

**EFFECT OF WORKING CAPITAL MANAGEMENT DECISIONS ON
FINANCIAL PERFORMANCE OF SMALL HOLDER TEA FACTORIES IN
KENYA**

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DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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LIST OF ABBREVIATIONS

ACP	Average Collection Period
CAPM	Capital Asset Pricing Model
CCC	Cash Conversion Cycle
CMA	Capital Market Authority
FGCP	Finished Goods Conversion Period
GDP	Gross Domestic Product
ICP	Inventory Conversion Period
JIT	Just-in-Time
KAM	Kenya association of manufacturers
NCA	National Construction Authority
NSE	Nairobi Securities Exchange
PCA	principal component analysis
RMCP	Raw Material Conversion Period
WCM	Working Capital Management

ABSTRACT

Working Capital Management (WCM) covers aspects relating to planning and controlling of an organization's current assets and current liabilities in ways that enhance the capabilities to fund liabilities when they fall due as well as earn maximum returns on investments in recurrent assets. Managers are coming to realization that there is a higher default risk if they do not assess liquidity well (Richard & Laughlin, 1980). This study sought to investigate how WCM decisions affect the financial operations of smallholder tea companies in Kenya. Using a correlation design, information was retrieved from publications of financial reports within a 5-year period (2011-2015) to achieve study objectives. Multiple regression analysis was used to assess the association between independent and dependent variables. From the findings, there is a positive correlation between the actual ROA of the smallholder tea firms over the period of the study, and the return predicted by the regression model, considering that the coefficient of multiple correlation stands at 0.485. The regression model explains approximately 23.5% of the variation in the smallholder tea firms' return on assets over the period covered by the study. Tests of significance have affirmed that the regression model is significant at 0.05 level, just as most of the coefficients of the regression models are. Future studies should consider how strategic decisions of the firm interact with decisions on working capital management to influence organizational performance.

CHAPTER ONE

INTRODUCTION

1.1 Background

Working Capital Management (WCM) is aimed at achieving two major corporate goals; to maximize profitability and firm liquidity. Based on WCM implications on both liquidity and performance of a firm, finance managers appreciate that WCM demands a careful inquiry since its role in the overall corporate strategy is a fundamental part of creating value to shareholders (Howarth & Westhead, 2003). Efficient working capital management demands maintaining sufficient level of current assets and liabilities to facilitate achievement of optimal profit levels and augmentation of shareholder wealth.

Working capital management is guided by theories such as the Keynesians Theory, Operating Cycle Theory and Cash Conversion Cycle. The underpinning assumptions of these theoretical foundations are pegged on cash, inventories, accounts receivables, accounts payables that ought to be effectively managed to facilitate effective working capital management. Baumal (1952) and Tobin (1956) stated that optimal cash balances, have expenses that ought to be met just like other organizational activities, have underlying costs that ought to be incurred (minimally) to increase the benefits derived therein.

After attaining independence in 1963, tea was made open for local farmers after passing land reforms bills by the African government. Kenya has continually been growing, using locally and exporting tea since independence and it is ranked third globally after India and China (Kagira et al., 2012). The challenges faced by small holder farmers can be put

in five categories: Management challenges, Production challenges, Local marketplace constraints, Legal challenges and export market challenges. Gakaria (2015) explains that smallholder farmers' returns have continually remained dismal due to the huge managerial and operational levies charged KTDA, immense taxes, huge production expenses, and lack of a streamlined supply chain framework that eventually drain the returns to farmers (in form of intermediary costs).

1.1.1 Working Capital Management Decisions

Brigham and Ehrhardt (2012) noted that working capital impacts heavily on business performance. This assertion has an implication that finance managers and other top executives ought to be wary of the factors that influence WCM. This knowledge will ensure that sufficient level of working capital for the businesses in question is optimum and competitive. In spite of the generally known importance of having an optimal level of working capital, researchers place lesser significance to working capital management, especially to small organizations such as tea factories in Kenya, compared to other determinants of firm performance such as capital structure and dividend policies.

Working capital is among the many imperative aspects finance managers ought to consider in making decisions relating to firms' usage of financial resources. Decisions regarding what resources and an optimal level of liabilities an organization ought to have determine the ability to meet operational obligations (Harris, 2005). Organizations that are doing well strive to have an optimum level of revenues and tied-up capital. Holding too much inventory impacts negatively on profit levels while holding little stock could deter an organization from satisfactorily meeting client needs; this calls for a need to have an optimal level of working capital. These assertions imply that WCM is an integral

feature of organizational operations and has a huge effect on both short-term and long term profitability. Hampton (1989) holds a view that working capital management policies are vital in financial management decisions implying that insufficient management of working capital suffers firms, so an optimal level of working capital is a vital for continuous inflow of profits to an organization.

WCM is an important tool for expansion and profitable financial performance of organizations, irrespective of their size (Akoto, Awunyo & Angwor, 2103). An insufficient amount of working capital could result to scarcities and difficulties in daily functioning of an organization. There have been situations where great corporations have collapsed as a result of poor working capital management (an aspect that has to be continually monitored as it influences short-term as well as long term firm operations). The goal of an appropriate working capital management policy is to have optimal proportions of the working capital management elements so that substantial cash flow and profits can be achieved (Shin & Soenen, 1998). Thus, the need to have optimal level of working capital in a firm cannot be ignored under any circumstances. The efficient utilization is equally vital in the long run as it involves trading off between risk and profitability or return (Smith, 1980; Raheman & Nasr, 2007).

1.1.2 Financial Performance

Financial performance entails assessing the results of the business' policies and their implementation in financial or monetary terms (Metcalf & Titard, 1976). Brigham and Ehrhardt (2012) hold a view that profitability is earnings available to stockholders prior to payment of dividends and taxes or interest expenses. Shareholder value creation is the primary goal of all firms. A firm that is not profitable cannot operate in the foreseeable future and this portends looming financial problems to the investors.

Financial performance can be determined through (ROI), (ROA), shareholder value, accounting profitability and its components among other measures. In this regard, ROA is used as a metric of financial efficiency and it measures how well a business uses its set of resources to create revenue. Financial ratios as well are key measures of performance. According to Saliha (2011) ratios provide a keener analysis in measuring financial performance since they rely on financial statements. This quantitative nature makes it even easier to assess the financial performance of a firm.

Ochieng (2012) noted that there exists an array of measures of firm performance, though there is yet to be a consensus on a universally acceptable measure of performance. Some of the performance measures of profitability include Net Income (NI), Return on Capital Employed (ROCE), Return on Investment (ROI), Operating Margins (OM) and Net Profit (NP). Brigham and Ehrhardt (2012) considers the measurement of Return on Capital Employed (ROCE) as a more suitable and comprehensive performance or profitability measure because it considers the management's ability to generate earnings from a capital investment.

1.1.3 Working Capital Management Decisions and Financial Performance

There is usually a tradeoff amid returns and liquidity in the context of working capital management. Too much investment possession of working capital positively influences liquidity but could have a negative impact on earning revenue for the organization. Conservatism investment in working capital could yield to low liquidity and higher profitability although it could result in unmet customer demands. WCM, therefore, involves management of this relationship to ensure optimization of financial performance. The prime objective of WCM is to ensure smooth operations while

satisfying long term as well as short-term obligations (Afza & Nazir, 2009). In spite of the overarching aim of firm operations being to maximize shareholder wealth; this objective is underpinned by the necessity to have optimal working capital to facilitate smooth business operations (Eljelly, 2004). According to Ricci and Vito (2000), the most appropriate approach for handling current assets and liabilities is to ensure the organizations executives have an understanding of the determinants of WCM. Poor working capital management deteriorates the benefits of short-term investments.

Peel and Wilson (1996) noted that there is a negative association between profitability working capital management efficacy. The authors further noted that working capital management is a relevant aspect for financial managers who commit much time and resources looking for an ideal or optimum equilibrium of risk and return as well as profitability and liquidity so as to maximize wealth for the owners.

Gakure, Cheluget, Onyango and Keraro (2012) investigated the profitability and working capital management link for 16 firms listed at the NSE and found that there is an inverse association between the two variables. Sharma and Kumar (2011) concluded that ICP and APP inversely linked to a firm's performance, while ACP and CCC show a positive association with financial performance of an organization.

Gill, Biger and Mathur (2010) established significant link between the CCC and performance, measured using GPM. The findings implied that firm's management can increase firm's productivity by optimally managing working capital. Overall from these studies done in the past, there is a relationship between WCM and organizational success in a variety of markets. There are various conclusions, with most of them pointing to an inverse association between organizational profitability and WCM.

1.1.4 Small Holder Tea Factories in Kenya

Small holder farmers are considered to be those whose farming activities are executed in pieces of land whose size is not larger than eight hectares. There are about 563,000 small-scale tea farmers in Kenya producing approximately 62% of tea crop in Kenya (Tea Board of Kenya statistics, 2015). The tea produced is sold through the Kenya Tea Development Agency (KTDA), which is considered the largest tea agency globally with over 60 tea factories.

Small scale tea farmers are usually price takers and sell their freshly harvested green leaves to tea collectors, plantations or processors (Were et al., 2002). The small holder farmers, by virtue of being price takers, are in most cases, exploited by middle men. There are poor marketing strategies, poor prices, and insufficient knowledge on how to access funding facilities that could be vital to the farmers in terms of becoming value addition agents or form stronger farmers' associations that can lobby for higher prices for their produce. The smaller holder tea farmers form the largest proportion of tea produced and exported by Kenya yet their earnings have continually been unsatisfactory.

Small-holder independent tea factory companies are managed by KTDA through a contractual agreement as a management agency where the factories pay agency fees/commission at a predetermined rate for the management services. The management arrangement is for efficient production, processing and marketing of quality teas. The agency agreement covers; organizational management, promotional and marketing activities, monetary services and tea administration and consulting services (Langat, 2013).

1.2 Research Problem

WCM is an integral aspect for firm performance that needs to be considered both for short and long term operational goals (Lamberson, 1995). Mukhopadhyay (2004) identified WCM decisions imperative in ensuring all recurrent expenses are paid for and smooth business operations are attained. According to Krueger (2005), many businesses have failed because of the inability of the finance manager to plan and control working capital of their respective organizations.

According to Ndege (2015), during recent years, the Tea industry in Kenya has been facing several challenges that can be summarized as: deficient governance and management by the KTDA; high reliance on a small number of export markets; low returns for small scale farmers; imposed regulatory practices by big market players that could not be favorable to the small stakeholders in the tea sector; insufficient market research and development coupled with poor infrastructure, and facilities for value addition to increase farmers' margins. As a result of the aforementioned challenges, financial performance among the industry players has been a cause of major concern.

The manner in which working capital is managed by an organization determines the firm's financial performance and liquidity (Shin & Soenen, 1998). Various studies have been done internationally as well as locally on the effect of WCM on firm's performance. Internationally, Deloof (2003), Falope and Ajilore (2009), Sharma and Kumar (2011), Garcia and Martinez (2007), Gill, Biger and Mathur (2010), Gul, Khan, Rehman, Khan, Khan and Khan (2013), Shin and Soenen (1998) have all researched on WCM and its effect on performance of companies. Similarly, local studies by Gakure, Cheluget,

Onyang'o and Keraro (2012), Mathura (2009), Akoto, Awunyo and Angmor (2013), Nyambwaga et al. (2012) have been conducted on Kenya firms. All these studies have established that WCM affects the profitability of firms. However, these studies are not focused on the financial performance of small holder tea companies that are affected by poor management as explained by Langat (2013) and Ndege (2015). It is also notable that previous studies have given conflicting findings. Nyambwaga et al. (2012) established a positive relationship between WCM and firm's performance while Deloof (2003) noted a negative association between WCM and firms performance. Kubasu and Langat (2016) revealed that there was a considerable relationship between the independent variables of Payables period, Receivable period and Inventory Period and profitability of firms. In light of these conflicting findings, this study seeks to answer the research questions; what are the effects of WCM decisions on financial performance of small holder tea companies in Kenya?, and, to what extent does WCM decisions influence the levels of companies financial performance?

1.3 Research Objective

This research intended to investigate the effect of working capital management decisions on financial performance of small holder tea companies in Kenya.

1.4 Value of the Study

The research helps finance managers at KTDA that supervises the small scale tea companies. The managers can understand the significance of WCM practices the need for appropriate funds management practices that are considered vital in policy formulation and implementation.

This research expands knowledge in financial management that act as a basis for further research by the scholars and students in different learning institutions. Additional information on the agricultural sector, which is considered the backbone of Kenya's economy, is presented in this research paper. The research findings in this document will act as scholarly reference material not only in academia but in organizational policy planning and decision making.

The regulatory agencies such as Ministry of Agriculture, KTDA and KAM would use this document to aid in policy development and formulation of regulations that will spur inclusive decision making of all the farmers. Information contained here will aid standardizing the agricultural value chain manufacturing and processing companies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will consist of an extensive review of literature that can be obtained from previous studies that were conducted on similar topics. It is composed of the theoretical review; the factors that determine financial prosperity; an analysis of empirical studies; the conceptual framework and a summary of the literature review.

2.2 Theoretical Review

This research embraced information documented by different scholars whose approaches to explaining WCM were considered relevant in achieving the study's overall objectives. The theories reviewed include the Agency Theory, Keynesian Theory of Money, Operating Cycle Theory and Cash Conversion Cycle Theory.

2.2.1 Agency Theory

Agency theory was advanced to aid in explaining the relationship between two parties; the principal and the agent. In an organizational context, the agents are the firm executives while the principals are the firm owners. Agency conflicts are bound to arise and ought to be solved by following the recommendations inherent within the agency theory; though with costs that have to be incurred to reach the possible solutions (Bruce et al., 2005).

Akoto, Awunyo-Vitor and Angmor (2013) hold a view that the management can ensure the earnings of the stockholders are kept optimum by working to ensure they reduce their accounts receivables to be paid within a month (30 days). In the KTDA small holder farmers' relationship, KTDA are the managers who work as agents of the farmers; the principals in this relationship.

2.2.2 Keynesian Theory of Money

Keynes (1935) came up with the General Theory of Employment, Interest and Money that presents three reasons as to why individual would hold money; to handle daily transactions that drive business operations; for security (payment of debts, liabilities and other insurgenies that could arise in the course of the business; risk and risk management needs); speculation for market trends with an aim of increasing shareholders wealth at the least possible cost. The Keynesian theory is relevant to this study as it explains reasons why individuals or firms hold money. Applying the concepts of the Keynesian theory would ensure the finance managers embrace appropriate working capital management methodologies that enhance financial performance of the organizations in question.

2.2.3 Operating Cycle Theory

Richard and Laughlin (1980) noted that the notion of business cycles does not capture all relevant dimensions as far as pertinent issues are concerned. Liquidity concerns the timeliness and adequacy of addressing obligations Knowledge of a firm's operating cycle is vital for this research. Through assessing the levels of WCM, one can ascertain how and to what extend liquidity contributes to the financial success of small holder tea processing businesses in Kenya.

2.2.4 Cash Conversion Cycle Theory

Richard and Laughlin (1980) noted that by ascertaining the period taken to use cash to purchase productive resources and when the funds are recovered through inflows in form of revenue and profits, financial managers can establish appropriate WCM policies. The authors further noted that a movement towards a longer cash conversion cycle could be detrimental as it needs immense cash commitment at the expense of having optimal balance between liquidity and profitability.

By analyzing the period that elapses from the time a firm spends cash on specific items, to the time it receives revenues in the form of sales, it is possible to find out it takes to convert cash outflow into an inflow. Richard and Laughlin (1980) explained that a movement towards a longer cash conversion period results in an expanded level of commitment in investing in current assets, though the financial capabilities of the firm may expand at a higher rate.

2.3 Determinants of Financial Performance

Financial performance is one of the metrics that shareholders use to ascertain how well their resources are being managed to earn them returns. Though this is not the only means through which firm performance can be determined, financial performance is considered a strong measure as Lebars & Euske (2006) noted. This section provides information about the various determinants that stakeholders can focus on to ascertain whether firm's assets, facilities, and management skills are effectively and efficiently utilized to achieve set objectives.

2.3.1 Corporate Governance

Gompers, Ishi and Metrick, (2003) demonstrated the existence of a positive link amid of corporate governance and organizational profitability. Corporate governance has been immensely studied and it is considered an integral area for research whose influence on increasing shareholder wealth has been proved to be substantial. Brown and Caylor, (2009) also showed a positive relationship between corporate governance on the performance of firms. When issues relating to information asymmetry are resolved, managers could implement stratagems that focus their efforts towards financial and investment projects that increase the wealth of owners and value of the firm.

2.3.2 Leverage

Diverse studies show that leverage could affect firm performance either positively or negatively. Jensen (1986) held a view that increasing external debt could positively influence organizational performance. The reasoning behind this assertion is that managers would be disciplined to use the free cash flows available for non-profitable ventures, so mitigating the agency problem as an internal corporate governance mechanism would be achieved. Lenders too would pursue the organization for their interest payments, and thus positively influence managers' activities to have their efforts geared towards achieving high performance or profitable results. On the contrary, huge amounts of leverage could affect the performance of an organization due to under-investment. Inadequate investment opportunities would imply a higher financial risk due to the affected market value of the stock prices.

2.3.3 Firm Size

To determine the size of a firm, a close look at the quantity and diversity of the firm's production capacity and ability or look at the quantity and diversity of services the firm can provide at a given time to its clients. Based on economies of scale, the size of a firm will dictate profitability as larger firms will benefit from lower costs of producing commodities. In a number of studies focusing on the effects of firm size on the level of profitability, there has been mixed results. Ozgulbas et al. (2006) found positive results indicating that large-scale firms had better performance over small-scale firms in a study which investigated the impact of firm size on the performance of companies listed in Istanbul Stock Exchange within a period of 6 years (2000-2005). Lee (2009) conducted a study in which he employed the fixed effect dynamic panel data model to analyze over 7000 publicly-owned companies in the US and he observed that firm size played a large role in the level of profits.

2.4 Empirical Review

Deloof (2003) conducted a study on the relationship between WCM and profitability of Belgian firms between 1960 and 1992. The study considered the number of days of accounts receivable, inventories and CCC as indicators of trade credit. Cash conversion cycle was the main indicator of WCM. The results showed that management can boost profits by lowering the number of days of accounts receivable, lowering CCC and reducing inventories turnover.

Padachi, (2006) assessed the trends in WCM and their linkage to firm performance. The findings proved that a huge investment in inventory and accounts receivables is linked with lesser profitability. The results indicated that shorter inventory periods and cash conversion days had positive association with higher firm performance. On the other hand, accounts receivables days and accounts payables days correlated negatively with profitability.

Rahman and Nasr (2007) conducted research on the determinants of WCM and their effect on the net operational profits of firms in Pakistan. They found an inverse relationship between profitability and increase cash conversion cycle receivable periods. This meant that finance managers ought to focus on adopting strategies that aid in reducing receivable periods and conversion cycles to aid in increasing organizational profits and maximizing returns to shareholders.

Falope and Ajilore (2009) conducted a study in which they sampled 50 non-financial firms that were listed on the Nigerian Stock Exchange and collected data between 1996 and 2005. In the analysis of the cross-sectional and time-series data collected, they used panel data econometrics in a pooled regression. They noted a significantly negative correlation between profitability, average collection and inventory turnover periods as well as average payment period and CCC. They also observed that there was no considerable disparity in the effect of WCM for both big and undersized firms.

Muthuva (2009) investigated the impact of the components of working capital on the profitability of a firm. The research was based on data between 1993 and 2008 for 30 companies listed at the NSE. To measure working capital, he relied on cash collection

cycle. Fixed effects regression models and Pearson and Spearman's correlation model were utilized for data analysis. The observed that accounts receivables collection period had an inverse relationship with the firms' profitability. On the other hand, both inventory conversion period and payables payment period had a direct relationship with the firm's profitability.

Dong and Su (2010) conducted research on the relationship between gross profitability and WCM. Receivables turnover, payables turnover and the CCC in days were considered as the predictor variables. Size of the firms, debt ratio and fixed assets to total assets are control variables. An inverse relationship between receivables turnover and inventory turnover in relation to organizational gross profitability was found out. They also noted a positive relationship amid profitability and payables turnover ratio.

Gakure et al. (2012) analyzed the relationship between WCM and profitability of 15 manufacturing companies listed at the NSE between 2006 and 2010. The results indicated that there was a strong negative link between a firm's liquidity and its performance. There was also a negative coefficient relationship between accounts collection period, average payables period, inventories holding period and profitability. On the contrary, CCC exhibited a positive correlation with profitability.

In Nigeria, Oladipupo and Okafor (2013) investigated the degree by which WCM influences a firm's profitability and dividend payout ratio for 12 manufacturing firms listed on the Nigeria Stock Exchange. The results indicated that shorter net trade cycle and debt ratio led to a higher level corporate profitability. Additionally, leverage level showed a negative but significant effect on a firm's profitability. The study shows that WCM does not have a statistically significant impact on corporate profitability.

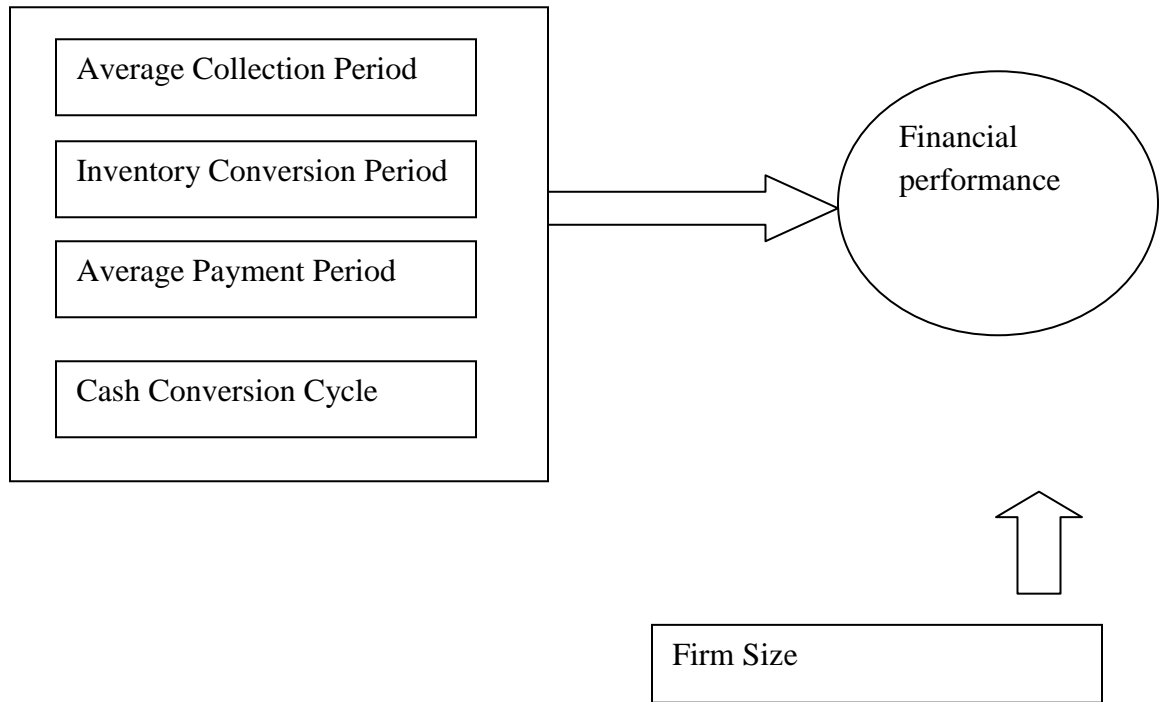
Nzioki et al. (2013) analyzed how WCM affects profitability of manufacturing firms listed at the NSE between 2006 and 2010. The study findings show a positive correlation between gross operating profit with average collection period and average payment period; however, there was a negative correlation with CCC. The study recommends that managers should focus on lowering the CCC and try collecting their receivables as soon as possible.

Omesa et al. (2013) examined the relationship between WCM and corporate performance of NSE listed firms. The results from the study showed a significant relationship between working capital and corporate performance measured using return on equity (ROE). According to the study results, ROA. The findings show that 17.2% of variations in financial performance are influenced by variations in WCM practices.

Chemis (2015) examined the effect of working capital management variables including the Average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle and Current ratio on the Net operating profitability of Sugar Manufacturing firms in Kenya. The study finds a significantly negative relationship between variables of the working capital management and profitability of Sugar Manufacturing firms in Kenya.

Simidi (2015) sought to ascertain the relationship amid working capital management and financial performance of Energy and Petroleum Companies listed at the NSE. The research indicated that WCM influence the ROA significantly. 17.8% of the variations in profitability are influenced by variations in WCM. The study thus established that the influence of WCM on profitability is statistically significant.

2.5 Conceptual Framework



For this research, the dependent variable was financial performance of the firm measured by the ROA of the smallholder tea firms in Kenya. The predictor variables included WCM practices such as receivables collection days, Inventory turnover period, Average payment days, Cash conversion cycle and the size of the firm.

2.6 Summary of the Literature Review

From the preceding sections of the paper, it has been made clear that WCM practices influence firm performance. The nature of the effect (whether positive or negative) on firm profitability is dependent on among other aspects, leverage, firm size, corporate governance, and liquidity. Organizations that embrace optimal WCM practices are likely to have an optimal level of funds (for liquidity) as well as effectively utilize the current assets to earn revenue for the stockholders increase their profits or financial performance. Researchers in both developing and developed nations have reached diverse conclusions on how WCM influences financial performance of commercial banks; there are thus inconsistent findings on whether working capital management has a definite effect on organizational performance. It is upon this backdrop that this research is focused to determine whether there is any relationship between WCM practices and small scale tea firms' financial performance in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the study methodology that will be followed towards attainment of the objectives. Specifically, it outlined the research design, target population, data collection and data analysis.

3.2 Research Design

The study adopted a quantitative approach which involves collection and analysis of numerical data. Using a correlation design, the researcher investigated the effect of WCM on the performance of the small holder tea companies. Correlation design investigates a range of factors including the nature of relationships between two or more variables and the theoretical model that might be developed and tested to explain these resultant correlations (Grimm and Yarnold, 2000). The purpose of correlation design was therefore to determine the relations between two variables two or more variables. Correlation design was found to be suitable for this study since it was used to test impact and relationship direction between WCM components and financial performance. There researcher was able to establish changes in one variable as a result of changes in another variable. Gakure, Cheluget, Onyango and Keraro (2012), Gill, Biger and Mathur (2010) used correlative analysis in their studies on the effect of WCM on performance. Therefore, this design helped the researcher compare the research findings with those from previous studies.

3.3 Target Population

Population in this context relates to all the smallholder team firms in Kenya; The total population for this research comprised of 66 KTDA managed small scale tea companies in Kenya (see appendix attached).

3.4 Data Collection

To study the impact of WCM on performance of small holder tea companies, the researcher used secondary data from published annual financial reports from 2011-2015. Data relating to ROA, ACP, APP, ICP and CCC was gathered from the financial reports. The published financial statements were retrieved from the targeted firms and from the supervisory agency, the KTDA. Table attached as (Appendix II) will be used to collect data from the published financial statements specifically of WCM components and performance.

3.5 Data Reliability and Validity

Kothari (2004) states that data reliability is a synonym for the consistency of the data collected from the various data sources. Validity on the other relates to the accuracy and lack of bias in data measurement approaches. Validity and reliability were achieved focusing on audited financial results from authorized sources only.

3.6 Data Aanalysis

Multiple regression analysis was preferred in this study to show the association amid the dependent and predictor variables. Excel and the Statistical Package for the Social Sciences (SPSS v17) was used to analyze the data collected to reach the research findings.

3.6.1 Analytical Model

This study was premised on a multivariate linear model as presented below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \dots \dots \dots 3.1$$

Where:

Dependent variable represented by Y, and independent variables by X₁, X₂, X₃, X₄, X₅:

Y = Financial performance; ROA = Net Income/ Average Total Assets

X₁= ACP= Receivables/Net sales*365

X₂= ICP = Inventory / Cost of sales *365

X₃= APP = Accounts payables/ Cost of sales *365

X₄= CCC = ACP + ICP – APP

X₅= Size = Ln Total Assets

β₀: Performance levels that is independent of working capital decisions (A constant).

β₁₋₅: (Predictor Coefficients) Magnitude with which each predictor variable affect levels of financial performance.

3.6.2 Inferential Statistics

The significance of study variable relationships was tested at a threshold of 95% confidence level. This was founded on the standard error tests, t-statistics, F-statistics, and ANOVA.

CHAPTER FOUR

DATA PRESENTATION, RESULTS AND DISCUSSION

4.1 Introduction

Empirical data provide reasonable grounds for valid and reliable conclusions regarding a phenomenon under investigation, which is especially true for data obtained through the application of the protocols and procedures specified in the research methodology. This chapter presents the data obtained in pursuit of the research objectives. It includes a description of the research data, results of correlation and regression analysis and a discussion of the findings.

4.2 Descriptive Statistics

The following table shows the summary descriptive statistics of the research data.

Table 4.1: Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
Inventory Turnover period (in Days)	22.52	88.54	45.12	6.70
Average Payment Period (in Days)	78.04	216.11	113.41	104.07
Cash Conversion period	-119.46	47.69	-77.39	121.33
Average collection period	19.28	74.34	32.68	14.84
Current Ratio	.05	3.31	1.06	0.57
Return on assets	-.18	0.26	0.0363	0.14162
Company size	12.05	15.47	13.6463	0.85004

The inventory turnover period of the smallholder tea companies averaged 45 days, with the standard deviation standing at about 6 days. Some firms had a considerably high inventory turnover period, considering that the maximum value observed in the data set was 88 days. The findings also suggest that some firms were very efficient in the management of inventory, with the inventory turnover period standing at 22 days. A low inventory turnover period minimizes the costs associated with inventory, such as storage and warehousing expenses (Raheman and Nasr, 2007). Efficient inventory management is especially important for the firm's bottom line if the annual ordering costs do not exceed the inventory costs.

The average payment period for the payables over the period covered by the study stood at 113 days, with a very high standard deviation of 104 days. Some firms' average payment period substantively exceeded the average; the maximum value in the data set was 216 days. Still, some firms were very effective in the management of the payment for credit purchases; the minimum payment period, from the findings, stands at 78 days, almost a half of the average for all the firms in the period covered by the study. The average collection period for the smallholder tea firms over the five-year period of the study stands at 32 days, with the standard deviation being 14 days.

Some firms had a higher collection period than others did, considering the maximum value of 74 days, which is more than twice the average for all the firms. With the average payment period exceeding the average collection period, the smallholder tea firms seem to have had effective strategies for managing the working capital. When a firm delays the payments for supplies acquired on credit, it effectively acquires low-cost working capital (Afza and Nazir, 2009). With the average period for collecting receivables falling below

that of making the payments for credit purchases, a firm effectively minimizes the opportunity cost of the funds invested in the merchandise that it sold on credit (Gill, Bigger and Mathur, 2010). From the findings, the return on assets of the smallholder tea firms averaged 3.63%, whereas the natural logarithm of the companies' total assets averaged 13.65.

4.3 Diagnostic tests

Some parametric procedures require a data set to conform to certain features, including, among others, normality and heteroscedasticity (Cooper and Schindler, 2010). Correlation and regression analysis comprise the range of the parametric procedures that require normal and heteroscedastic data in order to yield valid results. According to the central limit theorem, as a data set grows in size, it tends to be normally distributed (Levine et.al, 2011). Particularly, data sets comprising at least 30 observations have an approximately normal distribution. The data set used for this study had 330 observations, which is way above the minimum number of observations that result in an approximately normal distribution. Thus, the data for this study met the requirement of a normal distribution.

Cooper and Schindler (2010) argue that regression analysis falls in the class of statistical techniques that are robust to deviations from heteroscedasticity; the ANOVA technique will yield valid conclusions even when the data is not heteroscedastic in the strictest sense, something that is especially true when the data set is very large. By implication, therefore, this study's data set comprising more than 300 observations had adequate safeguards against homoscedasticity.

4.4 Correlation Analysis

The researcher used the Pearson correlation coefficient in assessing the nature and extent of the relationship among the study variables. The following table shows the correlation matrix.

Table 4.2: Correlation Matrix

	Return on assets	Inventory turnover period	Average payment period	Average collection period	Cash conversion cycle	Size
Return on assets	1	.307**	-.232**	.268**	-.087	0.618
Inventory turnover period		1	.278**	-.163*	-.147*	.431*
Average payment period			1	.079	-.140*	.759**
Average collection period				1	.194**	.538**
Cash conversion cycle					1	.466**
Size						1.000

** . Correlation is significant at the 0.01 level (2-tailed).

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

There is a positive and significant correlation between the return on assets of the smallholder tea firms over the period covered by the study and their inventory turnover period. As the inventory turnover period increases, so does the return on assets of the firms. A high inventory turnover implies that the firms turn their inventory into sales

within a very short period. As such, they do not incur high costs of inventory, and when the inventory costs and expenses decline, the overall operating costs are likely to decline. In addition, high inventory turnover during a financial year ultimately translates into a high sales turnover, and therefore high sales revenue, which boosts the return on assets.

There is a negative correlation between the return on assets and the average payment period for payables: as the payment period increases, the return on assets declines. A long payment period is likely to result in the imposition of stringent credit terms on a firm by its suppliers, leading to the loss of a low-cost source of credit (Howarth & Westhead, 2003). The loss of low-cost credit from a firm's suppliers most likely results in high finance expenses as the firm turns to alternative sources of short-term credit, something that results in a decline in the bottom-line performance as it increases the overall operating costs (Ricci and Vito, 2000). There is a positive correlation between the return on assets and the average collection period of the smallholder tea firms: as the collection period increases, so does the return on assets.

A long collection period implies that the firm has favorable credit terms, which results in higher sales and profit margin. The cash conversion cycle has a negative correlation with the return on assets; the return on assets increases as the cash conversion cycle decreases. With a short cash conversion cycle, a firm has adequate cash to fund short-term operating needs, which ensures that operating activities continue seamlessly, an integral factor in long-term sustainability and performance (Akoto, Awunyo and Angwor, 2013).

The control variable of the study- firm size- has a positive correlation with all the other variables. Large firms command a high market share, which implies high demand for their products: this leads to a high inventory turnover (Gill, Biger and Mathur, 2010). The large market share of big firms also implies that they can negotiate favorable credit terms with their suppliers, which results in a long average payment period. Big firms can also allow favorable credit terms to their customers without undermining their capacity to generate adequate short-term cash flow to finance operations, which results in a long average collection period.

4.5 Regression Analysis

To determine the extent to which the independent variables of the study predicted the financial performance of the smallholder tea firms, a regression model was fitted on the research data. The following table summarizes the regression model.

Table 4.3: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.485 ^a	.235	.340	.03685

a. Predictors: (Constant), Inventory turnover period, average payment period, average collection period, cash conversion cycle, company size

The preceding table shows that there is a positive correlation between the actual return on assets of the smallholder tea firms over the period of the study, and the return predicted by the regression model: the coefficient of multiple correlation, multiple R, stands at

0.485. The coefficient of determination, R Square, stands at 0.235, implying that approximately 23.5% of the variation in the smallholder tea firms' return on assets over the period covered by the study can be explained by the study's independent variables. The researcher tested the regression model for significance. The following table illustrates the results obtained.

Table 4.4: Model Significance
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.055	5	.011	11.001	.000 ^b
	Residual	.324	324	.001		
	Total	.379	329			

a. Dependent Variable: Return on assets

b. Predictors: (Constant), Inventory turnover period, average payment period, average collection period, cash conversion cycle, company size

From the table, the mean regression sum of squares exceeds the mean residual sum of squares, resulting in a large test statistic. The test statistic has a significance value of 0.000, which is lower than the 0.05 significance level at which the model was tested for significance. Therefore, the regression model significantly predicts the return on assets of the smallholder tea firms that constituted the study population. Further tests were undertaken to establish the significance of the coefficients of the regression model. The following table shows the results obtained.

Table 4.5: Regression Coefficients**Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.024	.007		2.161	.032
	Inventory turnover period	.089	.014	.381	5.857	.000
	average payment period	-.089	.015	-.342	-5.289	.000
	average collection period	-.082	.014	-.149	-2.348	.020
	cash conversion cycle	.050	.000	-.050	-.784	.434
	company size	1.288	.445	.525	2.896	.006

a. Dependent Variable: Return on assets

From the preceding table, all of the regression coefficients, except the cash conversion cycle, are significant predictors of the dependent variable. The largest changes in the return on assets result from the changes in the inventory turnover period and the cash collection cycle, which have larger coefficients than other dependent variables do. The values of the coefficients suggest the extent to which the return on assets of the smallholder tea firms changes upon a unit change in the independent variables. The significance of the regression coefficients affirms the findings in the preceding sections, where it emerged that the regression model was a significant predictor of the dependent variable.

4.6 Discussion of Findings

From the findings, there is a positive correlation between the actual return on assets of the smallholder tea firms over the period of the study, and the return predicted by the regression model, considering that the coefficient of multiple correlation stands at 0.485. The regression model explains approximately 23.5% of the variation in the smallholder tea firms' return on assets over the period covered by the study. Tests of significance have affirmed that the regression model is significant at the 0.05 level, just as most of the coefficients of the regression models are. These findings are consistent with those of Omesa et al. (2013), who examined the relationship between WCM and corporate performance of NSE listed firms.

The results from the study showed a significant relationship between working capital and corporate performance measured using return on equity (ROE). They also reflect those of Chemis (2015), who examined the effect of working capital management variables on the Net operating profitability of Sugar Manufacturing firms in Kenya and found significant effect of working capital management. Specific aspects of working capital management such as A high inventory turnover implies that the firms turn their inventory into sales within a very short period. As such, they do not incur high costs of inventory, and when the inventory costs and expenses decline, the overall operating costs are likely to decline. In addition, high inventory turnover during a financial year ultimately translates into a high sales turnover, and therefore high sales revenue, which boosts the return on assets. We also have to consider how a long payment period is likely to result in the imposition of stringent credit terms on a firm by its suppliers, leading to the loss of a low-cost source

of credit (Raheman & Nasr, 2007). The loss of low-cost credit from a firm's suppliers most likely results in high finance expenses as the firm turns to alternative sources of short-term credit, something that results in a decline in the bottom-line performance as it increases the overall operating costs (Afza and Nazir, 2009).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Several insights related to the research question emerged in the previous chapter. This chapter summarizes the findings of the study. The findings have important implications for various stakeholders in smallholder tea firms in Kenya. Thus, the researcher presents recommendations whose adoption will go a long way in enhancing the fortunes of the tea sector in Kenya. Tea exports comprise one of the main foreign exchange earners, making it imperative to adopt effective strategies in the management of working capital. The chapter also discusses the limitations of the study and provides suggestions for further research.

5.2 Summary

From the findings, there is a positive and significant correlation between the return on assets of the smallholder tea firms over the period covered by the study and their inventory turnover period. As the inventory turnover period increases, so does the return on assets of the firms. A high inventory turnover implies that the firms turn their inventory into sales within a very short period. As such, they do not incur high costs of inventory, and when the inventory costs and expenses decline, the overall operating costs are likely to decline. In addition, high inventory turnover during a financial year ultimately translates into a high sales turnover, and therefore high sales revenue, which boosts the return on assets.

There is a negative correlation between the return on assets and the average payment period for payables: as the payment period increases, the return on assets declines. A long payment period is likely to result in the imposition of stringent credit terms on a firm by its suppliers, leading to the loss of a low-cost source of credit (Howarth & Westhead, 2003). The loss of low-cost credit from a firm's suppliers most likely results in high finance expenses as the firm turns to alternative sources of short-term credit, something that results in a decline in the bottom-line performance as it increases the overall operating costs (Ricci and Vito, 2000). There is a positive correlation between the return on assets and the average collection period of the smallholder tea firms: as the collection period increases, so does the return on assets.

The findings suggest that there is a positive correlation between the actual return on assets of the smallholder tea firms over the period of the study, and the return predicted by the regression model: the coefficient of multiple correlation, multiple R, stands at 0.485. The coefficient of determination, R Square, stands at 0.235, implying that approximately 23.5% of the variation in the smallholder tea firms' return on assets over the period covered by the study can be explained by the study's independent variables. The regression model significantly predicts the return on assets of the smallholder tea firms that constituted the study population. All of the regression coefficients, except the cash conversion cycle, are significant predictors of the dependent variable. These findings suggest that working capital management has a significant impact on the return on assets of the smallholder tea firms in Kenya over the 5-year period of the study.

5.3 Conclusion

From the findings, the regression model significantly predicts the return on assets of the smallholder tea firms forming the study population, which indicates that working capital management has a significant impact on the financial performance of smallholder tea firms in Kenya. Working capital management decisions have profound effects on a firm's liquidity, which ultimately influences profitability. If the management of a firm decides to maintain a high inventory turnover, the investment in inventory decreases. Consequently, the firm is less likely to experience liquidity problems, which helps prevent operational breakdown that can possibly lead to higher production expenses.

There must be caution when increasing the inventory turnover because high ordering costs can erode the gains made from the savings on the opportunity costs of investing in inventory. Ultimately, the tea firms must weigh the benefits of reduced inventory costs against the possible increase in inventory expenses. Due consideration must also be given to the decisions on the accounts payable period and the receivables conversion period. A long accounts payable period provides the firm with a low-cost source of funding for short-term operational needs, although it has the potential to undermine the credit rating of a firm, which creates difficulties in securing funds for development in the long-term. Similarly, inappropriate decisions affecting the receivables collection period, while beneficial in terms of lifting the sales turnover and revenue, may result in shortfalls in the short-term cash flow.

5.4 Recommendations

The managers of the smallholder tea firms should keep the inventory turnover period as low as possible. The findings show that the inventory turnover period has a positive coefficient in the regression model. Reducing the inventory turnover period will help the tea firms incur reduced costs associated with inventory, such as the storage and warehousing expenses. With low inventory costs, there is no doubt that there will be a decrease in the overall cost of operations, which ultimately enhances a firm's bottom line performance. Low operating costs are particularly important for the tea sector where export competitiveness increasingly hinges on the efficient utilization of production resources.

There has to be effective coordination in the policies guiding the settlement of sales and the collection of cash from the receivables in order to maximize the contribution of strategic working capital management to the performance of smallholder tea firms. Tea firms will benefit if they do not settle the obligations arising from credit purchases in a short time, and if they collect cash from credit sales within a very short time. The ultimate objective should be maximizing liquidity while ensuring that the firm's profitability is not affected.

5.5 Limitations of the study

The study used a single measure of performance- the return on assets- that may not adequately capture all the relevant aspects as far as organizational performance is concerned. Working capital management decisions can affect other dimensions as well. For instance, inappropriate decisions on the inventory turnover period can result in

inadequate supplies for the production process, which causes delays in fulfilling customer orders. Delays in fielding customer orders can cause customer dissatisfaction, which may result in the loss of competitiveness.

The study did not consider how working capital management decisions interact with a firm's strategic direction in influencing financial performance, an aspect that is essential in understanding how working capital management influences organizational performance. For instance, a firm that aims to be a cost leader will manage its working capital in a way that reduces the overall operating costs, which may not be the case for a firm pursuing a differentiation strategy.

5.6 Suggestions for Further Research

Further studies should be carried out using a dependent variable that integrates multiple aspects of organizational performance. An example would be the measurement of performance using a composite index that incorporates qualitative and quantitative measures of performance. This will enhance the understanding of how working capital management influences firm performance.

Future studies should consider how strategic decisions of the firm interact with decisions on working capital management to influence organizational performance. Working capital management decisions are undertaken at the tactical and operational level, and it would be interesting to establish whether their effectiveness in helping the firm attain particular objectives depends on the decisions made at the strategic level.

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APPENDICES

Appendix 1: LIST OF KTDA MANAGED FACTORIES

1. Kagwe
2. Kambaa
3. Theta
4. Ndarugu
5. Mataara
6. Gachege
7. Njunu
8. Ngere
9. Makomboki
10. Ikumbi
11. Gacharage
12. Nduti
13. Githambo
14. Kanyenya-ini
15. Gatunguru
16. Kiru
17. Chinga
18. Iriani
19. Gitugi
20. Gathuthi
21. Ragati
22. Ndimba
23. Mununga
24. Kangaita
25. Kimunye
26. Thumaita
27. Mungania
28. Rukuriri
29. Kathangariri
30. Githongo
31. Kinoro
32. Imenti
33. Michi Mikuru
34. Kiegoi
35. Weru
36. Kionyo
37. Ingembe
38. Litein
39. Chelal
40. Tegat
41. Kapkatet
42. Momul
43. Kapkoros
44. Mogogosieki
45. Kobel
46. Kapset
47. Tirgaga
48. Rorok
49. Toror
50. Oleng
51. Nyansiongo
52. Kebirigo
53. Sanganyi
54. Tombe
55. Nyankoba
56. Kiamokama
57. Rianyamwamu
58. Nyamache
59. Ogembo
60. Itumbe
61. Eberege
62. Chebut
63. Kaptumo
64. Mudete
65. Kapsara
66. Nduti

Appendix 2: Data Collection Instrument

Name of Firm:					
Year	ROA	ACP	ICP	CCC	Total Assets
1					
2					
3					
4					
5					