

Supply Chain Management Practices on Organizational Performance: A Case Study of Tea Industries in North Rift Valley, Kenya

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ABSTRACT

The tea sector in Kenya has been in a crisis for the past decade due to supply and demand implications. Tea prices are increasing in the short term, but long-term prices have decreased to half of what farmers received five decades ago. The main purpose of the study was to evaluate the effect of supply chain management practices on organizational performance of tea industry in the North Rift Valley, Kenya. The study was guided by the four objectives: to identify supply chain management practices adopted by firms in the tea industry in North Rift Valley Kenya, to establish the level performance of tea firms in North Rift Valley Kenya, to find out if there is a significant relationship between SCM practices and performance in the tea industry in North Rift Valley, Kenya and to give recommendations on how to improve the levels of supply chain management practices of tea industry in the North Rift Valley, Kenya.

This study utilized a descriptive mixed research design. Tea manufacturers in the North Rift Valley region were investigated using a census technique. Purposive sampling and stratified sampling were used, with departments divided into clusters for each level of the organization. To pick respondents in various strata, simple random sampling was used. Total of 71 respondents participated in the study. For data analysis, this study used SPSS version 25.0, which generated descriptive statistics, frequency tables, plots, and graphs. It also supplied inferential statistics and variable correlations. Multiple linear regression was used to test the hypotheses.

The study findings showed that tea companies in the region recognize the importance of collaborative partnerships, lean practices, and effective materials management in optimizing their supply chain performance. From the findings, it was concluded that Tea firms in North Rift Valley, Kenya recognize and value strategic partnerships, lean practices, and materials management as key components of effective supply chain management. The study found that the tea companies are performing well in terms of efficiency and profitability. However, there was no significant relationship between strategic partnership and performance, hence the study recommended that tea firms should focus on improving their lean practices and materials management to optimize their supply chain performance.

Key words: Supply Chain, organizational performance, strategic partnership, lean practices, materials management

INTRODUCTION

Supply chain practices significantly influence organizational performance (Al-tit, 2017; Dey et al., 2020; Khalil, 2019). Supply Chain Management Practices(SCMP) aims at improving the sourcing of raw materials, the production and the distribution of products and services to customers (Hugos, 2018; Fredendall & Hill, 2000). Thus, the successful implementation of Supply chain management (SCM)

practices provides opportunities to improve organizational performance along the supply chain (Spina et al., 2015). Recent scholars have discovered that adopting supply chain management strategies effectively greatly results to increased market share and improved profitability (Jermsittiparsert et al., 2019; Nimeh et al., 2018). Organizational performance includes three distinct areas of firm outcomes: market share, financial performance, and reduced cost of production (Supply, 2020). Organizational performance measured by market share and profitability refers to a firm's actual result or outcomes as compared to its set objectives (Khan et al., 2018)

Supply chain practices are described as the collection of activities carried out by an organization to facilitate successful supply chain management (Gatimbu et al., 2018; Kumar et al., 2020). Ngatia, (2013) also described SCM as a multi-dimensional construct that encompasses both the upstream and downstream aspects of the supply chain. The organization's suppliers, as well as the mechanisms for maintaining relationships with them, make up the upstream component of the supply chain. The organizations and processes for selling and supplying goods to final customers make up the downstream section (Tarigan et al., 2021). Supply chain practices was measured in terms of strategic supplier partnerships, lean practices and materials management.

Manufacturing, processing, and retailing have all become increasingly complicated in recent years. Consumers have been very picky about the products they buy. Competition has increased as a result of the large number of national and foreign players, and product life cycles have shrunk (Agusa & Hassan, 2008; A. Khan & Siddiqui, 2018; Rutto, 2016). The balance of control has changed from producers to customers, resulting in an increased level of confusion and unpredictability (Sahay et al., 2003). Most manufacturers lack real-time inventory and order visibility and, as a result, are unable to respond to customer demands, rapidly losing a large number of potential sales. Since the country's taxation is complicated, businesses operate with small, dispersed depots, which raises overall costs.

Owing to a lack of technological use, the method of monitoring shipments from warehouse or fulfillment center to store is inefficient. The majority of companies use phone calls and physical receipts to monitor shipments (Tarigan et al., 2021). Supplier-to-manufacturer integration is extremely poor, with 80 percent of suppliers handling orders via informal contact through phone, fax, and e-mail (Chaziza, 2020). Nearly half of manufacturers have a purchase order lead time of more than 30 days, according to the Retail Operations Benchmarking and Excellence Survey, 2015. Given the current economic and competitive climate.

Despite the strong connection between SCMP and manufacturing, the effect of SCMPs on firm performance has not been exhaustively studied, with a few exceptions, especially in developing countries like Kenya (Barnes & Lea-Greenwood, 2006). As a result, the study's aim is to evaluate the relationship between SCMPs and firm performance in the context of the tea industry in Kenya, a developing nation. The effect of SCMPs on strategic supplier relationships, lean practices, and materials management is being investigated.

Tea is globally consumed and is among the most popular and lowest cost beverages, next only to water. It is consumed by a wide range of age groups at all levels of society. Tea varieties are grown in Africa, North America, the Near East, and especially the Asian region, with a reputation in the international markets for high quality (Hein & Tarassow, 2009). Asia specifically enjoys a big market share in the world because of the high quality of tea produced.

In Africa, the main producers of tea are Kenya, Burundi, Malawi, Rwanda, Tanzania, Uganda, and Zimbabwe, among others (Ngatia, 2013). In Kenya, tea factory managers have the responsibility of buying raw tea leaves from farmers who are in tea growing zones in Kenya (Gikunju et al., 2018). Tea leaves are highly perishable and they face a number of challenges in ensuring that they adopt appropriate Supply Chain Management Practices that can ensure value to the end user and profitability to the processor. Due to adoption and different levels of supply chain practices, processing firms in different parts of the country post

different profit margins. For example, tea firms in Nandi County reward their farmers with lower bonuses as compared to tea firms in the central region. Also, different tea firms within Nandi County still buy tea leaves at different prices. This poses the question of whether the differing profit margins are associated with supply chain practices.

According to Gikunju et al (2018), this also applies to tea processing plants as firms with supply chains that can improve performance. As market shares become more sophisticated and competitive, a wide range of tea products continue to be developed through product and process development for added value, necessitating proper inventory management practices among companies that can deliver the product to the market in a convenient manner (Hein & Tarassow, 2009). Though current literature gives a clear understanding of the link between SCM practices and performance, there is a lack of empirical evidence on the relationship between high-performers and best Supply Chain Management Practices, and which SCMPs enhance firms' performance. Managers and the tea industry players in the North Rift region should seek to identify the best SCMPs, on which they should focus more to enhance firm performance.

Statement of the Problem

The predominant goal of supply chain management is to deliver products to end users. Leading organizations recognize the importance of the customer in the supply chain because the customer has a significant impact on the organization's performance. In order to stay ahead of competitors, an organization must implement good Supply Chain Management Practices in order to ensure efficiency and effectiveness (Sukati et al., 2020; Sun & Zhang, 2021).

The tea sector in Kenya has been in a crisis for the past decade since production capacity has not kept pace with profitability owing to supply and demand implications. Tea prices are increasing in the short term, but when looking at the long term performance of the tea sector in terms of inflation in real terms, tea prices have decreased to around half of what farmers received five decades ago (Gikunju et al., 2018). Furthermore, tea factories in the north rift have been trying to survive due to the high cost of labor, farm inputs, and raw materials, while at the same time coping with the competition. However, some of the tea firms in the central region are quite doing well, evident by the annual bonuses and tea earnings of the farmers. "Could the difference be attributed to supply chain management practices?"

Although there have been scholarly attempts to examine the strategies that can be employed to improve performance in the tea industry, the existing literature does not give a clear indication of whether materials management, lean practices, and strategic supply partnerships play a role in finding solutions and improving organizational performance in terms of decreased cost of production, efficiency and profitability. Hence the current need for the current study.

Purpose of the Study

To evaluate the effect of supply chain management practices on organizational performance of tea industry in the North Rift Valley, Kenya.

Specific Objective

1. To identify supply chain management practices adopted by firms in the tea industry in North Rift Valley Kenya.
2. To establish the level of performance of tea firms in North Rift Valley Kenya.
3. To find out if there is a significant relationship between SCM practices and performance in the tea industry in North Rift Valley, Kenya.

4. To give recommendations on how to improve the levels of supply chain management practices of tea industry in the North Rift Valley, Kenya.

Research Questions

1. What supply chain management practices are adopted by tea firms in the North Rift Valley Kenya?
2. What is the level of performance of the tea industry in the North Rift Valley, Kenya?
3. Is there a statistically significant relationship between SCM practices and performance?

Hypothesis

1. There is no significant relationship between supply chain management practices and organizational performance in the tea firms located in the North Rift Valley region, Kenya with regards to;
2. Strategic supply partnerships
3. Lean practices
4. material management practices.

LITERATURE REVIEW

Introduction

Larson & Rogers, 1998 defined SCM as “the coordination of activities, within and between vertically linked firms, for the purpose of serving end customers at a profit.” SCMPs is a set of practices that integrate suppliers, manufacturers, distributors and customers to improve supply chain performance as well as organizational performance. It is recognized that SCM has firm-level consequences, it is necessary to measure the effect of supply chain management practices on organizational performance (Mathur et al., 2018; Ngatia, 2013). Challenges exist in terms of identifying appropriate measures for the analysis of the supply chain practices. Past studies developed a supply chain management construct which focuses on buyer-supplier relationship by reducing the supplier base, developing long-term relationship with the suppliers, continuous communication and organizing cross-functional teams and supplier involvement in planning and forecasting (Loice, 2015). Thereafter, there has been consistent interest in supply chain management construct and its relationship with organizational performance.

Chen and Paulraj (2004) developed and validated a measurement instrument for studying supply chain management practices with six dimensions, that is, strategic supplier partnership, customer relationship, information quality, internal lean practices and postponement. Gandhi et al (2017) examined the relationship between various supply chain management practices comprising supplier strategic partnership, customer relationship, information quality, postponement, agreed vision and goals, risk and reward sharing and supply chain practices. Gopal et al (2019) identified supply chain practices like use of technology, supply chain speed, customer satisfaction, supply chain integration and material management, which have an impact on organizational performance. Didonet and Díaz (2012) listed supply chain management practices such as customer and supplier management, supply chain features, communication and speed, lean practices, integration and customer service management, quality and service, distribution and design effectiveness. Kamble et al (2016) identified SCMPs like customer relationship, strategic supplier partnership, IS, information quality and lean retailing practices, which have significant direct positive impact on supply chain profitability and a firm’s profitability.

Gawankar et al (2017) listed that supply chain management practices like strategic supplier partnership, customer relationship, information technology, IS and supply chain integration have an impact on innovation performance and organizational performance. Chahal, (2012) investigate the impact of different lean practices including supplier development, supplier feedback, just in time (JIT) supply from supplier, customer involvement, flow, statistical process control, total productive maintenance (TPM), setup

reduction, employee involvement and customer participation on operational performance parameters such as productivity, quality, cost, delivery, safety, morale and financial performance. The study discovered and validated that lean manufacturing implementation has positive impact on organizational performance of the Indian industries. The results conclude that effective implementation of lean manufacturing is very much helpful in contributing factor for realization of organizational performance improvement.

However, it is noticeable that there are fewer studies in a developing country like Kenya as compared to the studies in developed countries. Furthermore, Kenya's tea sector is in flux with the continuous growth of organized processing formats (Gandhi et al., 2017). This warrants research into the ever-changing processing scenarios in a developing country to understand the supply chain management practices and its impact on the performance of the growing tea industries. We discuss in detail, these selected three supply chain management practices and its impact on organizational performance in the next section and propose the conceptual framework with the help of existing literature as given.

Relationship Between Variables

Relationship Between Strategic Supplier Relationship and Organizational Performance.

When successful relationships are built with suppliers, both parties benefit from reductions in costs and risk. Cost benefits arise because businesses which know each other well can hone their mutual processes to work more efficiently, and because strong relationships tend to bring direct benefits such as preferential pricing (Bosibori, 2014; Gatimbu et al., 2018; Muthuri, 2014; Nimeh et al., 2018; Nyangweso, 2013) Risks is lowered as continuous, repeat activity between two parties has intrinsic stability in the form of supply chain consolidation, which minimizes complexity and the risk of recurrence by concentrating on a limited number of trustworthy suppliers. Investing in long-term partnerships substitutes cost inputs with relation components, from either the additional costs of always hunting for new suppliers in the search for greater value to the logistical costs of a large number of suppliers (Agusa & Hassan, 2008; Gatimbu et al., 2018; Tarasovich et al., 2011). Efficiency gains from simpler supply chains reduce waste and fault potential losses, but strong supplier relations also make operations more efficient. (Nimeh et al., 2018).

Information sharing refers to a company's ability to effectively and efficiently share information with supply chain partners (Achieng, 2011; Choon, 2011; Mathur et al., 2018). One of the most critical capabilities of the supply chain process is effective information sharing. One of the most crucial instruments for developing an integrated and coordinated supply chain is information exchange. Information should be interoperable, which means that one system can communicate with another (Gandhi et al., 2017; Gorane & Kant, 2017; Muthuri, 2014). According to Kurniawan et al (2017) Kurniawan et al., 2017, the technical wave of the internet and e-commerce provides a new chance to construct a smart, integrated supply chain.

Organizations are said to be operating in a turbulent and hyper competitive environment, and it is their desire to continue to operate successfully by creating and delivering superior value to their customers while also learning how to adapt to a continuous and dynamic business environment. Strategic management is therefore a must as it involves developing and formulating strategies to meet competition and ensure long term survival and performance.

Relationship Between Lean Practices and Organization Performance

Production companies that operate in fast-changing, hypercompetitive sectors have adopted a quality management approach. Lean practices can be considered as a philosophy, a work culture, a technique, a management concept, a value, a methodology that improves all the processes at each level of an organization (Mathur et al., 2018). According to Mathur et al (2018) lean practices directly link upstream and downstream flow of products, services and information that reduce cost by reducing wastage by providing right quantity of right product at right time according to the need of customer. Lean principles

include a set of strategies and tools with the aim of reducing costs, both internally and externally to increase customer satisfaction through value creation in its products and services (Nimeh et al., 2018).

When we talk of lean organizations, we are looking into three lean categories, purpose, people and process (Rutto, 2016). Lean management is a method of leading an organization that is based on the notion of continuous quality improvement, a long-term approach to work that deliberately attempts to enhance efficiency and quality through tiny, gradual improvements in operations.

Lean manufacturing boosts production while increasing efficiency and reducing waste. As a result, the advantages are numerous. Reduced cycle time: By streamlining production methods, organizations can easily adjust to supply variations and other market factors, reducing the number delays and shorter lead times. When certain operational process enhancements are implemented, lean can result in significant performance increases, implying that lean practices are vital components of strategic management.

Relationship Between Materials Management and Organizational Performance

Materials management is responsible for determining the amount of material to be deployed at each stocking location across the supply chain, establishing material replenishment plans, determining inventory levels to hold for each type of inventory, and communicating information regarding material needs throughout the extended supply chain (Keitany et al., 2014). Inventory control improves profitability by reducing costs involving storage and handling of materials (Mathur et al., 2018).

Inventory control is a means by which materials of the right quality and quantity are made available as when needed with due regards to the economy of shortages, ordering cost, purchase price and working capital. Inventory control determines the extent of stock holding of materials (Gandhi et al., 2017; Nadler et al., 1982; Nyangweso, 2013; Sukati et al., 2020; Truong et al., 2017). It equally makes it possible for materials manager to carry out accurate and efficient operation of the manufacturing organization through decoupling of individual segment of the total operation and it entails the process of assessing of stock into the store house and the issue of stock (Achieng, 2011; Mathur et al., 2018; Puravankara, 2007).

Comparatively, shortage of materials can lead to disruption of products for sales; customer relations are hurt, while machines and equipment becomes underutilized (Bosibori, 2014; Sun & Zhang, 2021). Therefore, a company can only realize substantial savings by using a rational procedure for inventory control. This includes a careful handling of the stock and maintaining a perfect control over them (Bosibori, 2014). Handling of material is one of the events performed by materials managers and can be an efficient tool for saving cost and holding up profit. Storage of materials hinged on the nature and how they are used in the manufacturing procedures.

Strategic management is an important aspect of every firm. As a result, strategic management comprises assessing organizational objectives, the firm's strategy and future plans. Looking at Sun and Zhang, (2021) assertion that shortage of materials can lead to disruption of products for sales while machines become underutilized, this clearly demonstrates that, in order to avoid excessive costs, material management should be given top attention in enterprises. Kenyan processing and manufacturing firms, particularly those in the tea industry, are facing intense competition in the existing markets, necessitating the development of better methods and strategies for managing material resources, thereby minimize waste in the value chain and improving organizational performance.

METHODOLOGY

Introduction

The methods which were used to conduct the study are presented in this part. This part also highlights the

type and source of data, the target population and sampling methods. It also describes the way in which data was collected and how it was analyzed. The methodology which was most fit was used as a guideline in the gathering of information and ultimately, it's processing. Validity and reliability of the constructs are also discussed.

Research Design

In this study, quantitative research method was used. Descriptive mixed research design was utilized because descriptive research can be used to investigate the background of a research problem and get the required information needed to carry out further research. It is used in multiple ways by different organizations, and especially when getting the required information about their target audience. A descriptive research design describes the characteristics of a given population. Weaving et al., 2019 explained that the advantage of this design is that the researcher is able to use various forms of data as well as incorporating human experience.

Population and Sampling

The population of this study will consist of the administrative staff, operation managers, top managers and departmental heads of tea firms in North Rift Valley region.

Sampling

A census technique was applied to the tea factories under study; hence, all the tea factories in the North Rift Valley region was selected for investigation. Purposive sampling technique was used to select the respondents. Stratified sampling technique was applied, where all the department in the organization was purposively put into several clusters, so that each level in the organizational structure was represented. The departments was Stratified into the following units: operations/ factory, field department, out growers, human resource and administration, finance, logistics and administration. Simple random sampling was applied when selecting the respondents in various strata. This is because the questionnaires were administered based on the availability of the respondents in the said units.

Statistical Treatment of Data

Averages and cross tabulations of both independent and dependent constructs was tabulated then a correlational analysis was used to determine the level of association between the variables. The strength of the relationship between the dependent variable and the independent variable will then be measured. The outcome was positive, negative or zero/weak correlation between the variables.

Data Analysis

Computer program SPSS version 25.0 was used to analyze the data in this study. SPSS is a computer package that can be used in descriptive statistics to generate frequencies tables, plots and graphs. The data collected shall be presented using statistical measures pie charts, bar graphs, frequency tables and graphical presentations. The SPSS is also handy in inferential statistics hence shall also be utilized in getting the correlations between variables. Multiple linear regression was used to analyze data with the help of SPSS statistics where assumptions are checked logically.

DISCUSSION OF THE FINDINGS

Supply Chain Practices

The table 1below provides descriptive data for various supply chain techniques. The data provides a

summary level for each supply chain practice, and each practice reflects a distinct part of the supply chain. The descriptive statistics show mean values for several supply chain practices.

Table 1. Supply Chain Practices

	N	Mean	Std. Deviation
strategic partnership	71	1.7465	.34052
lean practices	71	1.7592	.33234
materials management	71	1.7408	.35680
Valid N (listwise)	71		

The variable strategic partnership has a sample size of 71, the mean value of this variable was 1.7465 indicating that on average the respondents reported a high level of strategic partnership the standard deviation of 0.34052 suggest that there was low variability in the response but overall, the respondents rating was relatively close to the mean

Similarly, the variable lean practices have a sample size of 71, the mean value was 1.7592 indicating that on average the respondents reported a high level of engagement in lean practices the standard deviation of 0.33234 suggest that there was some variability in the response but majority of respondents reported close to the mean

For the variable materials management the sample size was also 71 the mean value was 1.7408 indicating that on average the respondents reported to a high level of materials management in the supply chain, the standard deviation is 0.35680 suggest that there was some variability in the responses but majority of the respondents reported writing close to the mean. In summary based on the provided data the respondents reported high levels of strategic partnership engagement in lean practices and materials management the variability and response varied across the variables but majority of the respondents' report was close to the mean.

The data provided by respondents in the tea industry in Kenya reported high levels of strategic supplier partnership, engagement in lean practices, and materials management in the supply chain. These findings indicate that company+es in the tea industry recognize the importance of collaborative partnerships, lean principles and effective materials management in optimizing their supply chain performance. The relatively consistent ratings and low variability among respondents suggest a shared understanding and adoption of this supply chain management practices within the industry.

The findings indicate that the tea industry in the North Rift Valley Kenya has embraced fundamental strategic supplier partnership and materials management as key components of the supply chain management strategies.

The findings are consistent with findings of Mwangi, (2016), which found that tea factories use supply chain management practices, and most frequently techniques which include good customer relationship management, outsourcing non-core products and activities, lowering supply chain cycle times, and supplier development. Koech, (2019) also discovered that tea firms in Kenya's North Rift Valley use strategic supplier partnerships, which had a substantial beneficial influence on supply chain performance.

Strategic partnership refers to the collaboration and close relationship between different stakeholders in the supply chain, such as tea producers, suppliers, distributors and retailers. The high mean value suggests that the tea industry firms in the North Rift Valley have recognized the importance of building strong partnerships to enhance their supply chain performance, the results are in agreement with the findings of (Mathur et al., 2018) who also obtained the same results in the health sector.

Lean practices focus on eliminating risk and optimizing supply process, was reported to be highly adopted, the findings displayed similarities of adaption of lean practices with other studies by (Dey et al., 2020; Mathur et al., 2018; Nimeh et al., 2018). This indicates that the industry firms' argumentum techniques such as continuous improvement risk reduction and standardized process in the supply chain are exceptionally effective and efficient.

Materials management which involved effective control and management of inventory and materials throughout the supply chain was also reported to be highly practical, Keitany et al., (2014) also found in their study that materials management is highly prioritised in Kenya Cooperative Creameries as a total concept. This suggests that the industry firms are emphasizing on the management of raw materials, procurement, storage and distribution to ensure smooth and efficient operations.

Organizational Performance

The descriptive statistics for the variable's efficiency cost production and profitability are presented in the table below these statistics provide the information about the sample size mean and standard deviation for each variable

Table 2. Organizational Performance

	N	Mean	Std. Deviation
Efficiency	71	1.7972	.35856
cost production	71	1.7662	.44335
Profitability	71	1.8113	.41801

Table 2 has study findings for the variable Organizational performance: The respondents on average reported a relatively high level of organizational performance between the scores of 1.7915 the standard deviation of 0.32 346 suggest that there is variability in the responses but overall, the ratings were relatively close to the mean. Strategic partnership: the respondents on average reported a high level of engagement in strategic partnership with the mean score of 1.7465. This indicates that firms in the North Rift Valley are passive to prioritize and invest in building strong partnerships with stakeholders. The standard deviations of 4052 suggest that there is some variability in responses but the majority of the respondents reported that is close to the mean.

Overall, the descriptive Statistics shed light on how tea companies in Kenya's North Rift Valley are assessed to be performing. The finding is consistent with the findings of Chikamai, (2021) who found that tea firms are highly performing as a results of average production costs and higher revenue. Ngatia, (2013) also found in his study that KTDA managed firms had high performance. However, Gatimbu et al., (2018)found disparity in terms of profitability of small scale processing tea firms in Kenya, which ranged from 0.9% to 1.6% with a mean 1.4%. The results imply that the tea companies are somewhat effective, profitable, and diligent about managing their production costs. The disparity in responses for cost production, however, suggests that there may be some diversity in how the region's tea companies perceive or handle costs.

Relationship between variables

The following data explains objective three, which is to find out the relationship between Supply Chain Practices and Organizational Performance in the tea industry in North Rift Valley Kenya.

Inferential Statistics

To assess the extent and the intensity of relationship between the variables, the study used Inferential

Statistics: correlation and recession analysis.

Data Collection

The study used primary data. Primary data was gathered through structured questionnaires. The questionnaire will comprise of close-ended questions for bio data and the close-ended questions will capture the quantitative data. The questionnaire was divided into three sections. The first section will consist of demographics designed to determine characteristics of the respondent. The second section was devoted to the effects of Supply Chain Practices on Organizational Performance while the third section was focused on the Performance of the tea firms. The questionnaires were self-administered using the drop and pick-later approach as this will give the respondents enough time to respond to the questions appropriately. The target respondents for this study will include, the administrative staff and management staff.

Correlation Analysis

Correlation analysis presents the nature and strength of relationship amongst the study variables. The following table for Correlation, shows the relationship between Supply Chain Practices and performance in the tea industry in North Rift Valley Kenya.

Table 3. Correlations

		organizational performance	strategic partnership	lean practices	materials management
Pearson Correlation	organizational performance	1.000	.379	.691	.629
	strategic partnership	.379	1.000	.540	.480
	lean practices	.691	.540	1.000	.653
	materials management	.629	.480	.653	1.000
Sig. (1-tailed)	organizational performance	.	.001	.000	.000
	strategic partnership	.001	.	.000	.000
	lean practices	.000	.000	.	.000
	materials management	.000	.000	.000	.

The correlation table 13 is providing information about the correlation coefficient between the variable's organizational performance, materials management, strategies partnership and lean practices. Pearson correlation between the organizational performance and materials management is 0.629 indicating moderately strong positive correlation between organizational performance and strategic supplier partnership. Pearson correlation between the organizational performance and strategic supplier partnership is 0.379 indicating a relatively weaker positive correlation between organizational performance and strategic supplier partnership. Pearson correlation between the organizational performance and lean practices is 0.691 indicating a moderately strong positive correlation in between organizational performance and lean practices.

Two-tailed represents the significance level, p value associated with correlation coefficients indicates the probability of obtaining the observed correlation coefficients by chance alone in this case the p values are less than 0.001 (0.000) indicating that the correlations are statistically significant and 0.001 level. Since the p values shows that there is a positive statistically significant relationship of performance and each of the other variables: materials management, strategic partnership and lean practices, therefore we can conclude that there exists a relationship between SCM practices and performance in the tea industry in North Rift Valley, Kenya.

Diagnostic tests

The study conducted tests for the assumptions made by parametric tests in which linear regression is part of. these are linearity, homogeneity of variance Multicollinearity tests and Test for Normality.

Multicollinearity

According to numerous academic works, the basic presumptions of the linear regression model should be verified before executing the model (Mwaiseje & Mwagike, 2019; Ngahu & Bula, 2015; Weaving et al., 2019). The researcher verified the multicollinearity and normality tests. The researcher looked at two things in order to evaluate this presumption. The first was to see if the predictors were closely associated by looking at a correlation table. The purpose of the test for multicollinearity, according to Mwaiseje and Mwagike, (2019) is to make sure that the independent variables are not connected to one another.

Table 4. Multi-Collinearity Results

Model	Tolerance	VIF
(Constant)		
1 supplier management	.614	1.629
quality	.625	1.600
cycle time	.645	1.551
lead-time	.540	1.852
inventory management	.676	1.480
Dependent Variable: Information sharing		

Table 14 has study findings for the multi-collinearity. Multicollinearity was determined by the level of Tolerance, and variance inflation factor (FIV). Multicollinearity is associated with FIV above 5 and tolerance below 0.2. (Matuga, 2022). From the table above, the findings show that the Tolerance of all the independent variables were above 0.2. while the VIFs were all below 5, implying that there was no presence of multicollinearity in the data. Hence the variables in the study were therefore accepted for further analysis.

Test for Normality

Table 15 has study findings for the test for normality. Normality determines if the data distribution resembles that of a normal distribution. This is required to decide whether parametric or non-parametric testing should be used(Matuga, 2022).

Table 5. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Information sharing	.210	71	.000	.880	71	.000
supplier management	.176	71	.000	.940	71	.002
Quality	.159	71	.000	.929	71	.001
cycle time	.174	71	.000	.920	71	.000
lead-time	.135	71	.003	.940	71	.002
inventory management	.172	71	.000	.934	71	.001
Efficiency	.179	71	.000	.941	71	.002
cost production	.152	71	.000	.939	71	.002
Profitability	.213	71	.000	.862	71	.000
a. Lilliefors Significance Correction						

The analytical results indicated that the research variables did not vary substantially from normal distribution since non from the Asymp. Sig. (p-value) was more than 0.003, which was less than the $p > 0.05$ threshold. As a result, the other statistical tests and procedures based on the normality of these variables would be applicable.

Linear Regression model

The table 6 below provides descriptive statistics for the mean and standard deviation values for the four variables: organizational performance, strategic partnership, lean practices and materials management the sample size for a variable 71.

Regression Descriptive Statistics

Table 6. Regression Descriptive Statistics

	Mean	Std. Deviation	N
organizational performance	1.7915	.32346	71
strategic partnership	1.7465	.34052	71
lean practices	1.7592	.33234	71
materials management	1.7408	.35680	71

Organizational performance: The respondents on average reported a relatively high level of organizational performance between the scores of 1.7915 the standard deviation of 0.32 346 suggest that there is variability in the responses but overall, the ratings were relatively close to the mean.

Strategic partnership: the respondents on average reported a high level of engagement in strategic partnership with the mean score of 1.7465. This indicates that firms in the North Rift Valley are passive to prioritize and invest in building strong partnerships with stakeholders. The standard deviations of 0.3 4052 suggest that there is some variability in responses but the majority of the respondents reported that is close to the mean.

Lean practices: respondents reported a high level of engagement in Lean practices with a mean score of 1.7592. This indicates that firms have implemented lean techniques to improve efficiency and eliminate waste. Number division 0.33 234 and get some variability in the responses but majority of the respondents reported ratings close to the mean.

Materials management: The respondents on average reported high levels of materials management with mean score of 1.7408. This indicates that the firms in the North Rift Valley place importance on efficiency managing their materials through the supply chain. The standard deviation of 0.3 568 suggests some variability in the responses but the majority of the respondents' reported ratings close to the mean.

Model Summary

Table 7. Model Summary

Model	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.535	.514	.22548	.535	25.683	3	67	.000

- a. Predictors: (Constant), materials management, strategic partnership, lean practices
- b. Dependent Variable: organizational performance

Table 17. provides study results for Model Summary. R Square: In this case, the R Square value is 0.535, indicating that approximately 53.5% of the variance in organizational performance can be explained by the predictor variables. The predictor variables in this case are materials management, strategic partnership, lean practices.

Analysis of Variance (ANOVA)

The provided table presents the results of an analysis of variance for the regression model predicting the dependent variable organizational performance; the model includes three predictors materials management strategic partnership lean practices. The analysis of the variance table provides valuable information about the contribution of each component to the overall model fit and the significance of the predictors.

Table 8. Analysis Of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.917	3	1.306	25.683	.000 ^b
	Residual	3.406	67	.051		
	Total	7.324	70			
a. Dependent Variable: organizational performance						
b. Predictors: (Constant), materials management, strategic partnership, lean practices						

Analysis of variance

The findings indicated that there was a significant relationship at the p less than the $p < 0.001$ level, $F(3,67) = 25.683$. This therefore shows that the regression model significantly predicts the outcome variable, and hence the model was fit to predict whether there is significant relationship between supply chain management practices and organizational performance in the tea farms located in the North Rift Valley region Kenya.

Coefficients

Regression coefficient were tested for significance using t statistics at 5% level of significance and conclusion drawn. The beta coefficients indicated the directions of the relationship between supply chain management practices and organizational performance in the farms located in the North Rift Valley region, Kenya with regards to; Strategic Partnership, Lean Practices, and Materials Management Practices. The p-value was used to assess whether the hypothesis will be rejected or not.

Table 9. Coefficients Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.497	.166		2.983	.004	.164	.829
	strategic partnership	-.047	.096	-.050	-.494	.623	-.239	.144
	lean practices	.495	.114	.508	4.347	.000	.268	.722
	materials management	.291	.102	.321	2.863	.006	.088	.495
a. Dependent Variable: organizational performance								

Analysis and interpretation

The predictive model

Y = Organizational Performance

x_1 = Strategic Partnership

x_2 = Lean Practices

x_3 = Materials Management

Strategic Partnership

The coefficients table 17 above shows the strategic partnership has no significant relationship with organizational performance in the tea industry in North Rift Valley Kenya. The regression coefficients of strategic partnership is statistically not significant because it is higher than 0.05 level of significance ($0.623 < 0.05$). Therefore, the null hypothesis was accepted. The coefficients of strategic partnership (-0.047) indicates that for every one-unit change in strategic partnership there is a decrease in performance (0.047) unit decrease in performance. This is further elaborated by the regression coefficients of strategic partnership which is greater than 0.05 ($0.623, < 0.05$). It therefore indicates that strategic partnership as measured by the information sharing and supplier management does not necessary contribute to increase performance.

Lean Practices

The coefficients table 17 above shows that lean practices have significant relationship with organizational performance in the tea industry in North Rift Valley Kenya. The coefficient of Lean Practices (.495) indicates that for every one-unit change in lean practices, there is an increase in performance .495 unit increase in performance this suggest the adopting lean practices by managing quality and cycle time will increase the performance. Further, it can be observed that the regression coefficients of lean practices are the statistically significant ($0.00 < 0.05$) and therefore the null hypothesis is rejected.

Materials Management

The coefficient table 17 above shows that materials management have significant relationship with organizational performance in the tea industry in North Rift Valley Kenya. The coefficient of materials management (.291) indicates that for every one-unit change in materials management there is an increase in performance 0.291 unit increase in performance. This suggest that shortening lead time across the supply chain and necessitating proper inventory management practices will increase the performance. Further, it can be observed that regression coefficients of materials management are statistically significant at 0.006 which is lower than 0.05 and therefore the null hypothesis is rejected.

DISCUSSION OF THE FINDINGS AND CONCLUSION

The regression analysis from the study shows the coefficients of the independent variables (strategic partnership, lean practices, and materials management) and their relationship with the dependent variable (organizational performance). The results show that both lean practices and materials management have a statistically significant positive relationship with organizational performance. This means that implementing these practices can lead to an increase in performance by managing quality, reducing lead times, and improving inventory management practices across the supply chain. However, the strategic partnership variable has a negative relationship with organizational performance, but it is not statistically significant. Therefore, organizations in the tea industry and similar sectors should prioritize lean practices and materials management to remain competitive in the market.

The findings are consistent with the findings of other scholars (Debala et al., 2022; Mbugi & Lutego, 2022; Pakfard et al., 2022; Supply, 2020; Yuliando et al., 2015) who agree that effective supply chain management practices are critical for the success of firms in the tea industry. By adopting best practices such as strategic supplier partnerships, lean practices, and effective materials management, firms can improve supply chain performance, reduce costs, and enhance their competitiveness in the market. Another study by Kibet, (2016) examined the impact of lean practices on organizational performance in the tea industry in Kenya. The study found that the adoption of lean practices such as continuous improvement, waste reduction, and employee involvement had a significant positive impact on organizational performance, including increased productivity, reduced costs, and improved quality. (Farah, 2015) according to his study on lean supply chain management practices on organizational performance in the public water sector in Kenya, also that lean practices directly influence organizational performance.

Scholarly research suggests that effective materials management practices can significantly improve organizational performance in various industries, including the tea industry in North Rift Valley Kenya (Pakfard et al., 2022). In their study, (Pakfard et al., 2022) found significant positive relationships between all eight materials management practices constructs and firm performance. Furthermore, a research study on the Benue Brewery Industry in Nigeria found that effective material management is essential for the smooth flow of necessary materials needed for an organization's day-to-day activities (Mbugi & Lutego, 2022).

According to recent research, strategic supplier partnerships have become increasingly important in the literature on Supply Chain Management as they can create numerous valuable results, including improving financial performance and reducing negative effects (Al-shuaibi, 2016). The study analyzed data from 401 Saudi chemical and petrochemical firms and found that strategic supplier partnership has a significant direct and indirect effect on a firm's performance through the mediation of long-term relationships. Long-term relationships with suppliers are an important intervening variable behind the success of strategic supplier partnerships (Al-shuaibi, 2016). Additionally, there are examples of successful strategic supply partnerships in the industry (Bosibori, 2014; Gorane & Kant, 2017; Supply, 2020).

Based on the findings, the study recommended that the tea firms in the North Rift Valley region prioritize the implementation of lean practices and materials management to improve organizational performance. This can be achieved through training and education of employees on lean techniques and inventory management practices. In addition, the company should invest in technology such as supply chain management software to improve materials management and reduce lead time. It also recommended the tea companies to review their current strategic partnerships and explore new partnerships that align with their business objectives Pembroke overall performance. By blending these recommendations tea companies in the North Rift Valley Kenya can improve their supply chain management practices and ultimately and enhance to their organizational performance.

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CONCLUSION

Based on the findings it can stated that strategic partnership, lean practices, and materials management are highly appreciated and widely adopted by tea firms investigated. This means that tea firms in North Rift

Valley, Kenya recognize and value strategic partnerships, lean practices, and materials management as key components of effective supply chain management, and that improving these practices can lead to increased organizational performance. The widespread use of these supply chain management strategies demonstrates an industry-wide recognition and dedication to improving supply chain performance. These findings contribute to the understanding of successful supply chain management techniques adapted to the region's tea sector.

The findings from the study on the performance of tea firms in the North Rift Valley, Kenya, indicate that the tea companies in the region are performing well in terms of efficiency and profitability. The high average values for efficiency and profitability demonstrate the tea firms' commitment to streamlining their processes and achieving positive financial outcomes. While there was no significant relationship found between strategic partnership and performance, the study did find significant positive relationships between lean practices and material management with organizational performance. These findings suggest that tea firms in the region should focus on improving their lean practices and materials management to optimize their supply chain performance and improve their overall organizational performance.

RESEARCH RECOMMENDATIONS

The objective four the study was to give recommendation on how to improve the level of supply chain management practices based on the research findings. Based on the findings of the research, tea firms in the North Rift Valley Kenya, reported high levels of supply chain management practices such as lean practices materials management and strategic partnership. The study therefore recommends that the firms strengthen collaborative and strategic partnership.

organizations are also encouraged to invest in employee training and development programs to build expertise in Lean methodology and techniques. This also can be done with implementing regular performance monitoring measurement system to track the effectiveness of lean practices and identify areas for improvement.

The study also recommends further strengthening of materials management. this can be done by preventing robust inventory management systems to ensure optimal levels of stock and minimal stockouts in inventory. Furthermore, tea industries can develop efficient processes for demand forecasting and procurement to minimize lead time and ensure timely availability of raw materials. it is also suggested that clear guidelines could be established as well as procedures for materials handling, storage, and transport to reduce waste and improve overall efficiency.

Based on the research findings, the study also recommends tea industries to foster a culture of performance measurement and improvement; whereby key performance indicators that are relevant to supply chain practices, on-time delivery, customer satisfaction and cost reduction are defined. Also regularly measure and monitor this key performance indicators to track performance and identify areas of improvement while at the same time, establishing a system for feedback and continuous learning, where lessons learnt from previous experience are used to drive process improvements. Another recommendation suggested by the study is to encourage knowledge sharing and learning. This would promote cross-functional collaboration and knowledge sharing among different departments within the organization to enhance supply chain visibility and understanding.

Organizations are also encouraged to explore opportunities for benchmarking and knowledge exchange with other tea farms or industry associations to gain insights into best practices and identify areas for improvement. Finally, the study recommends that tea industries to embrace technology.

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