and bonds that reassure suppliers to advance the superiority of their goods. Lead time has also been shown to reduce the cost of inventories. The study's findings demonstrated that the independent factors that were examined had a substantial impact on supply chain effectiveness.

Chebet (2020) established how supplier relationship management techniques affect financial performance. The study's findings demonstrated how important it is for companies to build associations with their contractors that benefit both parties because doing so enables them to compete successfully, cut costs, allow information to flow freely, handle change with flexibility, and utilize their resources wisely. As per the study's outcome, SC administration strategies suggestively distress the financial success of the tea dispensation companies in Kenya's Kericho Region.

Increased market competitiveness is among the most important of the obstacles that many businesses are striving to overcome as they attempt to stay afloat (Ondieki, & Oteki, 2015). Along with that, the economy is difficult to operate in due to high rates of

inflation, high interest rates, and erratic currency changes. Businesses must adapt their management strategies to the new environment, maintain a culture of management commitment, and concentrate on the growth of their clients and goods. Businesses will be less able to prosper financially, control the market, deliver top-notch customer service, and boost sales if they are unable to attract and retain suppliers and customers. (Earl, 2012).

In Rwanda, Lankford (2012) looked into how outsourcing affected organizational performance (cost effectiveness, productivity, and profitability). The research's findings have demonstrated that all of the participating organizations outsource some of their core (such as operation management,) and non-core (such as human resource, and manpower) activities. These findings revealed that Rwandan businesses use outsourcing to gain access to specialized knowledge. Additionally, the results indicated that outsourcing practices improved organizational performance. Additionally, the outcome suggest that outsourcing operations have a positive and significant association with cost effectiveness, but only weakly or moderately positive insignificant relationships with productivity and profitability.

Anaja (2022) conducted a study on subcontracting as a strategic approach and its impact on administrative act, with a positive focus on Nigeria Bottling Firm Plant and Camela Vegetable Oil Corporation. The study was grounded on the core competency hypothesis. To collect data, a survey study design was employed, exploiting questionnaires and conferences as the primary information gathering methods. Secondary data for the analytical discussion was obtained through library research. The findings revealed that outsourcing back office, the core, and support functions significantly enhances corporate effectiveness.

Wamalwa (2014) did an investigation on how outsourcing affected Kenyan oil marketing companies. The study found that operational outsourcing, process-specific outsourcing, professional outsourcing, and manufacturing outsourcing all add 4% to organizational performance. Process-specific outsourcing was the only strategy that significantly increased the administration's enactment. Outsourcing of qualified services has a negative

impact on administrative enactment, hence it is essential for corporations to prevent it since it harms their status. To guarantee that they comply with industry standards, and that product quality is maintained, a firm should, if possible, aim to create its goods or services domestically. Outsourcing manufacturing damages a company's financial line. Due to the positive correlation between process-specific outsourcing and organizational performance, businesses may benefit from this by making sure they hire the finest contractors to deliver the greatest results. As a consequence, profitability, productivity, and time will all increase.

Wren (2022) researched on SC integration using Ethiopia as a case study. His analysis was based on field research on the manufacturing sectors in Ethiopia. These manufacturing sectors mostly produced everyday consumer goods. They separated supply chain integration into four phases. The first step was an illustration of the dispersed operations within the particular organization. The second stage's characteristics were restricted to the integration of related tasks, such as buying and commodity control. Stage three of the integration demanded that each organization internally integrate its end-to-end planning. The final level represented the true integration of the SC, encompassing the upstream relationships with suppliers and the downstream relationships with customers. According to the research's findings, the organizations under investigation appeared to be focused on inter-organizational integration. The findings showed that Ethiopian businesses had a low degree of integration, but there were some promising projects in progress.

Anyigba (2019) conducted a research on how the triumph of supply arrangements is impacted by supply chain consolidation. The entire routine of supply chains was explicitly examined with regard to the effects of information, operational, and relational integration. According to his research, relational integration has a detrimental impact on SC performance while information and operational integration have beneficial effects. The conclusion suggests that managers should focus more on information and operational integration in the Ghanaian context in order to improve supply chain outcomes, while

relationship integration should be handled more cautiously due to its foundation in long-term commitments and trust.

The research conducted by Charles (2021) discovered approaches for dominant, sustaining, and striking a competitive status quo in supply chain. The study examined the impact of data sharing on various aspects, such as supply chain visibility, cooperation, agility, and performance, from relational, resource-based, and extended resource-based perspectives. By assessing the crucial significance of information sharing within supply chains, the research findings revealed that cooperation, flexibility, information sharing, and supply chain visibility had substantial effects on supply chain performance. Consequently, these factors contributed to improved gains, competitiveness, and flexibility. The results demonstrate that information exchange significantly and favorably affects the supply chain's performance, agility, and visibility. Collaboration, agility, and performance all benefited from visibility in the supply chain, but performance benefited more from agility and collaboration. The study's conclusions imply that information exchange is necessary for increased supply chain efficiency and competitive advantages.

Alzoubi & Yanamandra (2020) looked at if there was a connection between organizational success and the amount of information exchange. Using structural equation modeling, the possible connections between the data from 150 industrial categories were examined. The findings demonstrate that information quality and integrated information technology have a favorable influence on the extent of information sharing. On the other hand, internal integration and cost-benefit sharing have little impact on how much information is exchanged. This study found no connection between sharing information and organizational effectiveness. The coordinated efforts of supply chain partners serve as a bridge for its linkage. This suggests that while sharing knowledge is crucial, it is insufficient to significantly improve performance on its own.

Examining how (IT) improves supply chain performance was the goal of Frederico et al. (2020). The information on the industry was gathered through both semi-structured interviews and a comprehensive survey. We identify and investigate the two key components of knowledge sharing: willingness and connectivity. It has been

demonstrated that these two factors have an impact on operational performance and are crucial for the growth of a real capacity for information exchange. However, it has shown that many businesses frequently prioritize connection above the willingness construct. Since a cohesive supply chain team is difficult to build, the promise of information exchange is rarely fulfilled.

2.4 Research Gaps

Table 2.1: Research Gap

Author	Study	Gap
Ondieki (2015)	Supplier relationships impact on the efficacy of SCM performances in the Kenyan public sector	The repercussion of individual predictor variable on the criterion were not examined in this study.
Wanja and Chirchir's (2013)	The factories performance under the KTDA oversight and Supply Chain Management (SCM) methodologies.	The performance of factories under the KTDA supervision and SCM methodologies were not found to be causally related in the study. The difficulty to determine the precise contributions of individual predictor variable on the criterion led to this constraint.
Mukulu, Iravo and Namusonge, (2017)	The impact of SC capacities on the performance of Kenya's manufacturing firms	The performance of factories under the KTDA supervision and supply chain management (SCM) methodologies were not found to be causally related in the study. The difficulty to determine the precise contributions of individual predictor variable on the criterion led to this constraint.
Namusonge and Iravo's (2015)	Effects of supply chain management strategies on Kenyan steel businesses' profitability.	It was challenging to definitively identify the optimal practices for each of the selected companies in the study.

Source; Researcher, 2023

2.5 Conceptual Model

A study's conceptual model illustrates the respective variables and the metrics to be applied to gauge the effects of study variables..

Independent

Dependent

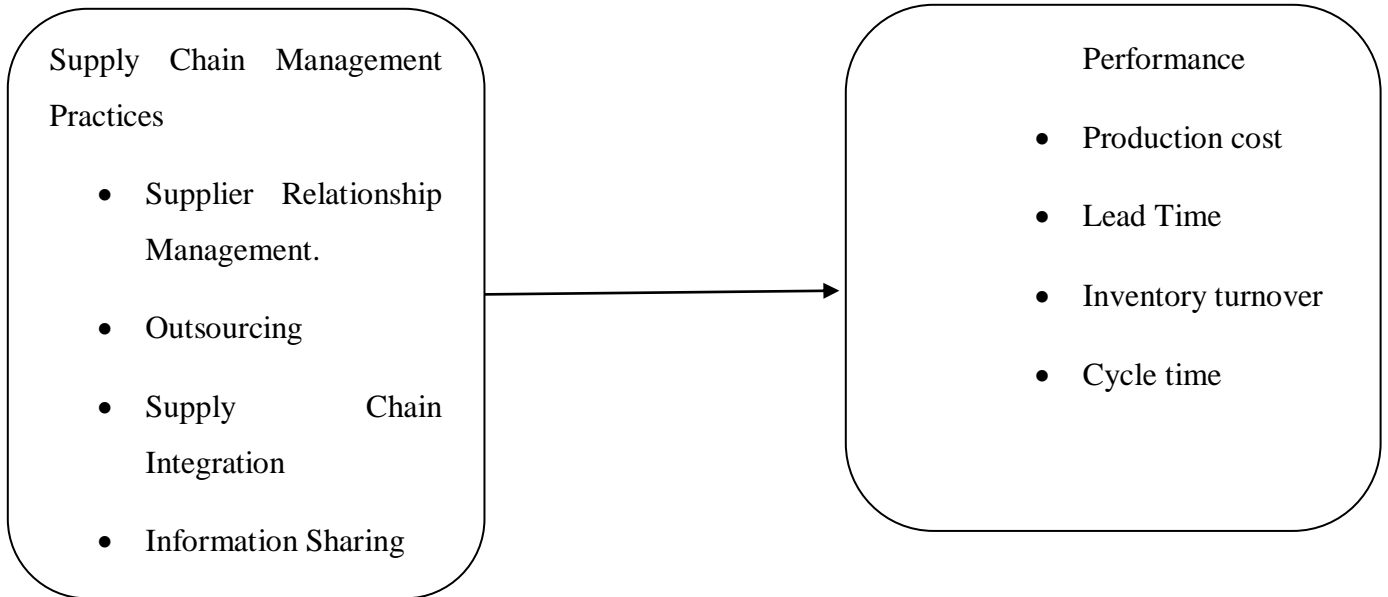


Figure 1: Conceptual Framework

Source: Researcher, 2023

Figure 1 communicates that supplier relationship management, outsourcing, SC integration and information sharing have effect on performance of tea factories in Kenya.

CHAPTER THREE : RESEARCH METHODOLOGY

3.1 Introduction

Methods that are employed in undertaking the study in line with the value and overall goal are covered in Chapter three. The design, data collection systems, population, validity and reliability of research instruments, analysis, and matters on ethics will be covered.

3.2 Research Design

Descriptive survey design was utilized to conduct out the investigation. A descriptive study must accurately and methodically characterize a population, circumstance, or phenomena. What, where, when, and how questions can be answered, but not why. This research design may make use of a variety of research methods to study one or more variables (Barron, 2013). Since the drive of the study is to discover features, frequencies, drifts, and categories, the researcher suggests a descriptive research design. Additionally, it was selected since the researcher had no control over the factors being studied.

3.3 Population

All of Kenya's KTDA-managed factories were targeted. There are 54 operational processing facilities owned and operated by the Kenya Tea Development Agency, and they are found in 17 counties with ideal climatic conditions for growing tea. The contributors in the study were the managers of the factories' supply chains or the general managers. The 54 companies that KTDA oversees were part of the census conducted by the researcher. The findings clearly explain how practices like supplier relationship management, outsourcing, supply chain, integration, and information sharing affect organizational performance.

3.4 Data Collection

A semi-structured questionnaires was utilized to gather primary data. With the use of a Likert scale, closed-ended questions was applied to gather quantitative data. The likert

scale had ranges of 1 (strongly agree) to 5 (strongly disagree). An inquiry form is appropriate for collecting data from a large population, according to Kothari (2014), since it saves time by collecting a lot of information at once. Data gathered through open-ended queries was qualitative.

Each questionnaire had transmittal notice. To ensure personalized delivery of the study items and a high reply rate, the researcher was assisted by two research assistants. The respondents were told the importance of the study, and assistance was provided if they had any questions.

3.5 Data Analysis

The information from questionnaires was converted into data by tabulation. Data was carefully reviewed to identify and fix as many typos, factual omissions, and other problems. This was to help to ensure that the data is precise and of the greatest standard. The SPSS 27.0, was utilized to analyze the information. Descriptive investigation was used to provide an overview of the variables, and inferential analysis were used to demonstrate how they are related.

The study also adopted a regression model. It was advised because it offers a statistical framework for describing the linking between independent and dependent variable quantity. The performance of Kenyan tea factories is a dependent variable, while SCM practices (supplier relationship management, outsourcing, supply chain integration, and information sharing) constitutes the independent variables. Regression analysis produces a regression equation, and the coefficients illustrate the interactions between the independent and dependent variables.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Y = Performance of Tea factories in Kenya, β_0 = Constant X_1 = Supplier Relationship management, X_2 = Outsourcing, X_3 = Supply Chain Integration, X_4 = Information Sharing $\beta_1 - \beta_4$ = The regression co-efficient while ε is the casual error term that monetary records for other variables not comprised in the model.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.1 Introduction

This chapter provides a detailed data analysis of research's findings, starting with response rate analysis and concluding with a diagnostic model analysis.

4.2 Response rate.

Table 4.1: Response Rate

		Frequency	Percent	Cumulative Percent
Valid	Response	40	74.0	74.0
	Nonresponse	14	26.0	100.0
Total		54	100.0	

Source: Researcher (2023)

The response rate was at 74% which according to Bryman (2019), a response rate of 65% and above is a good response rate. With such the findings can be relied upon for conclusion, recommendation and decision making.

4.2 Analysis of Respondent's Background

This section entails analysis of respondent background characteristics such as age bracket, highest level of education and industry experiences. The analysis is important in determining capability of respondents to contribute towards the study topic.

4.2.1 Respondent Distribution by Age

Table 4.2: Age range

		Frequency	Valid Percent	Cumulative Percent
Valid	31-40	5	12.5	12.5
	40-50	22	55.0	67.5
	Above 50	13	32.5	100.0
Total		40	100.0	

Source: Researcher (2023)

Analysis of age is important in gauging the level of experience in the industry and the how the respondents have progressed through the various levels of management. According to responses by age range, 55% of respondents were in the range 40-50 years followed by 32.5% at above 50 years and 12.5% were in the range 31-40 years. This shows that the respondents were mostly above the age of 40 years.

4.2.2 Distribution by Education Level

Table 4.3: Highest Level of Education

		Frequency	Valid Percent	Cumulative Percent
Valid	College	6	15.0	15.0
	University	27	67.5	82.5
	Post graduate	7	17.5	100.0
Total		40	100.0	

Source: Researcher (2023)

Analysis of respondent highest education level is important in determining the respondent comprehension of the subject matter –supply chain organization practices and the tea industry at large. By education level most of the respondents had acquired a university degree at 67.5% followed by post graduate qualifications at 17.5% and college at 15%. The findings show that respondents were highly educated thus well informed about industry and the study subject. The findings are in table 4.2.

4.2.3 Analysis of Industry Experience

Table 4.4: Industry Experience

Years	Frequency	Valid Percent	Cumulative Percent
1-5	3	7.5	7.5
6-10	2	5.0	12.5
11-15	8	20.0	32.5
16-20	19	47.5	80.0
Above 20	8	20.0	100.0
Total	40	100.0	

Source: Researcher (2023)

Analysis of industry experience is important because it enables the investigator to gauge the level of industry indulgent among the respondents. The higher the experience, the more the understanding of the industry and its operations. According to the statistics, the most respondents had an industry experience of 16-20 years at 47.5% followed by 11-15 years and above 20 Years being at 20% respectively. Respondents (3%) had 1-5 years while 2% had 6-10 long years of experience in the industry. An experience of 16-20 years in the tea industry is a relatively long experience in the tea industry which implies greater understanding of the tea industry and tea industry supply chain operations by the managers. The findings are in table 4.3.

4.3 Supply Chain management Practices and Organizational Performance

The responds in this section show the SCM practices adopted by tea factories. Respondents were enquired to rate on a scale of five the extent to which they agree or disagree with each.

4.3.1 Supplier Relationship management and Performance of Tea Factories

Table 4.5: Supplier Relationship Management Practices

		Frequency	Valid Percent	Cumulative Percent
Valid	Supplier relationship management reduce the cost of products and services, promotes quality improvement and increases innovation	18	45.0	45.0
	SRM allows the mutual sharing of risks and flow of information	6	15.0	60.0
	SRM allow the flexibility in change management and effective utilization of resources	8	20.0	80.0
	Supplier relationship management enables the company to engage competitively	8	20.0	100.0
Total		40	100.0	

Source: Researcher (2023)

Respondents were examined to rate on a scale of five the scope to which they agree or disagree with various testimonials on supplier relationship administration. Respondents (45%) indicated that the goal of Supplier Association Management is to rationalize processes amid an enterprise and its suppliers, 20% that SRM allow the elasticity in change administration and effective utilization of capitals, 20% that Supplier relationship management enables the company to engage competitively and 15% that SRM allows the mutual allocation of risks and flow of data. The findings are in Table 4.6

4.3.2 Outsourcing and Performance of Tea Factories

Table 4.6: Outsourcing Practices

		Frequency	Valid Percent	Cumulative Percent
Valid	Tea factories that outsource some of their core activities are likely to save on costs	7	17.5	17.5
	Outsourcing some of the none core activities increases efficiency	10	25.0	42.5
	Tea factories outsource in order to access special expertise	8	20.0	62.5
	Outsourcing activities contributes to the organizational performance of tea factories	15	37.5	100.0
	Total	40	100.0	

Source: Researcher (2023)

Respondents were asked to rate various statements on outsourcing. Respondents (37%) indicated that Outsourcing activities contributes to the organizational performance of tea factories, 25% that Tea factories outsource some of their none core activities, 20% that Tea factories outsource in order to access special expertise and 17.5% that Tea factories outsource some of their core activities. The findings are in Table 4.7

4.3.3 Supply Chain Integration and Performance of Tea Factories

Table 4.7: Supply Chain Integration Practices

		Frequency	Valid Percent	Cumulative Percent
Valid	Supply Chain Integration leads to lower supply chain costs	13	32.5	32.5
	Implementing SCI system results to lead time reduction	5	12.5	45.0
	SCI increases lead time flexibility	16	40.0	85.0
	The use of supply chain integration lowers production costs	6	15.0	100.0
	Total	40	100.0	

Source: Researcher (2023)

The findings in this section present respondent views on the various supply chain integration practices. Respondents (40%) indicated that SC amalgamation is widely backed as one of the vital factors to attain superior supply chain presentation, 32.5% that Supply chain integration applies to information and operations, 15% that Supply chain integration is pursued as part of competitive strategy and 12% that Tea factories pursue integration to achieve positive outcomes in their SC. The Table 4.7 outlines the results

4.3.4 Information Sharing and Performance of Tea Factories

Information allotment enables supply chain members to share information across the supply chain. This section presents findings relating to information sharing practices in tea factories. Respondents (50%) indicated that Information sharing ensures that supply chain businesses share accurate information, 20% that Information exchange considerably enhances organizational visibility in the supply chain, 17.5% that Tea factories can maintain, and strengthen competitive positions in supply chains through information

sharing and 12.5% that Information quality and integrated information technologies have a favorable effect on organizational performance. The Table 4.8 outlines the results

Table 4.8: Information Sharing Practices

		Frequency	Valid Percent	Cumulative Percent
Valid	Employment and usage of technology communications enhances cost reduction	20	50.0	50.0
	Information sharing reduces cycle time	5	12.5	62.5
	Adopting information sharing techniques improves inventory turnover	8	20.0	82.5
	Information sharing increases transparency across the supply chain	7	17.5	100.0
	Total	40	100.0	

Source: Researcher (2023)

4.3.5 Supply Chain Indicators of Organizational Performance

The results of SCM practices on organizational recital can be measured based on supply chain related indicators of organizational performance in tea factories. Majority of the respondents at 42.5% indicated improvement in inventory turnover, 20% reduction in lead time and 17.5% reduction in manufacture costs. The findings indicate that the most common indicator is inventory turnover. The outcome is as given in Table 4.9.

Table 4.9: Supply Chain Indicators of Organizational Performance

			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Reduced cost	Production	7	17.5	17.5	17.5
	Reduction in Lead Time		8	20.0	20.0	37.5
	Improved turnover	Inventory	17	42.5	42.5	80.0
	Reduced Cycle time		8	20.0	20.0	100.0
	Total		40	100.0	100.0	

Source: Researcher (2023)

4.4 Correlation between SCM Practices and Performance of Tea Factories

The findings show that Supplier Relationship Management ($r=.707$), Outsourcing ($r=.645$) Supply Chain Integration ($r=.314$) and Information Sharing ($r=.175$) have a positive plus significant relationship with Performance of Tea factories (PTF). The findings are in table 4.10.

Table 4.10: Correlation between Supply Chain Management Practices and Organizational Performance

		SRM	OTS	SCI	IS	PTF
SRM	\Correlations	1				
	N	40				
OTS	Correlations	.615*	1			
	Significance	.000				
	N	40	40			
SCI	Correlations	.293	.347*	1		
	Significance	.000	.000	.000		
	N	40	40	40		
IS	Correlations	.335	.440	.273	1	
	Significance	.000	.000	.000	.000	
	N	40	40	40	40	
PTF	Correlations	.707**	.645*	.314	.175	1
	Significance	.000	.000	.000	.000	.000
	N	40	40	40	40	40

*. Level of Alpha (0.0)

b. Listwise N=40

4.5 Multiple Regression

Table 4.11: Model Summary

Model	R	R ²	Adjusted-R ²	Estimate's Std. Error
1	.131 ^a	.246	.263	.82700

a. Predictors: (Constant), Information Sharing, Supplier Relationship Management, Supply Chain Integration, Outsourcing

A higher correlation coefficient (R) suggests a more robust association between the independent and dependent variables. With an adjusted R square of 0.263, the independent factors and the dependent variable are positively correlated. This indicates that 24.60% of the variability in the dependent variable (Performance of Tea Factories) may be attributed to the combined influence of the four independent factors. The findings are in table 4.11.

4.6 Analysis of variance

The F value is at 0.425 with a degree of freedom (df) at 4. The P value 0.034 is statistically important being <0.005 level of importance. Therefore, the performance of tea factories is the dependent variable, and the independent variable, which is made up of supply chain supervision practices including supplier relationship management, outsourcing, supply chain incorporation, and information sharing, has an effect on it. The results are in table 4.12.

Table 4.12: ANOVA

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	1.163	4	.291	.425	.034 ^b
1	Residual	23.937	35	.684		
	Total	25.100	39			

a. Organizational Performance(Criterion)

Supplier Relationship Management Information Sharing, , Supply Chain Integration, Outsourcing

4.7 Regression Coefficients

Table 4.13: Coefficients

Model	Coefficients ^a			T	Sig.	
	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta			
1	(Constant)	3.324	.556		5.976	.000
	Supplier Relationship Management	.138	.111	.207	1.235	.000
	Outsourcing	.074	.120	.106	.618	.000
	Supply Chain Integration	.020	.123	.027	.160	.000
	Information Sharing	.009	.112	.014	.083	.000

Source: Research Data (2023)

The result indicates that Supplier Relationship Management (0.138), Outsourcing (.074), Supply Chain Integration (.020) and Information Sharing (.009) had a positive influence on performance of tea factories. High t-values and P values of ≥ 0.05 indicate a significant positive relationship between the criterion and predictor variables. The regression equation is thus as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$Y = 3.324 + 0.138X_1 + 0.074X_2 + 0.020X_3 + 0.09X_4$$

Where:

Y=Performance of Tea Factories

α = Constant term

β_1 = Beta Coefficient

X_1 = Supplier Relationship Management

X_2 = Outsourcing

X_3 = Supply Chain Integration

X_4 = Information Sharing

ε = Error term

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The last (5th) chapter discusses findings and the conclusion of the study to demonstrate relevance and applicability in policy

5.2 Summary of Findings

Examining how supply chain management strategies affect tea manufacturers' performance was the goal of the study. The findings show a favorable and statistically significant association between the Performance of Tea Factories (PTF) and Supplier Association Management ($r=.707$, $P=.000$), Outsourcing ($r=.645$), Supply Chain Integration ($r=.314$), and Information Sharing ($r=.175$). The criterion and predictor variables appear to be positively correlated, as indicated by the corrected R square of 0.263. By combining the effects of these four independent variables, it can be inferred that 26.3% of the fluctuations in the dependent variable (Performance of Tea Factories) may be explained.

5.3 Conclusion

The findings show that the performance of tea factories and SCM practices—SRM, outsourcing, supply chain integration, and information sharing—correlate positively and significantly. The variables have a positive correlation, as indicated by the R square value of 0.264. It can be inferred that 56.4% of the fluctuations in the dependent variable can be accounted for by the combined influence of the four predictor variables.

5.4 Recommendations

Tea factories should have effective supply chain management systems to enable them compete in both local and global markets. It is important it is for the companies to build relationships with their suppliers that benefit both parties because doing so enables them to compete successfully, cut costs, allow information to flow freely, handle change with flexibility, and utilize their resources wisely. The findings indicate that tea factories outsource some of their functions. Process-specific outsourcing is the strategy that

significantly increases the organization's performance. Before outsourcing, the management should carry out due diligence to ensure that the companies involved comply with industry standards, and that product quality is maintained and company image maintained or promoted as well. Management should also assess the degree of risks involved in outsourcing and develop measures to mitigate them.

For effective integration tea factory managers should focus more on information and operational integration in the industry context in order to improve supply chain outcomes, while relationship integration should be handled more cautiously due to its foundation in long-term commitments and trust.

Information sharing promotes visibility in the supply chain. While information exchange is necessary for increased supply chain efficiency and competitive advantages, the type of information shared should be assessed and risks outlined. Information should be shared on a basis that promotes trust and confidentiality. Management should be keen not to provide details detrimental to the firm's competitive advantage

5.5 Limitations of the Study

The study was concerned with supply chain applies and organizational presentation in tea factories. The tea factories involved were those under management of Kenya Tea Development Agency. Therefore, the findings are limited to the extent of what the respondents from the tea factories had to say regarding the subject matter.

5.6 Suggestions for Further Research

The findings indicate the four independent variables (supplier relationship management, outsourcing, supply chain integration and information sharing) put together account for 26.3% of the changes in the dependent variable. There is a suggestion to establish the other factors apart from the variables under this study, which have significant effect on performance of tea factories. Further studies can also include tea factories not under management of Kenya Tea Development Agencies to identify any similarities or differences with the findings of this study.

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APPENDICES

APPENDIX I: RESEARCH QUESTIONNAIRE

Collecting information on how supply chain management techniques affect Kenyan tea manufacturers' operations is the main goal of this survey. Please reply to each question on the following form in accordance with the guidelines. You may be sure that any information gathered will be treated with discretion and used only for this study. Remain anonymous to the investigator

SECTION A: DEMOGRAPHIC INFORMATION

Mark as Appropriately

1. What age are you in years?

- Below 20
- 20-30
- 31-40
- 40-50
- Above 50

2. What is your highest level of education?

- Secondary level
- College level
- University level
- Post graduate level

3. How long have you worked in the tea industry in years?

- Below 1
- 1-5
- 6-10
- 11-15
- 16-20
- Above 20

SECTION B

Part 1: Supplier Relationship Management and organization performance

In Likert weighted scale descending in weight from 5-1, you are requested to rate the statements at the column-row intersection and mark legibly to show your choice

Statement	5	4	3	2	1
Supplier Relationship Management reduce the cost of goods and services, promotes quality improvement and increase innovation					
SRM allows the mutual sharing of risks and flow of information					
SRM allow the flexibility in change management and effective utilization of resources					
Supplier relationship management enables the company to engage competitively					

Part 2: Outsourcing and organization performance

In Likert weighted scale descending in weight from 5-1, you are requested to rate the statements at the column-row intersection and mark legibly to show your choice

Statement	5	4	3	2	1
Tea factories that outsource some of their core activities are likely to save on costs					
Outsourcing none core activities increases efficiency					
Tea factories outsource in order to access special expertise					
Outsourcing activities contributes to the organizational performance of tea factories					

Part 3: Supply Chain Integration and organization performance

In Likert weighted scale descending in weight from 5-1, you are requested to rate the statements at the column-row intersection and mark legibly to show your choice

Statement	5	4	3	2	1
Supply Chain integration leads to lower supply chain costs					
Implementing SCI system results to lead time reduction					
SCI increases supply chain flexibility					
The use of supply chain integration lowers production costs					

Part 4: Information Sharing and organization performance

In Likert weighted scale descending in weight from 5-1, you are requested to rate the statements at the column-row intersection and mark legibly to show your choice

Statement	5	4	3	2	1
Employment and the usage of technology communications enhances cost reduction					
Information sharing reduces cycle time					
Adopting information sharing techniques improves inventory turnover					
Information sharing increases transparency across the supply chain					

In Likert weighted scale descending in weight from 5-1, you are requested to rate the statements at the column-row intersection and mark legibly to show your choice

STATEMENT	5	4	3	2	1
Supply chain relationship management have an effect on organizational performance					
Outsourcing affects organization performance					
Integration of supply chain have a significant relationship to organizational performance					
Sharing of Information across the supply chain have an effect on organizational performance					

“THANK YOU FOR PARTICIPATING”