

# EFFECT OF INVENTORY COST MANAGEMENT ON THE FINANCIAL PERFORMANCE OF KAPKOROS TEA FACTORY IN BOMET COUNTY, KENYA

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**Abstract:** Building internal capacity, conducting energy audits, training energy management teams, facilitation of new technology in tea factories has been some of the several interventions made to decrease the cost of production and ensure more money in the pockets of tea growers. However, a decline in tea prices, bonuses and increase in cost of production proven to be a challenge. Therefore, this study investigated the effect of inventory cost management on the financial performance of Kapkoros Tea Factory in Bomet County, Kenya. The study adopted descriptive research design. The target population was Kapkoros Tea Factory in Bomet County, Kenya. The total number of respondents was 350 respondents who were employees in the marketing, production, personnel and finance departments of the factory. Respondents in this study were divided into groups according to their industry. Respondents were selected using stratified method and simple random method respectively. The sample size was 187 respondents. The data collection tool for this study was semi-structured questionnaire. A pilot study was conducted in 18 respondents. Assessment of validity of research tools was done using content validity. Cronbach's alpha test was used to measure reliability. Data analysis using descriptive and inferential analysis methods was done. The study found that inventory cost management, had a significant positive impact on the financial performance of Kapkoros tea factory. Regarding inventory cost management, the study concluded that inventory cost management increases accuracy by ensuring that factories have optimal inventory to fulfill orders. The study recommends that factories should always ensure that they can easily track the status of raw materials and finished goods in the supply chain.

**Keywords:** Inventory Cost Management, Financial performance.

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## 1. INTRODUCTION

The success of a business depends on knowing how to maintain the financial stability of the organization because it is an instrument for evaluating an organization's performance and establishing its level of profitability (Zietlow, Hankin, Seidner & O'Brien, 2018). Dutton (2020) observe that maintaining an organization's financial health improves working capital, enables the business to invest in new products and marketing assets, ensures payments are made on time, and keeps the business functioning smoothly. Therefore, financial stability is essential for the organization's long-term survival.

In order to acquire or realize a financial or non-financial goal, the organization's overall organizational operation cannot abandon the goals of growth maximization and cost minimization (James & Luke, 2018). To improve a company's financial gain within a single fiscal year is the aim of profit maximization, according to Hamermesh (2019). Costs were continual in the quest of profit and had to be handled so that they did not result in losses, which would prevent the organization from operating indefinitely. As a result, cost minimization is the opponent of profit maximization. This implies, then, the basic principles of organizational cost management. Cost management enhances competitive advantage, which leads to improved

resource allocation, and it supports decision-making. Additionally, cost management be a crucial element of a business's overall management success. It makes it possible to estimate costs accurately before a process begins and can aid in forecasting future cost occurrence (Ellram & Stanley, 2018). Pandey (2020) argue that if a business has a cost management strategy in place, it may estimate future costs if it has data on both current and upcoming expenses. Therefore, managers will be so empowered to take actions that will advance the company's financial performance.

Cost management in the United Kingdom encompasses all aspects of financial management, including the sources, uses, and implications of money for decisions involving investments, production, marketing, or human resources, as well as the general effectiveness of the company (Gaughan, 2018). According to Myers and Brealey (2020), one of the key causes for which organizations in the United Kingdom fail due to low profitability is the absence of appropriate cost management methods in the early stages of a company. As a result, given the importance of cost management to the business, it is possible to draw the inference that the profitability level of the enterprise is determined by it.

Khumalo, Chasomeris, Munapo and Adeyeye (2019) observe that since 2000, the South African tea industry has been in decline which resulted in the closure of the majority of the tea plantations, leaving a small number of tea estates functioning on a tight budget and in unstable financial conditions, primarily supported by government funds. According to Bokwe (2021) South Africa's demand for tea is rising but domestic supply is drastically dropping due to the closure of tea farms mostly due to industry problems, creating a situation where imports are required. Due to this, the majority of the tea plantations were forced to close, leaving a small number of tea estates to continue operating with limited resources and unpredictable financial situations, mostly backed by government money.

For Kenya's overall economic and social development, the agriculture sector's growth and development are essential. As a key cash crop, tea has considerably benefitted the economy. However, high production costs and poor management have forced the tea sector to make difficult decisions, endangering its future (Namu, Kaimba, Muriithi and Nkari, 2018). Omosa, Muya, Omari and Momanyi (2022) observe that one of the biggest problems the Kenyan tea business has is the rising cost of manufacturing, particularly the high cost of labor. Many businesses today are faced with the simultaneous challenges of enhancing product and service quality while reducing corporate overhead expenses. Therefore, In order to increase performance in terms of annual returns, Kenyan tea manufacturers should continuously implementing cost-cutting measures to ensure that they keep processing costs low.

Financial performance is a broad indicator of a company's total financial competence in comparison to other companies over a certain time period. A company's financial performance, as determined by profitability and stock prices, is mirrored in how effectively and efficiently it uses its resources and grows its sales (Ismail, 2019). Profitability, according to Burca and Batrinca (2017) involves calculating the margin by which an organization's income exceeds its corresponding outlay. Profit, liquidity, and the wealth of the owners were among the metrics for financial performance that were advised.

Saliha and Abdessatar (2018) observe that a company's financial performance serves as a measure of how effectively it generates revenue from its core market assets. Investment and asset returns indicate the company's financial performance together with the market value, and accounting profits. According to Amacha and Dastane (2021) better financial performance is shown in how management uses company resources effectively and efficiently as evidenced by increases in sales, profits, and stock price. Therefore, the financial performance of businesses is directly impacted by well-organized control of different economic tools.

Assagaf and Ali (2017) observe that financial performance evaluation must take into account a variety of factors, assesses how well a company uses their money to generate profits. Net asset value, taxable earnings, and profit after tax and interest are some of the most often used measures of a corporation's financial performance. According to Batchimeg (2021) choosing a certain measure of performance in finance relies on the way it adequately meets the target set. Therefore, an organization's financial performance is its capability in utilizing available resources with the aim of increasing the wealth of its stakeholders and sustain its profits by increasing their strength on capital base by retaining their earnings.

The most crucial managerial tools are cost management techniques, which are seen as essential to raising revenue for manufacturing organizations to succeed (Govindarajan & Shank, 2018). Parker (2019) recognizes that a well-designed cost management system will improve product utility, cost, and quality. Manufacturing firms employ current cost-cutting measures in their day-to-day operations, which has a substantial impact on their financial outcomes. Therefore, cost management strategies are essential to business performance management since it affects every company's bottom line.

Shank (2019) observe that every logistic system relies heavily on inventory, which is why it must be planned, managed, and regulated in a manner that will assist in achieving the overarching objective of reducing costs to the barest minimum level of investment while ensuring the firm's customers' pleasure. Toktay, Wein and Zenios (2020) indicate that when an effective inventory management system is in place, the cost of inventory can be decreased. Therefore, by paying close attention to inventory, a company can increase shareholder value, satisfy customers, and do it at a lower cost, all of which will increase revenue and improve customer service.

Kapkoros tea factory began in 1977 in accordance with the Company Act, to serve then the small emerging small-scale farmers. The factory is situated in Bomet County in Sibaiyan location 15km away from Bomet town. It has satellite factories which are now full tea processing companies which include Tirgaga, Olenguruone and Motigo tea factory which became the 68th company to join KTDA (KTDA, 2018). The factory has processing capacity of about 30 million kilograms on average of tea per year with a combined annual tea production capacity of roughly 7 million kilos (KTDA, 2015). It has a catchment radius of 70kms which has led to the increase of tea production over 5 years thus introduction of 2 high-capacity CTC's and three driers to meet the demand. The board has adopted 5years replacement policy which will see improvement in leaf collection thus increase in efficiency (Bomet County, 2018).

## 2. STATEMENT OF THE PROBLEM

The government established Tea Board of Kenya (TBK) to regulate the tea industry. Several interventions have been made to salvage the cost of production and ensure more money in the pockets of tea growers by building internal capacity and conducting energy audit across Asia and Africa as well as training energy management teams in tea factories, facilitating new technology, thus improving data monitoring and using satellites and drones (ETP & GIZ, 2020). However, the tea industry in Kenya has been facing numerous challenges which include relying on traditional export market, limited value addition and high production cost. Kenya has lagged behind in adopting energy saving methods and efficient tea processing machines which promote efficiency and quality of tea being produced and government regulations on minimum wages thus making tea production in Kenya costly compared to other countries, this has made many tea growers to abandon tea growing and venture into other crop farming (KTDA, 2018)

Government have been subsidizing the tea production cost, but the sector has proven to be unsustainable since the cost of fuel, electricity and labour cost have doubled due to inflation (KTDA, 2020). The standard price per kilo of green leaf is Ksh.14 and the other payments are bonuses done after tea is sold annually, each factory pays its own tea growers differently depending on revenue generated and processing cost, in the financial year 2020/2021 some factories paid Ksh.30 and Ksh.7.00 (KTDA, 2020). In Kenya tea production sector has been facing increase in cost of production of tea thus leading to drop in bonuses (Kiai & Wambui, 2015). A decline in the bonus paid by Kapkoros tea factory has been experienced in spite the acquisition of two driers and other innovations, by a drop of Ksh 33.02 from Ksh 46.02 in 2012 to Ksh 13 in 2021.

## 3. LITERATURE REVIEW

### Theoretical Literature Review

Based on the idea of an integrated manufacturing process, Henry Ford developed the concept at the Venetian Arsenal in the 1450s. Lean inventory theory is an extension of just-in-time inventory management, and its idea is that companies should maintain only the minimum amount of inventory necessary to meet the needs of the production process (Edwin & Florence, 2015). Womack (1990) developed the theory of Lean Inventory based on maintaining low inventories throughout the organization. As with lean or reduced inventory systems, reducing inventory costs increases a company's profitability. Lean inventory theory seeks to reduce the cost of an organization's inventory system by making decisions that focus on production, storage and the entire supply chain (Egbunike, 2007).

According to Njeru (2016), the Economic Order Number (EOQ) assumption is the cornerstone of the Lean philosophy, which attempts to maximize inventory by determining the optimal amount of inventory for each order. According to this theory, project management has dynamic capabilities, as does the operating system used to track inventory levels and other inventory items that may require special attention. Holding extra inventory will negatively affect a firm's cash flow, and thrift theory helps firms gain competitive advantage in highly competitive environments, gain more market share, and increase profits (Lydia, 2016). Lean inventory theory was used to theoretically underpin the research topic. This decision was motivated by the need for a thorough approach to inventory management and the need to examine how inventory

management affects the organization's inventory cost management. In addition, it helps organizations improve the company's return on investment by reducing the inventory held by the company and the costs associated with it.

### Empirical Literature Review

Lwiki, Ojera, Mugenda and Wachira (2018) investigate the impact of inventory cost management strategies on the financial performance of sugar companies in Kenya. Between 2002 and 2007, we conducted a survey in each of the eight active sugar mills. Key informants in the organization are required to complete structured and semi-structured questionnaires to collect primary data. The secondary data for sugar statistics contains the annual report on economic activity, which is the source of the secondary data. Data were examined using descriptive statistics and correlation analysis. The study found a statistically significant relationship between the financial success of Kenyan sugar companies and their inventory cost management practices.

A study by Muhindo and Ruakihembo (2021) investigates the impact of inventory cost management on the financial performance of a private hospital using empirical data from western Uganda. The study surveyed 32 private hospitals in Western Uganda using a cross-sectional research design and empirical data collection methods. The study collected data using a closed-ended questionnaire, and the results were evaluated using basic linear regression. The results show that inventory cost control is an important predictor of financial success in private hospitals in western Uganda.

Mburugu (2020) investigates the impact of inventory cost management on the financial performance of commercial and service companies listed on the Nairobi Stock Exchange. In this variable study, they were analyzed using a descriptive cross-sectional design. The survey covered all 11 NSE-listed business and service companies. The results show that inventory cost management has statistically significantly improved the financial performance of NSE-listed commercial companies and service companies. The results of the study show that inventory cost management has a statistically significant positive relationship with return on equity and return on assets.

## 4. RESEARCH METHODOLOGY

The study adopted descriptive research design. The target population was Kapkoros Tea Factory in Bomet County, Kenya. The total number of respondents was 350 respondents who were employees in the marketing, production, personnel and finance departments of the factory. Respondents in this study were divided into groups according to their industry. Respondents were selected using stratified method and simple random method respectively. The sample size was 187 respondents. The data collection tool for this study was semi-structured questionnaire. A pilot study was conducted in 18 respondents. Assessment of validity of research tools was done using content validity. Cronbach's alpha test was used to measure reliability. Data analysis using descriptive and inferential analysis methods was done.

## 5. FINDINGS

The descriptive statistics results of inventory cost management are presented in Table 1.

**Table 1: Inventory Cost Management**

	M	SD
The factory has a successful strategy for managing both direct and indirect costs.	4.26	0.74
To cut down on stock storage expenses, the firm makes sure that only materials needed for a specific amount of time are purchased	4.59	0.41
To ensure that products of acceptable quality are created, the plant has obtained high-grade materials.	4.72	0.28
The plant uses a store management system similar to FIFO to ensure that items that were purchased first are used first to reduce losses brought on by materials that have expired	3.98	1.02
An integrated material management system at the factory makes ensuring that products are properly purchased, delivered, and handled or stored.	4.06	0.94
In order to reduce the cost of material acquisition, the firm purchases materials at a relatively low cost	4.50	0.50
The firm maintains accurate material records that make it simple to track down costs associated with materials.	4.44	0.56

The results presented in Table 4.3 indicate that the respondents strongly agreed on statements that; to ensure that products of acceptable quality are created, the plant has obtained high-grade materials (M=4.72, SD=0.28), to cut down on stock storage expenses, the firm makes sure that only materials needed for a specific amount of time are purchased (M=4.59, SD=0.41) and that in order to reduce the cost of material acquisition, the firm purchases materials at a relatively low cost (M=4.50, SD=0.50). The finding agree with Shank (2019) who observe that every logistic system relies heavily on inventory, which is why it must be planned, managed, and regulated in a manner that will assist in achieving the overarching objective of reducing costs to the barest minimum level of investment while ensuring the firm's customers' pleasure.

The respondents agreed on the statement that; the firm maintains accurate material records that make it simple to track down costs associated with materials (M=4.44, SD=0.56), the factory has a successful strategy for managing both direct and indirect costs (M=4.26, SD=0.74), an integrated material management system at the factory makes ensuring that products are properly purchased, delivered, and handled or stored (M=4.06, SD=0.94) and that the plant uses a store management system similar to FIFO to ensure that items that were purchased first are used first to reduce losses brought on by materials that have expired (M=3.98, SD=1.02). The result concur with Toktay, Wein and Zenios (2020) who indicate that when an effective inventory management system is in place, the cost of inventory can be decreased. Therefore, by paying close attention to inventory, a company can increase shareholder value, satisfy customers, and do it at a lower cost, all of which will increase revenue and improve customer service.

### Results of Inferential Statistics

#### Correlation analysis

**Table 2: Correlation Analysis**

		Inventory cost management	School performance
<b>Financial performance</b>	Pearson Correlation	.803*	1
	Sig. (2-tailed)	.000	
	N	182	182

The results as presented in Table 2 show that the Pearson r value of inventory cost management on financial performance was 0.803 with a significance value of 0.000 which is less than 0.05. This shows that inventory cost management had a very strong effect on the financial performance of Kapkoros Tea Factory. The results agree with Lwiki, Ojera, Mugenda, and Wachira (2018) study which investigated the impact of inventory cost management strategies on the financial performance of sugar firms in Kenya. The study discovered a statistically significant link between Kenyan sugar manufacturing companies' financial success and their methods for managing inventory costs.

#### Results of Regression Analysis

**Table 3: Model Summary**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.707 <sup>a</sup>	.812	.801	1.348

The results in Table 3 show that the adjusted R-square value was at 0.801 (80.1%) indicating the extent to which inventory cost management had affected the financial performance of Kapkoros Tea Factory. Therefore, it can be concluded that the remaining 0.199(19.9%) could account for other variables not studied.

**Table 4: Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.125	1	101.125	1652.969	.001
	Residual	11.012	180	.0612		
	Total	112.137	181			

The results as presented in Table 4 show that the significance value was at 0.001 which was below the assumed level of significance value at 0.05. The results further indicate that the statistical F value was at 1652.969 which was greater than the statistical mean square value at 101.125. The fulfillment of these conditions justify that the model was significant.

**Table 5: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.744	.297		2.505	.001
	Inventory cost management	.724	.213	.016	3.399	.000

The results as demonstrated in Table 5, holding inventory cost management to a constant the financial performance of Kapkoros Tea Factory in Bomet County, Kenya would be at 0.744. The study found that a unit increase in inventory cost management would lead to an increase in the financial performance of Kapkoros Tea Factory in Bomet County, Kenya by 72.4%. The final regression equation is presented as follows:

$$\text{Financial performance} = 0.744 + 0.724 (\text{Inventory cost management})$$

The study further examined that inventory cost management had a positive significant effect on the financial performance of Kapkoros Tea Factory in Bomet County, Kenya as indicated by t-values ( $t=3.399$ ;  $P<0.05$ ). Therefore, the hypothesis that there is no significant relationship between inventory cost management and the financial performance of Kapkoros Tea Factory in Bomet County, Kenya was rejected and the study concluded that inventory cost management had a significant relationship with the financial performance of Kapkoros Tea Factory in Bomet County, Kenya. This finding agrees with Mburugu (2020) study which investigated the impact of inventory cost management on the financial performance of commercial and service companies listed on the Nairobi Stock Exchange. The findings revealed that inventory cost management statistically significantly improved the financial performance of NSE-listed commercial and service businesses.

## 6. CONCLUSIONS

The study concluded that inventory cost management improves accuracy by ensuring that the factory has optimal stock available to fulfill orders. Errors can be avoided by increasing inventory management efficiency, and rectifying errors takes less time and money overall. Good inventory control reduces the need for significant working capital, enhances cash flow, and gives the company the necessary funds to pay employees, fund product development, or finance any other commercial activity.

## 7. RECOMMENDATIONS

The study recommended that the factory should constantly make sure that it is simple to track the status of completed goods and raw materials along the supply chain. The plant should receive real-time stock updates via the information management system (IMS), which should also lessen the amount of manual input needed for inventory tracking. For optimal performance, the inventory management system should be able to upgrade and add new functions that satisfy the unique needs of the organization.

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