

**THE RELATIONSHIP BETWEEN WORKING CAPITAL
MANAGEMENT AND FINANCIAL PERFORMANCE OF TEA
FACTORIES IN MERU AND THARAKA NITHI COUNTIES**

BY

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DECLARATION

This research project is my original work and has not been submitted for a degree award in any other University.

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DEDICATION

This research is dedicated to my loving parents, especially my mother Mrs. Stella Maru who supported me emotionally and financially to pursue the MSC program and whose unceasing support for personal growth I will cherish for centuries. Special dedication to my daughter Eleana Chaniya for her patience and understanding during my long absence from home compromising my parental roles.

ABSTRACT

Working capital management is a key organizational role with several financial practitioners trying to identify the optimal levels of working capital for healthy overall performance of their businesses. This research study therefore sought to find out the relationship between working capital management and financial performance of tea factories in Meru and Tharaka Nithi counties. The study adopted a descriptive design method. The study population was all the seven tea manufacturing factories in Meru and Tharaka Nithi Counties licensed by the Tea Board of Kenya. Secondary data was extracted from the annual audited reports and financial statements maintained at the respective factories using a data collection form. The data was collected for a five year period from 2011 to 2015. Data obtained from financial reports of the factories under study were analyzed using Microsoft Excel spreadsheets and thereafter Statistical Package for Social Sciences (SPSS) software version 20 was used for data analysis. Diagnostic test was conducted on the secondary data collected to determine its suitability for the study which included normality, independence, linearity, homoscedasticity and multicollinearity. Correlation and multiple regression model were used to ascertain the nature of the relationship between the independent variables and the dependent variable. The study found that there exist a negative relationship between average collection period, inventory conversion period and financial performance among the tea manufacturing factories in Meru and Tharaka Nithi Counties. However, the study found a positive relationship between average payment period and financial performance. Cash conversion cycle was excluded from the final regression model since its inclusion resulted to high degree of multicollinearity among the working capital variables. Likewise, leverage and factory size used as control variables had an insignificant positive effect on financial performance. The study concludes that working capital management is a very important component of financial performance because it directly affects the liquidity and profitability of the company. The study concludes that there exist a relationship among financial performance and Working Capital Management of tea manufacturing factories in Meru and Tharaka Nithi Counties. The study therefore recommends that tea manufacturing factories should employ working capital management strategies that will assistance in maximizing liquidity while safeguarding their financial performance.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACP	Average Collection Period
ANOVA	Analysis of Variance
APP	Average Payment Period
CCC	Cash Conversion Cycle
CSE	Colombo Stock Exchange
EOQ	Economic Order Quality
ICP	Inventory Conversion Period
KTDA	Kenya Tea Development Agency
NSE	Nairobi Stock Exchange
OLS	Ordinary Least Square
SPSS	Statistical Package for Social Sciences
VIF	Variance Inflation Factors
WCM	Working capital management

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Organizations regardless of their nature of operations and size have working capital requirements. Working capital is the lifeblood for economic units' operations and is a crucial function of corporate management. Working capital management (WCM) subsequently is an essential for liquidity, continued operations, growth, (in) solvency and business entities' profitability (Mukhopadhyay, 2004). Efficient management of liquidity is among some key decisions that firms make in their operations as excess working capital lowers risks and associated returns, while inadequate working capital raises risks and associated returns thus have a link to financial performance (Ross, Westerfield & Jaffee, 1996).

Financial performance is regarded as a reliable measure of organizational performance given the importance the shareholders, management and the market attach to it (Fwaya, 2006). According to Darun (2011) the importance of efficiently managing working capital is not limited to cases of financial distress as it is also related to increasing firm's profitability as well as gaining of competitive edge over others. According to Shin and Soenen (1998) efficient WCM is key in creating shareholders value while Smith (1997) gave emphasis to liquidity and profitability as the main objective of working capital management. Kargar (1994) holds that the balance between liquidity and profitability is essential because it helps determine the likelihood for failure and insolvency of firms.

Management of working capital is a key organizational issue with several financial practitioners trying to identify working capital dynamics and the optimal levels of

working capital which should be held for healthy overall performance of their businesses (Lieberman, 2009). According to Nazir and Afza (2009) much of the available literature on corporate finance issues have mainly studied the long-term financial strategies involving capital structure, investments and dividends, despite the importance of the current assets component of total assets. This study was thus conducted with the recognition that current assets need to be carefully analyzed as well and their contribution to financial performance of a firm determined.

1.1.1 Working Capital Management

Naser, Nuseith and Al-hadeya (2013) defined WCM as a managerial accounting strategy that aims to ensure current assets and current liabilities optimal levels. Such optimality seeks to guarantee firms adequate cash flow to address their short-term obligations hence making WCM an important financial management practice which contributes to firms' wealth creation thus influencing organizational profitability and liquidity. Pandey (2007) defines current assets as the assets which in the context of typical firm activities can translate into cash in a year while current liabilities refer to those obligations expected to be settled within similar duration. Hofman (2010) surmises that managing working capital encompasses all components related to overseeing current assets as well as current liabilities.

Working capital amounts change throughout the financial year of the firm. Generally the figures at the end of the financial year are deemed the best measures though for firms with seasonal operations they can be misleading. The daily inventories, accounts payables, accounts receivables and cash conversion sequences are often used to estimate working capital practices in statistical studies which rely on financial data. Deloof (2003) asserts that the managing firm working capital requires quick decisions on how to finance the short term assets and liabilities aspects. Padachi (2006) argues

that a misalignment between assets and liabilities could lead to increased firm's short-term profitability, but it will expose the firm to insolvency in the long run.

Working capital was measured using the outstanding number of daily inventory, outstanding number of daily accounts receivables and payables as well as the cash conversion cycle. The cash conversion cycle measures the duration between when finished goods are paid for and when the purchase for raw materials was made (Deloof 2003). According to Planware (2010) quick ratio is comparable but it considers the fact that it usually takes some time to get cash from the firm's inventory. This has made the cash conversion cycle a popular and reliable working capital measure in diverse studies (Deloof 2003).

1.1.2 Financial Performance

Financial performance measure how best firms can use assets in business activities to generate revenues. The interests of various firm stakeholders are determined and affected by the financial performance of the firm. Financial performance also refers to the general indicator of a firm's financial strength over a given duration of time and is used for comparative purposes for similar firms in the same industry or to compare competing sectors. Performance thus can refer to the outcome as a result of an organizational capabilities to source and manage resources using innovative strategies to build and sustain competitive advantage (Iswatia, 2007).

Strategic management scholars have presented diverse and robust models for evaluating financial performance but there is no consensus on what constitutes convincing performance criteria due to challenges in defining and measuring the concept. Performance has been defined as an outcome of an activity, and the suitable measures chosen to evaluate firms performance is selected depending on the

objectives to be achieved and the nature of organization being evaluated. Occasionally, researchers such as Ostroff (1993) have stated the need for a multidimensional approach to performance using different models of inter-linkages among performance indicators and its drivers will emerge enhancing decision making.

Novy-Marx (2012) argues that financial performance, which is measured by the ratio of a firm's gross profits, that is, revenues less the cost of sales, to its assets, is just one of the many measures of the financial performance of any firm. He goes further to suggest that there are other measures like book-to-market ratios that can be used to measure financial performance. Indeed, he pronounces that gross profit is the cleanest accounting measure of true financial performance. Brigham, Gapenski and Ehrhardt (1999) argue that the measures of profitability can either be book value based or market value based. In measuring financial performance, tea factories take into consideration the income from operations and mainly the return to growers based on the green leaf delivered which is measured as total green leaf payment divided by green leaf supplied.

1.1.3 Working Capital and Financial Performance

Horne and Wachowitz (2000) recognized the importance of WCM efficiency, especially in the manufacturing sector where majority of assets are composed of current assets. According to Ricci and Vito (2000) proper management of the working capital enables monitoring the short term finances of an entity in a manner that strikes a balance between profitability and the risk(s) related to such profitability. The working capital practices form a crucial part of the firm's liquidity and profitability (Dong & Su, 2010).

Filbeck and Krueger (2005) argue that firm's success is dependent on the capability of finance directors to manage receivables, inventories and liabilities. A firm needs to make just enough investment in current assets that would guarantee maximum profitability. High current assets outlay would mean lower returns on a firm's investment leading to low profitability levels (Lamberson, 1995). He also observes a small investment in current assets leads to stock outs in sales which lead to inability to settle accounts payables as and when they fall due.

Raheman and Nasr (2007) found a significant positive link among indicators of working capital practice and those representing profitability of the firms. The study also showed a strong positive interlink between liquidity, size of the firm and its profitability. Furthermore, the study recorded a significant link between debt and profitability. Amarjit, Nahum and Mathur (2010) noted that theoretically there exists some relationship between working capital management and profitability of manufacturing firms in US and concluded that working capital measures have a negative relationship with performance indicators.

1.1.4 Tea Factories in Meru and Tharaka Nithi Counties

Tea factories in Tharaka Nithi and Meru Counties are amongst the best performing factories in Kenya which are managed by Kenya Tea Development Agency (KTDA, 2016). The agency manages tea factories to effectively manage costs, offer extension services to the farmers on their tea farms, oversee production processes, selling of the final product to the customer, pay farmers for the leaf delivered and investing prudently to secure farmers' financial future. The farmers are paid a constant initial payment at the end of the month based on the quantity of the leaf delivered in kilograms and a final payment at the close of the year on the basis of quality of tea delivered. The quality price is based on the net income of the factory after deducting

all the costs involved in processing and selling of the made tea. Determination of what is finally paid to the farmers who are the shareholders of the factories therefore depends on the performance of each individual factory (KTDA, 2016).

The tea sector in Meru and Tharaka Nithi is an important economic undertaking with seven factories being operational. It is thus imperative to identify the factors that can influence the tea sector performance to enhance its growth and improvements. The working capital management in the tea factors is identified as one such. The inability of the tea factories to meet their obligations may lead to disruption of the marketing and distribution activities by issues including tea plucking boycotts and non-deliveries by suppliers. Key challenges facing the tea sector includes ever increasing cost of operations, unfavorable tax regime, climatic change, volatility in exchange rates, international market price fluctuations and land subdivision (Annual report KTDA 2011/2012)

1.2 Research Problem

Proper working capital practices play an important role in determining firm's performance. While profit maximization is the key goal of any firm, failure to manage its liquidity may result to its inability to ensure a smooth running of its daily operations. Jeng-Ren, Li and Han-Wen (2006) noted that a proper working capital practices enhances a company's outlook in terms of liquidity and grows shareholders wealth. The importance of the profitability liquidity tradeoff has also been emphasized as it determines whether firms remain solvent or whether they fail (Kargar & Bluementhal, 1994).

The significance of working capital management has led numerous researchers to consider the inter-relationship among various working capital indicators and financial

performance measures. For instance, Lazaridis and Tryfonidis (2006) analysed the inter-linkage between cash conversion sequence and level of profitability of companies listed at the Greeks' Athens Stock Exchange. The observed study results showed that inventory management, accounts payable turnover and accounts receivable turnover had a negative link with profitability. Wairimu (2015) on the other hand, analyzed how working capital practices affected financial indicators of three star hotels operating in Nairobi. The study found out that average collection period, inventory collection period as well as cash conversion sequence were negatively related to financial performance with average payable period showing positive but insignificant effect.

Kamara (2014) studied the link among working capital components and the financial performance of agricultural firms listed at the NSE. The results provided evidence that WCM as measured by the cash conversion cycle negatively affected profitability. Kundu (2014) investigated how working capital practices influence profitability among Petroleum companies in Kenya. This study results found that outstanding daily sales, daily payables and cash conversion cycle played insignificant positive role towards profitability while daily sales and inventory had a significant negative relationship. Ndonge (2015) evaluated how working capital management practices affect financial performance in tourist hotels in Mombasa County. The research revealed a strong negative relationship between the hotels net operating profit and the total days for accounts receivables, total days for accounts payables, the inventory turnover period and the cash conversion sequence.

However, tea firms have remained hostage to different debilitating conflicts which affects their performance. For instance, unhealthy competition among the factories,

fluctuating performance and high operating cost are some of the common challenges. Additionally, weak regulatory and policy framework on funds retention has led to negative working capital which has forced most of the factories to rely on financial institutions to finance their day to day operations. Despite all these, there is an increasing demand among the factory shareholders for better return, which calls for advanced intents to strengthen WCM of the tea factories for better financial performance. The necessity to gauge the importance of working capital to these tea factories has led to the question; is there a relationship between working capital management and the financial performance of tea factories in Meru and Tharaka Nithi counties?

1.3 Research Objective

To establish the relationship between working capital management and financial performance among tea factories in Tharaka Nithi and Meru Counties.

1.4 Value of the Study

The study is important as it will help players in the manufacturing sector appreciate the importance of WCM to their firms. It will also offer an independent and balanced platform for regulators in the tea sector to help them appraise their tools of supervision in a bid to make information based policy adjustments. Regulatory bodies that are responsible for licensing, regulation and supervision of operation including policy formulation, monitoring and evaluation will make informed decisions on the basis of the findings when executing their mandates with respect to WCM.

The study findings will be beneficial to the management and employees of the tea factories as it will offer insights into how the tea factories can efficiently manage working capital to boost their financial performance. The findings from this study will also enable shareholders in manufacturing firms understand the best approach to

working capital management and thus support management in enforcing any approaches adopted in management of working capital.

The study will enrich the existing body of knowledge on the topic of working capital practices in tea factories. The finding of this study will be of help to academicians interested in understanding the role of WCM practices on financial performance of manufacturing firms. The findings of this study would serve as a source reference to other researchers interested in this area of study.

The findings obtained will also provide information to potential investors in the manufacturing firms on how to manage working capital in such a way that shareholders wealth will be maximized. The study is expected to shed more light on the link between working capital practices and financial performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter comprises of the theoretical perspectives relied upon by the study, the determinants of financial performance, empirical studies, conceptual framework and the summary of the literature identifying the gap that the current study seeks to bridge.

2.2 Theoretical Review

Working Capital Management theories describe how best to properly manage working capital and the benefits that accrue to the firm (Brigham et al., 1999; Gitman, 1997). The study is based on the Miller-Orr Model, The Baumol- Allais-Tobin Model and the Cash Conversion Cycle (CCC) Theory.

2.2.1 The Miller-Orr Model

This Miller-Orr Model was posited by Orr and Miller in 1966 and sought to overcome the weaknesses of the Baumol (1952) model. According to Ross, Westerfield and Jaffe (2008) this model builds on Baumol's approach by introducing a stochastic cash flow. In particular, cash flow and outflows are allowed to fluctuate randomly on a daily basis. The model tracks inflows and outflows of cash, allows for irregularity in inflows and outflows of cash. Miller and Orr (1966) identified the lowest and the highest amounts of cash held as the trigger points for a change in policy for cash held.

The excess cash in the firm it is implied on the cash balances on the upper limits and the need of the organization to purchase the securities in order to bring the cash balances to the appropriate level in the organization. And there is a shortage of the available cash the organization tends to sell the securities in order to bring the the

cash levels in the desired level (Marsh, 2009). A firm's cash must be maintained at an ideal level since it may result to increased cost due to mishandling, theft or waste; too much or inadequate level of cash balance for instance can lead to stopping in business operations (Padachi, 2006).

2.2.2 The Baumol- Allais-Tobin Model

Baumol (1952) developed the model in which cash was managed like ordinary inventory based on the Economic Order Quality (EOQ). The model's fundamental motivation was how to ascertain the optimal cash levels of to be held by entities at every given time for efficient operation. The model assumes that the firm has ability to certainly predict its cash needs at regular intervals and that the firm faced a stable rate of cash outflows. Further, the model holds that the opportunity cost associated with holding certain amounts of cash is known and constant over specific time. Baumol also assumed that each transaction incurs a fixed cost and a variable cost.

This model assumes that cash start from replenishment level declining gradually over time till it is depleted upon which it can be instantly reloaded through disposing off another cash equivalent for which the entity pays a certain trading cost (Cornett, Adair & Nofsinger, 2009). In the Baumol model, the financial management practitioners are expected to decide on how to share division of available funds between cash and marketable securities (Singh & Pandey, 2008). Firms thus attempt to reduce the cash they hold and the cost associated with converting the marketable securities back in to cash (Ross, Westerfield & Jordan, 1991).

Despite the fact that Baumol's cash management is an important tool in management, it suffers from a number of short comings. First, the model holds that the firm has a steady, near perfect cash payout rate while in business reality the rates are flexible and

erratic. Secondly, the model holds that no cash will flow in during the period in consideration. However, most firms are in the business of making more money than what they pay out, they thus have cash flowing most of the times. Finally, the model does not allow for contingent stock of extra cash to protect the firm against unforeseen large demands for cash (Cornett et al., 2009). According to Ochieng (2007) large considerable amount of funds is required to maintain the large size of inventories

2.2.3 Cash Conversion Cycle (CCC) Theory

The Cash Conversion Cycle traces its roots to Gitman (1974) and further developments made by Richards and Laughlin (1980). This cash cycle concept introduced by Gitman (1974) denoted the number of days from when inventory is obtained to when account receivables are collected. Richards and Laughlin (1980) made adjustments to the original cash cycle concept where they subtracted the days in account payables to arrive at the cash conversion sequence. This approach has become a robust measure of continuous liquidity management by combining balance sheet information and data from the income statement to produce a time a robust multi-dimension measure. According to Shin and Soenen (1998) CCC begins when payment are made for the raw materials, includes the processing duration in addition to the duration when collection for outstanding credits sales are done.

Ensuring optimal conversion cycle has been found to affect cash flows and the financing requirements needed for daily operation which in turn influences profitability (Yazdanfar & Öhman, 2014). The financial management practitioners have become cognizant of the fact that different working capital investments have diverse payback periods and their conversion rates to useful liquid assets is has differing conversion speeds (Temtime, 2016). It is apparent that cash conversion cycle

perspective is thus deemed an authoritative grounding to explain working capital practices and its influence on other firm aspects. The theory is suitable for this study as it includes components from when raw materials are sourced to when the finished products are sold a process which is relevant for tea factories which are the concern of this study. The theory also considers outputs as indicated by inventory levels, to receivables and payables indicating the cash aspect. Mathuva (2014) recognized the robustness of the CCC as a theoretical perspective for explaining how working capital affects firm profitability.

2.3 Empirical Studies

This section covers both local and international empirical studies that are related to working capital practices and financial performance among entities with focus on the manufacturing firms which share characteristics with the tea factories which are the scope of this study. Presented are the most relevant key studies.

In a study based in Belgium, Deloof (2003) analyzed how profitability relates with working capital issues. The population of study was 2000 firms out of which 1,009 Belgian large non-financial firms were selected as the sample. The study used secondary data from the database provided by the National bank that consisted of financial statement for a five year period from 1992-1996. Data were analyzed using correlation and regression model with the analysis revealing a negative association between total days under account receivables, inventories and payables and profitability among sampled firms. Accounts payables were found to have negative relationship with profitability being consistent with the position that less profitable firms pay their bills after longer periods than the more profitable ones.

In Saudi Arabia, Eljelly (2004) investigated the how liquidity was linked to profitability using a sample of 929 joint stock companies. The study used current ratio and cash gap as measures for liquidity. Secondary data were collected from four years (1996-2000) annual reports. The data were analyzed through regression technique. The study found that profitability and liquidity had a negative links as indicated by cash gap and current ratio. The study concluded that the CCC is a deemed a better and reliable liquidity determinant than the current ratio. Firm size measures showed notable effect on industry level profitability with great disparities being recorded among the studied industries.

In another study by Lazaridis and Tryfonidis (2006), the link between the cash conversion sequence and the level of profitability was pursued among 131 companies listed at the Greeks' Athens Stock Exchange. Secondary data were gathered from the publicly available financial reports within the four years extending from 2001 to 2004. Pearson correlation and regression techniques were applied in a bid to seek whether there was a statistically significant link between the CCC and profitability among the sampled firms. The study found that a combination of inventory management practices, accounts payable turnover and accounts receivable turnover, negatively affected or harmed profitability. This is consistent with the hypothesis of this study which predicts some link among working capital indicators and firms' financial performance.

Zariyawati, Annuar, Taufiq and Rahim (2009) studied how working capital affects profitability of firms in Bursa Malaysia. Out of 1628 firms drawn from six different sectors a sample of 148 firms was selected. The study used secondary data for 10 year period (1996 -2006) obtained from Data Stream database which consists of financial

statements. Ordinary Least Square (OLS) regression analysis method was used to analyze the data. Results revealed that less cash conversion periods were associated with higher profit margins. This study proposed that to create shareholders value, firm managers should be concerned with shortening CCC until optimal level is achieved. This is consistent with the expectation of this study that firm managers should be concerned with minimizing the cash conversion cycles with the intention to create more shareholders wealth.

In Sri Lanka, Niresh (2012) investigated the correlation between working capital practices and financial performance among listed manufacturing firms with the aim of identifying the nature and extent of such correlation. The population of study was composed of thirty nine manufacturing firms listed at the Colombo Stock Exchange (CSE) out of which thirty firms were selected for the study. Secondary data were collected from financial reports in the four year period extending from 2008 to 2011. Quantitative research approach was used to arrive at the study findings and data analyzed using regression method with the results revealing that, the CCC had no significant relationship with performance measures. This finding is inconsistent with the hypothesis of this study which predicts that cash conversion cycle has a relationship with financial performance of tea factories.

Locally several relevant studies have also been conducted including Ragen (2014) who studied how working capital aspects affect financial performance of manufacturing firms operating in Nairobi. The target population was 149 manufacturing firms in Nairobi County out of which a sample of 20 firms was selected. Secondary data were retrieved from audited financial reports of the sampled firms for a period of five years 2009-2013. The study used qualitative research design.

Cause and effect relationships between working capital aspects and performance were determined through regression. The study found existence of a negative relationship between firm's performance and average collection period while average payment period positively affected return on assets. The study was too narrow since it limited itself to manufacturing firms within Nairobi County excluding those from other Counties within the country.

Kundu (2014) sought to establish the relationship between WCM and profitability of Petroleum companies in Kenya. The target population was 30 petroleum companies in Kenya, out of which a sample of six large companies were selected. Secondary data was collected from annual audited financial statements of the firms over a seven year period between 2007 and 2013. The research design used was a Cross-Sectional Study and the data gathered was analyzed using descriptive and inferential techniques. Study results indicated that there was insignificant positive relationship between, day of sales outstanding, day of payable and cash conversion cycle with profitability while day of sales in inventory had a significant negative relationship. However, this study was limited to petroleum industry in Kenya which is an importer disregarding other factors from outside the country. Hence generalizing the findings to petroleum industries would be a challenge.

Kamara (2014) conducted a study to establish the relationship between components of working capital and financial performance of agricultural firms trading at the NSE. Target population of the study comprised all the seven agricultural based companies as at December 2013 and a census was conducted. Secondary data from the company's audited financial statements was collected for a five year period 2009-2013. The study adopted a descriptive research design using quantitative method

approach and data analyzed using multiple linear regression and correlation analysis. The results provided evidence that the cash conversion cycle, as a measure of WCM, negatively affects profitability. This indicates that companies can increase their profitability by shortening their accounts receivables and inventory while lengthening their payables periods. This is consistent with the hypothesis of this study which predicts a relationship between accounts receivables indicators and financial performance.

Wairimu (2015) analyzed the effect of WCM on financial indicators among three star hotels operating in Nairobi. The target population consisted of 58 hotels out of which a sample of 30 hotels was selected for the study. Secondary data were gathered from audited financial reports of the hotels for a period of ten years (2000-2015). The study adopted a causal research design and data analyzed using Eviews econometric software. The study found out that average collection period, inventory collection period and CCC were negatively related to financial performance with average payable period showing positive but insignificant effect. The analysis was limited since it covered only three Star Hotels in Nairobi County, restricting the findings that could have been realized if the entire hotel industry would have been studied.

Ndonye (2015) investigated how working capital practices affect the financial performance in a survey of the tourist hotels at the Kenyan coastal region. The target population was 44 tourist hotels listed by the Ministry of Tourism out of which a sample of 22 hotels was selected. The study utilized secondary and primary data for year 2013. Primary data was gathered from the hotels' accountants and the managers using research questionnaires while secondary data were gathered from online and print journals, books, newspapers, local authorities, magazines and the hotel's

handbooks. The study adopted a descriptive survey research and data analyzed using descriptive statistics and Pearson correlation coefficient. The research found a strong negative relationship between financial performance and number of day's accounts receivable, number of day's accounts payable, the inventory turnover period and the cash conversion cycle. The analysis only covered one year period limiting the fair findings that could have been if a longer period of time were considered in the study.

2.4 Determinants of Financial Performance of Tea Factories

Financial performance is the monetary achievement of an entity over a given period mostly a financial year, depicted in terms of overall gains and losses. Given that profit maximization is the main among profit firms it follows that firms that consistently post profits enhances their chances of survival compared to those firms posting inconsistent financial results or continuously loss making. The four factors discussed below are deemed to play a role towards the profitability of tea factories.

2.4.1 The Size of the Factory

The size of a firm is indicated by production capacity features and the resources it possesses which can be deployed to offer goods and services to customers (Jonsson, 2007). The productivity of a factory plays a crucial part in determining the types of relationships the factory has in the internal and external operating environment. Productivity has been considered as a fundamental variable in explaining firm financial performance since it may lead to advantages like economies of scale, greater bargaining power over suppliers and distributors and greater production capacity. On the contrary, it may have negative impact on financial performance if it causes diseconomies of scale (Ravenscraft & Scherer, 1987).

The larger a factory's production capacity is, the greater the influence it has on its financial performance. As productivity capacity rise, factories financial performance

increases since larger factories are able to manufacture tea more cheaply due to fixed costs spread and economies of scale over a greater amount of production. Andreas (2009) stated that high productivity shows either in lower average production costs, output quantities or superior product quality high produced using fewer inputs. Such high productivity in firms ultimately translates to greater profit margins.

2.4.2 The Location of the Company

Strategic location has been identified as one of the most important factor in business development as it is associated with raw material sourcing logistics, accessibility, infrastructure and customers catchment area. Esteban, Yancy and Christian (2010) emphasize the need for proper choice of business location be it in the urban or rural set up. Business location is determined by issues such the type of product or service the firm offers and will in turn affect the financial performance of any firm. Orloff (2002) argues that location decision have to consider the economic conditions, density of entrepreneurs' per capita and social stratification of catchment communities. Therefore, an explanation on business location considers proximity and accessibility of the firm to its sources of raw materials, infrastructural network and accessibility of the business to customers.

A factory's location determines its effectiveness in terms of green leaf collection and delivery of the made tea to the market, hence it is an important financial performance factor. If a factory is situated near the supply of its raw materials, it will incur less transport costs as compared to that which is located far away. However, transporting the made tea to the market may also lead to increased distribution costs. Kala and Guanghua (2010) found that the strategic location of most local firms goes a long way in enhancing their performance.

2.4.3 Foreign Exchange Risk

Clark (2002) defines foreign exchange rate risk as volatility in the local currency, assets value, liabilities, income or expenditure as a result of unforeseen changes in the exchange rates. The exposure arises due to the fact that home currency values of the items changes as exchange rate changes. Runo (2013) explored how foreign exchange risk influence oil companies profitability and concluded that foreign exchange fluctuations affects the overall net profit reported by a company. Indeed, Starks and Wei (2005) note that exchange rate volatility can drive an organization into financial strain and identifies exchange rate risk.

Tea factories export most of their teas to other countries and receive their payments in foreign currency at a later date hence exposing them to transaction risk. When the Kenya shilling is devalued, tea factories will receive more for the teas exported increasing their return on sales meaning that an increase in foreign exchange rate affects financial performance of tea factories positively and vice versa. Cherop (2010) in his study on exchange rate fluctuations on tea export earnings among smallholder tea factories in Kenya concluded that exchange rate fluctuation exposure has some effect on their earnings and identified positive correlations between appreciation of the Kenya shilling and earnings performance.

2.4.4 Leverage

Abor (2005) refers to leverage as the debt that entities have at their disposal for purchasing additional assets. Further, leverage is the ratio between total debt to the total assets of the firm and it indicates the extent at which total assets are financed by debts (Mwangi, Muathe, & Kosimbei, 2014). The ratio of debt to equity has far reaching implication for the firm stakeholders. It affects shareholders' dividends and the inherent risk which in turn influences the cost of funds and subsequently the share

prices (Pandey, 2007). Numerous researchers including Upneja and Dalbor (2001) have studied the debt use practices and proposed that firms' debt-equity strategies should consider interest tax shields and costs of financial stress trade-off.

Tea factories in Meru and Tharaka Nithi counties sometimes borrow to pay farmers for green leaf delivered as opposed to retaining earnings to improve their cash flows. Specifically, when factories have deficit of cash flow they are forced to borrow hence incurring huge borrowing cost. Tea factories sometimes finance their asset through borrowing while withholding cash for investment opportunities. Arguments by Jensen (1986) as well as Myers (1977) hold that debt may affect firm value either positively or negatively depending on the firm's future investment opportunities. This study holds that debt can have either positive or negative effects on financial performance of tea factories where the optimal debt structure is determined by matching the agency costs with other costs associated with such debt(s).

2.5 Conceptual Framework

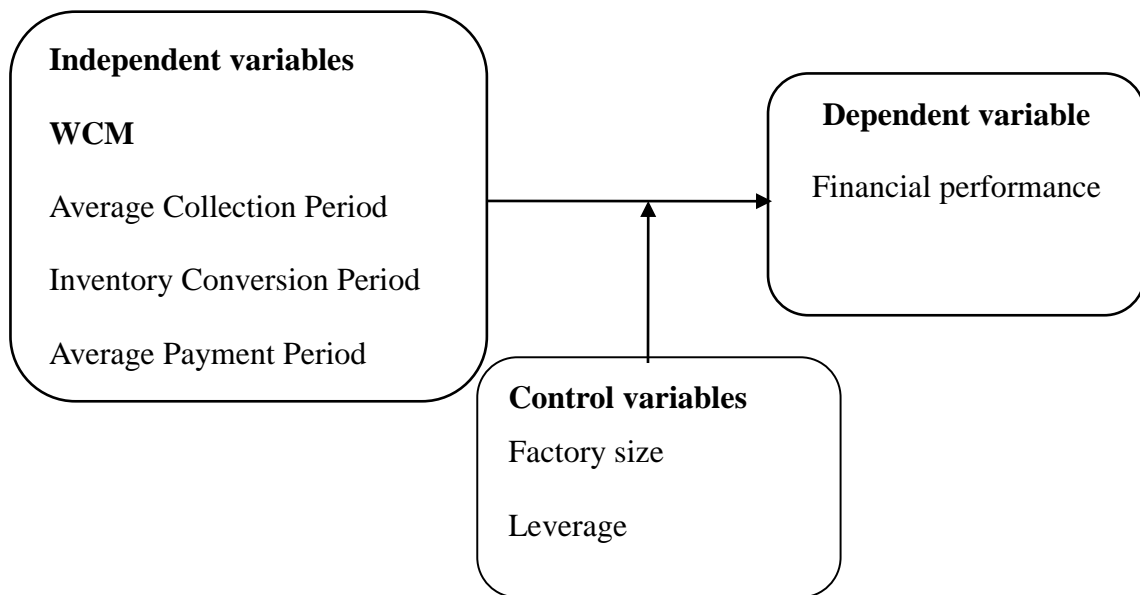
According to Miles and Huberman (1994) a conceptual framework is an illustration explaining either graphically or in narration the key issues to be studied and the supposed relationships among them. Consistent with previous studies (Wairimu, 2015; Ndonye, 2015; Kundu, 2014; Elljelly, 2004; and Niresh, 2012) the firm's financial performance is modeled as a function of the identified working capital indicators. The independent variables used in this study include average collection period, inventory conversion period, cash conversion cycle and average payment period. These are the estimated core components of working capital that need to be managed to increase efficiency and effectiveness of working capital.

It is expected from previous studies that companies can improve their profitability by minimizing their accounts receivables and inventory while raising their payables period. Cash conversion cycle, as a measure of WCM, can affect profitability such that companies can increase their profitability by shortening their accounts receivables and inventory while lengthening their payables periods. This implies that to create shareholders value, firm managers should be concerned with shortening CCC until optimal level is achieved. Accounts payables can impact profitability negatively showing that less profitable firms pay their bills after longer periods than the more profitable one. This position has been investigated by a number of scholars who have investigated the relationship between working capital management and Financial Performance of manufacturing firms with mixed and inconclusive results.

The productivity of a factory can also play a crucial part in determining the types of relationship the factory has in the internal and external operating environment. Productivity has therefore been considered a fundamental variable to be controlled in explaining firm financial performance since it may lead to advantages like economies of scale, greater bargaining power over suppliers and distributors and greater production capacity. Firm size measures can also affect industry level of profitability though the various studies done have shown great disparities being recorded among the studied industries. The ratio of debt to equity is used as a control variable since it could affect shareholders' dividends and the inherent risk which could influence the cost of funds and subsequently the share prices. The conceptual model linking the study variables is shown below.

Figure 2.1: Conceptual Model

Source: Researcher (2017)



2.6 Summary of Literature Review

This chapter reviewed theoretical and relevant empirical studies on the relationship between WCM and firm performance. Several studies, of WCM in relation with firms' financial performance, have been carried out both locally and internationally with quite mixed outcomes. Whereas some scholars argue that there exists a positive relationship between WCM and firms performance, other researchers have found evidence of a negative relationship. In addition, some researchers argue that there exists a notable relationship between WCM and firms performance, other researchers have found either no relationship or a weak and insignificant relationship. Thus previous studies are not sufficient enough to adequately explain how working capital management inter-links with financial performance in the unique context of the tea factories. Therefore, this study seeks to bridge this gap and seeks to estimate the link between working capital management (WCM) and financial performance with a case of the tea factories in Tharaka Nithi and Meru Counties.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design, the target population, data collection and analytical approach applied in this study.

3.2 Research Design

The study adopted a descriptive design method using secondary data collected from the financial statements of tea factories in Meru and Tharaka Nithi counties. According to Glass & Hopkins (1984) descriptive research comprises of collection of data explaining issues and then organizing, tabulating, depicting and describing the data. This approach is suitable as it allows analysis and relationships of variables and the findings can be generalized to a larger population.

3.3 Population

Ngechu (2004) defines population as the total collection of elements with common observable characteristics about which some inferences can be made. The population of interest in this study comprised all the 7 tea manufacturing factories in Meru and Tharaka Nithi Counties licensed by the Tea Board of Kenya and have been in operation for the duration of the study (2011-2015).

3.4 Data Collection

The study used secondary data extracted from the annual report and financial statements maintained at the respective factories using a data collection form. The data was collected for a five years period from 2011 to 2015.

3.5 Diagnostic Test.

Due to various assumptions of regression model, diagnostic test was conducted on the secondary data collected to determine its suitability for the study. This include test of normality using Shapiro–Wilk test, independence tests assessed through the Durbin-Watson test while the ANOVA test of linearity was used to check for linearity of the relationships between the independent and the dependent variables. Levene’s test of homogeneity of variances was also used to test for Homoscedasticity and Multicollinearity was tested through Variance Inflation Factors (VIF) and tolerance.

3.6 Data Analysis

The data collected was analyzed using Microsoft Excel spreadsheets and thereafter Statistical Package for Social Sciences (SPSS) software version 20 was used for data analysis. Correlation and multiple regression analysis were done to ascertain the nature of the relationship between the independent variables and the dependent variable. Regression analysis was appropriate for the study as it enables to ascertain the nature and direction of inter-linkage among two or more variables (Abudho, Kimeli, Nthiwa and Nzioki, 2013).

3.6.1 Analytical Model

The regression model was as follows:

$$Y_{it} = \beta_0 + \beta_1 (ACP_{it}) + \beta_2 (ICP_{it}) + \beta_3 (APP_{it}) + \beta_4 (CCC_{it}) + \beta_5 (FS_{it}) + \beta_6 (LEV_{it}) + e$$

Y_{it} = Financial performance of firm i at time t , ACP = Average Collection Period, ICP = Inventory Conversion Period, APP =Average Payment Period, CCC =Cash Conversion Cycle, FS = Factory Size, LEV =Leverage, β_0 = the regression constant, β_1 - β_6 = regression coefficients and e is the error term of the regression model.

3.6.2 Test of Significance

The t-tests at 95 % confidence level was used to ascertain the relationship between financial performance and each of the independent variables and F- statistic used to determine whether the regression is of statistical importance at 95 % confidence level. The coefficient of determination, R^2 and the Adjusted R^2 was used to determine how much variation in the financial performance was explained by variation in the working capital indicators.

3.6.3 Measurement of Variables

Variables	Description	Measurement
Financial performance	Capability to operate efficiently, profitably, grow and survive.	Was measured by the total payout expressed as Ksh/Kg of green leaf delivered. Total annual payout = (Initial payment + final payment) / Raw material supplied for the year
Average Collection Period	The time taken to collect receivables from customers	Account receivable/Net sales*365
Inventory Conversion Period	The duration taken to convert inventory into sales.	Inventory / Cost of goods Sold*365
Average Payment Period	The time taken to pay firm suppliers.	Accounts Payable / Cost of goods sold *365
Cash Conversion	The time-lag between payment for purchases and	Average Collection Period + Inventory Conversion Period –

Cycle	collection of sales.	Average Payment Period
Factory size	Production capacity and ability possessed by the firm	Natural Logarithm of green leaf processed.
Leverage	The proportion of a company's assets that are financed by debt.	$(\text{Short term debt} + \text{Long term debt}) / \text{Total Assets}$

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents data analysis, results and discussion of findings on the relationship between working capital management and financial performance of tea factories in Meru and Tharaka Nithi counties. The findings are shown in terms of descriptive test as while as the diagnostic tests of the statistical assumptions of the regression analysis. Data was analyzed using SPSS version 20.

4.2 Descriptive Statistics

Presented herein are the descriptive statistics for all the 7 factories in Meru and Tharaka Nithi counties for a duration of 5 years(2011-2015) which included measures of mean, minimum, maximum, standard error of estimate, kurtosis and skewness relating to the study variables.

Table 4.1: Descriptive Statistics

	ACP (In days)	ICP (In days)	APP (In days)	CCC (In days)	Factory Size (Natural logarithm of green leaf)	Leverage	Financial Performance (Ksh/Kg of green leaf)
N	35	35	35	35	35	35	35
Mean	73.0235	72.8414	29.3443	116.5091	7.1789	.0764	48.3694
Std. Error of Mean	2.73561	2.52395	2.54118	3.15327	.03288	.01492	.80348
Std. Deviation	16.18407	14.9319	15.03384	18.65501	.19452	.08829	4.75343
Skewness	-.297	-.265	.962	.350	-1.788	2.234	-.610
Std. Error of Skewness	.398	.398	.398	.398	.398	.398	.398
Kurtosis	-1.198	-.972	-.192	.117	2.523	5.252	.750
Std. Error of Kurtosis	.778	.778	.778	.778	.778	.778	.778
Minimum	42.58	45.31	12.76	80.08	6.62	.01	35.01
Maximum	97.88	98.12	66.91	163.58	7.38	.41	56.12

Source: Research Findings 2017

Table 4.1 above shows that ACP, ICP, APP, CCC, Firm size Leverage and financial performance had a mean of 73.02, 72.84, 29.34, 116.51, 7.19, 0.08 and 48.37 respectively. The results indicate that APP, CCC and leverage had positive skewedness while ACP, ICP, Factory size, and financial performance and negative skewedness.

4.3 Diagnostic Test

Regression model is built on numerous assumptions including multivariate normality, independence, linearity, homogeneity of variances and Multi-co linearity. Several diagnostics tests to test the assumptions of the variables in the study were carried out on the data as presented below.

4.3.1 Test for Normality

The study sought to establish whether the variables are normally distributed and two tests were run using the Kolmogorov-Smirnov test as well as the Shapiro-Wilk test.

The findings are presented below in Table 4.2:

Table 4.2: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Finance performance	.071	35	.200*	.967	35	.369
ACP	.142	35	.073	.938	35	.047
ICP	.112	35	.200*	.953	35	.144
APP	.199	35	.001	.874	35	.001
CCC	.091	35	.200*	.984	35	.874
Firm Size	.229	35	.000	.765	35	.000
Leverage	.300	35	.000	.692	35	.000

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Research Findings 2017

As we had only 35 components, the Shapiro-Wilk test was used and the results shown in table 4.2 indicate that all the variables had Shapiro-Wilk probability $>.05$ indicating that all the variables follow a normal distribution.

4.3.2 Test for Independence

Independence test was carried out through the Durbin-Watson (1951) statistics to test the autocorrelation in the variables. The findings are presented in Table 4.3 below;

Table 4.3: Independence test Model Summary^b

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.982 ^a	.965	.959	.96265	1.966

a. Predictors: (Constant), ACP, ICP, LEV, FS, APP

b. Dependent Variable: Finance Performance

Source: Research Findings 2017

The Durbin Watson statistic ($d=1.966$), lies amid the two critical values of $1.5 < d < 2.5$ denoting that there is no first order linear auto-correlation between the dependent and the independent variables.

4.3.3 Test for linearity

The ANOVA test of linearity was used to check for linearity of the relationship between the independent and the dependent variables. Linearity was considered significant when the computed F value for the nonlinear component was less than 0.05. Table 4.4 below outlines the results.

Table 4.4: Linearity Test

				Sum of Squares	df	Mean Square	F	Sig.
Finance performance * ACP		(Combined)		736.313	33	22.313	.699	.760
	Between Groups	Linearity		148.419	1	148.419	4.650	.276
		Deviation from Linearity		587.893	32	18.372	.576	.803
	Within Groups			31.920	1	31.920		
	Total			768.233	34			
Finance performance * ICP		(Combined)		767.137	33	23.247	21.226	.170
	Between Groups	Linearity		201.006	1	201.006	183.533	.047
		Deviation from Linearity		566.132	32	17.692	16.154	.195
	Within Groups			1.095	1	1.095		
	Total			768.233	34			
Finance performance * APP		(Combined)		725.266	33	21.978	.512	.829
	Between Groups	Linearity		96.017	1	96.017	2.235	.375
		Deviation from Linearity		629.249	32	19.664	.458	.851
	Within Groups			42.966	1	42.966		
	Total			768.233	34			
Finance performance * CCC		(Combined)		744.771	33	22.569	.962	.685
	Between Groups	Linearity		196.391	1	196.391	8.371	.212
		Deviation from Linearity		548.381	32	17.137	.730	.749
	Within Groups			23.461	1	23.461		
	Total			768.233	34			
Finance performance * Factory Size		(Combined)		514.213	23	22.357	.968	.549
	Between Groups	Linearity		61.961	1	61.961	2.683	.130
		Deviation from Linearity		452.252	22	20.557	.890	.610
	Within Groups			254.020	11	23.093		
	Total			768.233	34			
Finance performance * Leverage		(Combined)		663.266	26	25.510	1.944	.165
	Between Groups	Linearity		43.072	1	43.072	3.283	.108
		Deviation from Linearity		620.194	25	24.808	1.891	.177
	Within Groups			104.967	8	13.121		
	Total			768.233	34			

Source: Research Findings 2017

Based on Table 4.4 above it can be concluded that there is a linear relationship between dependent variables and the independent variables because the value of Sig deviation from linearity of all the variables was >0.05 .

4.3.4 Test for Multi-co linearity

Multi-co linearity is the violation of the ordinary least square's assumption of no correlation. The presence of multi-co linearity of data was assessed using the Variance Inflation Factors (VIF) and tolerance test. As presented in Table 4.5 below

Table4.5: Multi-co-linearity test

Model	Unstandardized		Standardized	t	Sig.	Collinearity	
	Coefficients		Coefficients			Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-110.517	8.652		-12.774	.000		
ACP	-.242	.013	-.825	-18.923	.000	.635	1.574
ICP	-.383	.017	-1.202	-22.517	.000	.424	2.361
APP	.244	.018	.773	13.939	.000	.393	2.547
FS	27.342	1.311	1.119	20.853	.000	.419	2.387
LEV	12.903	2.273	.240	5.678	.000	.677	1.477

a. Dependent Variable: FINANCE PERFORMANCE

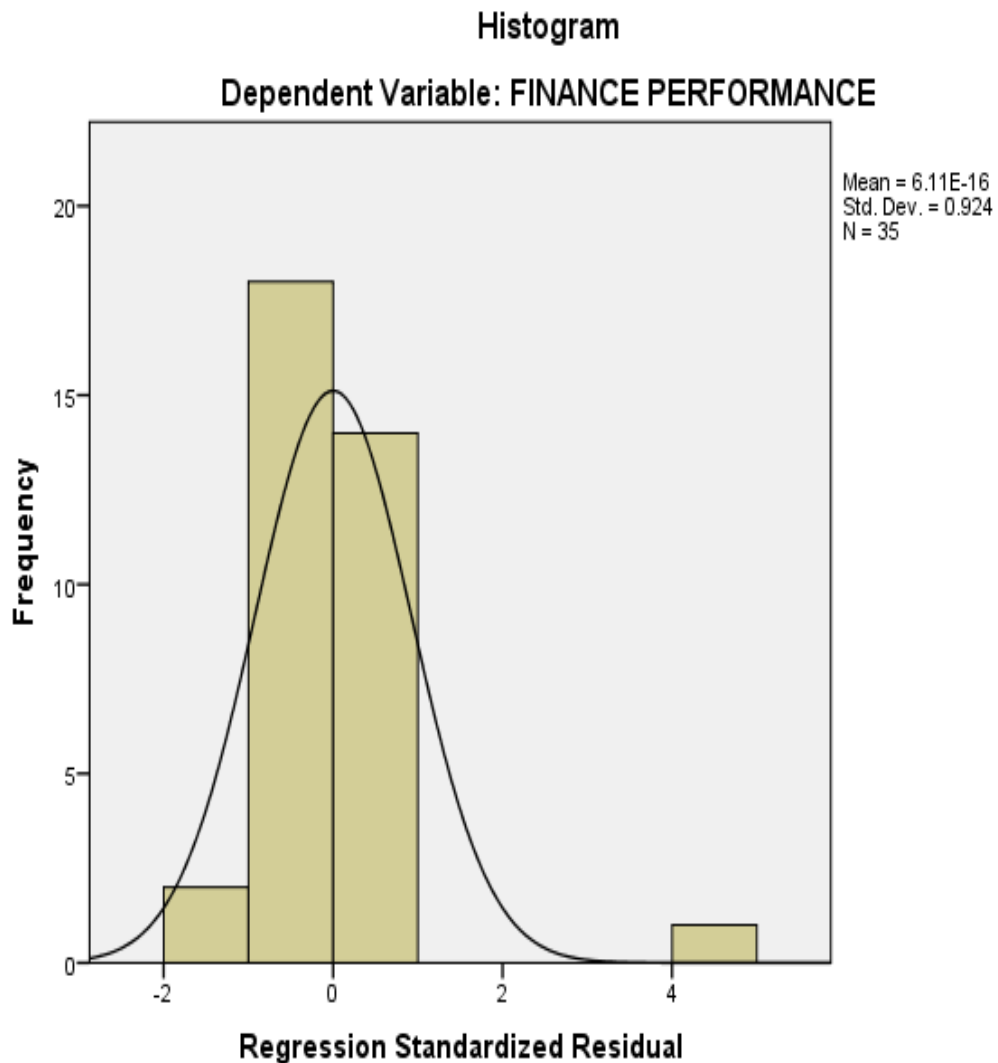
Source: Research Findings 2017

Tolerance should be > 0.1 (or $VIF < 10$) for all variables, which was achieved. CCC was excluded from the independent variable list entered. This is because it was found to have collinearity with the other independent variables.

4.3.5 Test for homoscedasticity

Homogeneity of variances was tested based on the histogram, normal P-P plot of the standardized residuals, the scatter plot of residuals as well as the Levene's test. The results are shown in Figures 4.1 to 4.3 below:

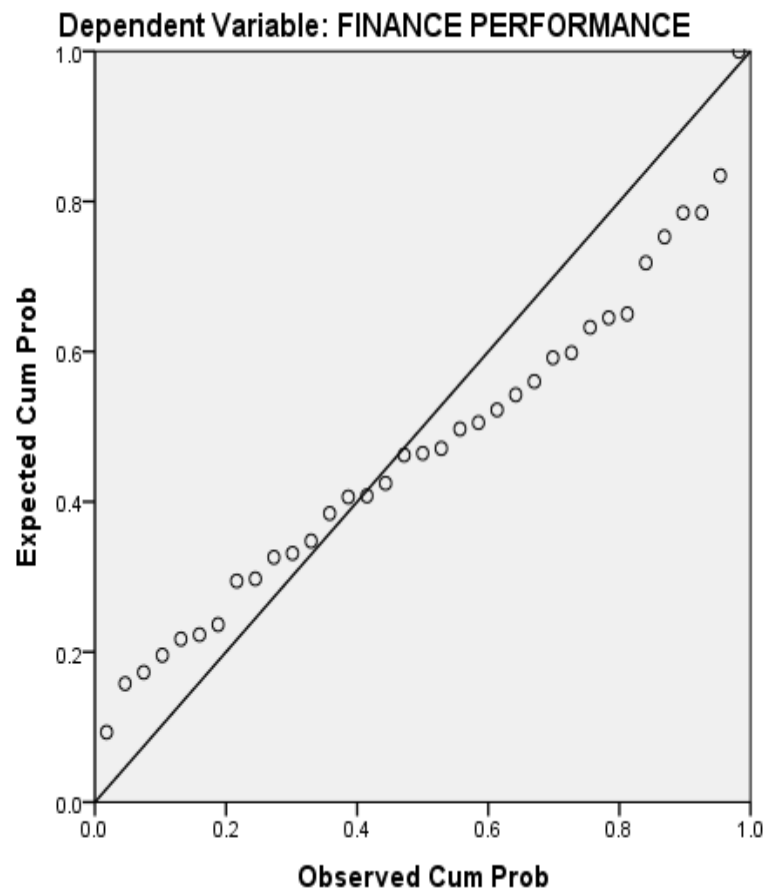
Figure 4.1: Histogram



The histogram in Figure 4.1 above shows almost a normal distribution of the variables.

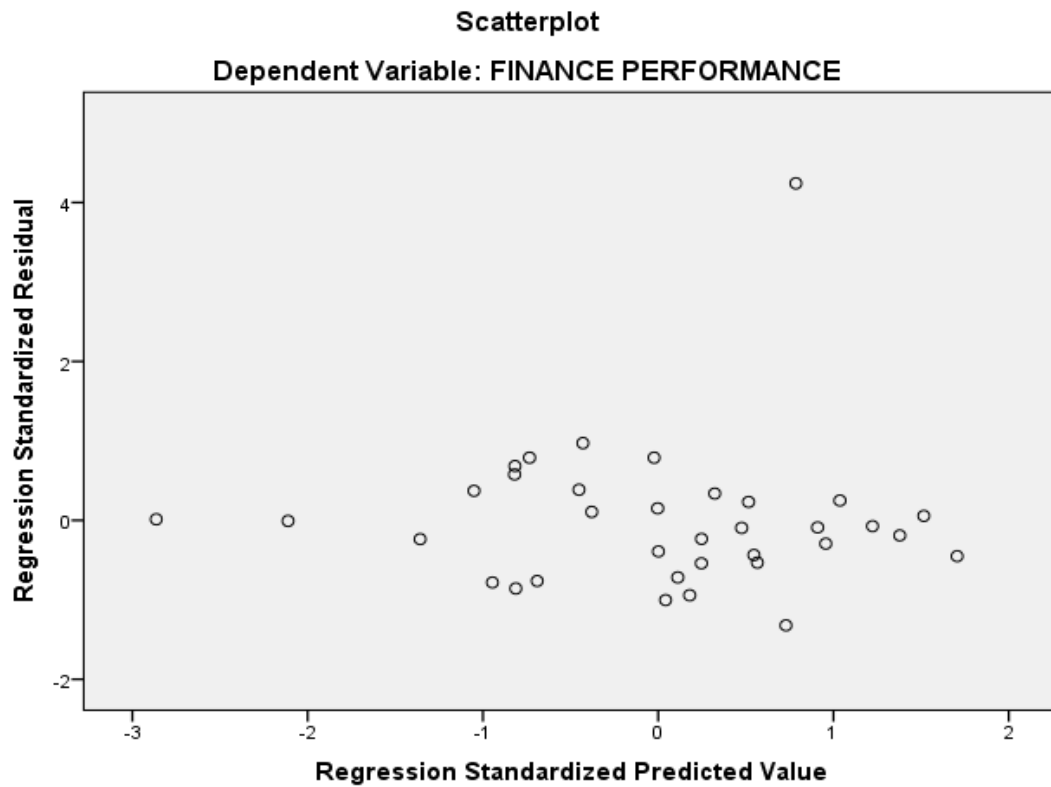
Figures 4.2: Normal P-P Plot of Regression Standardized Residual

Normal P-P Plot of Regression Standardized Residual



Figures 4.2 above shows the Normal P-P Plot indicating no evidence of heteroscedasticity in the variables

Figure 4.3: Scatterplot



Source: Research Findings 2017

The scatter plot above in Figure 4.3 shows no evidence of heteroscedasticity in the data

Table 4.6: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Finance performance	.974	4	30	.436
ACP	.210	4	30	.931
ICP	2.171	4	30	.096
APP	5.580	4	30	.002
CCC	1.548	4	30	.214
Factory Size	.844	4	30	.509
Leverage	1.757	4	30	.164

Source: Research Findings 2017

Table 4.6 above shows no evidence of heteroscedasticity as confirmed by Levene Statistics ($p > .05$) of all the study variables.

4.4 Correlation Analysis

Correlation analysis was performed to test the relationship between the variables of study. Financial performance. The findings as indicated in Table 4.7 below shows that Financial performance had statistically negative significant correlations with ACP, ICP, APP and CCC as shown by a correlation coefficient ($r = -0.440, -0.512, -0.354,$ and -0.506 respectively hence $p < .05$). The correlation was controlled for leverage and size of the firm.

Table 4.7: Correlation Analysis

	ACP	ICP	APP	CCC	Factory Size	Leverage	Financial performance
ACP	1						
ICP	.155	1					
APP	.383*	.561**	1				
CCC	.683**	.484**	-.024	1			
Factory Size	.212	.348*	-.167	.598**	1		
Leverage	.160	-.020	.209	-.046	-.473**	1	
Financial performance	-.440**	-.512**	-.354*	-.506**	.284	-.237	1

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

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

Source: Research Findings (2017)

4.5 Regression Analysis and Hypothesis testing

To determine the extent to which the independent variables of the study predicted the financial performance of the tea factories. Table 4.8 summarizes the regression model

performed with independent variables being ACP, ICP, APP and CCC with leverage and firm's size used as the controlling variables.

Table 4.8:Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.982 ^a	.965	.959	.96265

a. Predictors: (Constant), LEV, ICP, ACP, FS, APP

b. Dependent Variable: FINANCE PERFORMANCE

Source: Research Findings 2017

R² which is coefficient of determination and adjusted R², tells us how financial performance of tea factories in Meru and Tharaka Nithi counties varied with working capital management. From Table 4.8 above, the value of R² is .965. This implies that up to 96.5% of variations in financial performance can be explained by variables of working capital management. 4.5% of variations in financial performance are due to other factors. This shows that the model fittingly describes the relationship between working capital management and financial performance.

Table 4.9:ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	741.358	5	148.272	160.001	.000 ^b
	Residual	26.874	29	.927		
	Total	768.233	34			

a. Dependent Variable: FINANCE PERFORMANCE

b. Predictors: (Constant), LEV, ICP, ACP, FS, APP

Source: Research Data 2017

The analysis of variance presented in table 4.9 indicates that the regression model is statistically significant with a sig. value of 0.00 which is less than a p-value of 0.05 ($p < 0.05$). The F value of 160.001 also shows that the model is significant. The regression model, hence is statistically significant to predict the relationship between financial performance and working capital management.

From Table 4.10 below, the following regression model was established:

$$Y_{it} = - 110.57 - 0.242 (ACP_{it}) - 0.383 (ICP_{it}) + 0.244 (APP_{it}) + 27.342(FS_{it}) + 12.903 (LEV_{it}) + e$$

CCC was dropped from the independent variable list entered because it was found to have collinearity with the other independent variables.

Table 4.10: Coefficients of model variable

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-110.517	8.652		-12.774	.000
1 ACP	-.242	.013	-.825	-18.923	.000
ICP	-.383	.017	-1.202	-22.517	.000
APP	.244	.018	.773	13.939	.000
FS	27.342	1.311	1.119	20.853	.000
LEV	12.903	2.273	.240	5.678	.000

Source: Research Findings 2017

4.6 Research Findings

Descriptive statistics findings showed that financial performance among tea factories in Meru and Tharaka Nithi counties averaged 48.3694 with standard deviation of 4.75. ACP and ICP and a mean of 73.02 days and 72.84 days respectively, average payment period had a mean of 29.34, cash conversion period (116.51), factory size (7.18) while leverage and a mean of 0.764. The findings indicated that APP, CCC and leverage had positive skewedness while ACP, ICP, Factory size, and financial performance and negative skewedness.

Correlation outcomes shows that there was a statistically negative significant relationship between financial performance and ACP ($r = -0.440$; $p > 0.05$). Additional results indicate that ICP also had a significant negative relationship with financial performance ($r = -0.512$; $p > 0.05$ while CCC indicated a significant negative relationship with financial performance ($r = -0.506$; $p > 0.05$). The findings concur with those of Ndonye (2015) who investigated how working capital practices affect the financial performance in a survey of the tourist hotels at the Kenyan coastal region. The research found a strong negative relationship between financial performance and number of day's accounts receivable, the inventory turnover period and the cash conversion cycle.

The negative constant of regression shows that there is a part of financial performance in the tea factories that is independent from the variables used in the study. Regardless of the variations in working capital management, the factories financial performance was affected by other factors. This is established by a study by Runo (2013) who established that foreign exchange fluctuations affects the overall net profit reported by

a company. Guanghai (2010) in his study also found out that the strategic location of most local firms goes a long way in enhancing their performance.

The coefficient of average collection period was negative and statistically significant showing that the more aggressive the factory was in collecting their debts, the better their financial performance. The findings appear to agree with those of Wairimu (2015) who analyzed the effect of WCM on financial indicators among 30 three star hotels operating in Nairobi from 2000-2015. The study found out that average collection period was negatively related to financial performance.

The coefficient of determination (R^2) of .965 or 96.5% shows that the independent variables included in the model explained 96.5% variations in financial performance of the studied tea factories. This therefore implies that only 4.5% of changes in financial performance of tea factories was explained by other causes that were not incorporated in the model. Further, results reveal that the model was significant and useful in predicting financial performance of tea factories ($f = 160.001$; $p < 0.05$).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In the preceding chapter, the researcher presented the research data, analyzed it and drew necessary insights. In this chapter, the study findings are summarized and the necessary conclusions drawn. The chapter will also make recommendations and suggestions for further research.

5.2 Summary of Findings

The study aimed to establish the relationship between working capital management and financial performance of tea factories in Meru and Tharaka Nithi Counties. Working capital management was measured using four variables that is inventory conversion period, average collection period, cash conversion cycle and accounts payable period and. Factory size and leverage were used as control variables.

Secondary data was collected from the financial statements and annual reports maintained at the respective factories. The research used data for seven factories registered by Tea Board of Kenya in Meru and Tharaka Nithi counties for a five year period (2011-2015). Descriptive analysis, diagnostic tests, regression analysis and correlation analysis were conducted to achieve the objective of the study using SPSS version 20. The diagnostic tests was carried out comprised of normality, independence, linearity, multicollinearity and homoscedasticity.

The study showcased there exist a significant negative relationship between financial performance and average collection period among the tea factories in Meru and Tharaka Nithi counties. This indicates that a reduction in time taken to collect account receivables results to improved financial performance and vice versa. Further a

significant negative relationship between inventory conversion period and financial performance was also evidenced denoting that a reduction in inventory conversion period led to increased financial performance and vice versa. Average Payment Period had moderate significant positive relationship with financial performance meaning that factories that delayed in paying their creditors performed better. The study also established that Cash Conversion Cycle indicated a significant negative relationship with financial performance meaning that the lesser time the factories took to convert their inventory into cash the greater the shareholders return and vice versa. However CCC was excluded in the regression model since its inclusion would result to a high degree of multicollinearity among the working capital variables.

5.3 Conclusions

The objective of the study was establish the relationship between working capital management and financial performance of tea factories in Meru and Tharaka Nithi Counties. The independent variables included in the model explained 96.5% variations in financial performance of the studied tea factories. This therefore implies that only 4.5% of changes in financial performance of tea factories was explained by other causes that were not incorporated in the model with results showing that the model was significant and useful in predicting financial performance of tea factories ($f = 160.001$; $p < 0.05$). The negative constant of regression showed that regardless of the variations in working capital management, the factories financial performance was affected by other factors.

Results from regression analysis reports average collection period, inventory conversion period, and account payable period affect the working capital management of tea factories. The study indicates that financial performance of tea factories depends upon management of working capital components. This study found a

significant negative relation between average collection period and inventory conversion period with financial performance. The negative relationship reveals that factories ought to collect receivables quickly because it's better to obtain inflows earlier than later in order to improve financial performance. On the other hand financial performance is positively related with average collection period meaning it is profitable to hold payables as long as the relationship with your customers is not affected and invest the funds into gainful projects

The conclusions of this study concur with those of Kamara (2014), who conducted a study to establish the relationship between components of working capital and financial performance of agricultural firms trading at the NSE and concluded that companies can increase their profitability by shortening their accounts receivables and inventory while lengthening their payables periods. This is consistent with the hypothesis of this study which predicts a relationship between accounts receivables indicators and financial performance.

5.4 Recommendations

The study found that effective management of working capital results to improved financial performance among tea factories under review. Based on the findings that average collection period negatively impacts on the financial performance of tea factories the research recommends effective management in the strategies guiding the payment of accounts receivables. Tea factories will increase their returns through quick collection of cash from credit sales. Average payment period on the other hand showed a positive relationship with financial performance meaning tea factories should take advantage by delaying settling obligations from credit purchases as long as their customer relationship is not compromised. Tea factories should engage with those suppliers who permit lengthy credit period and those customers who make

prompt payment. The ultimate objective of the factories should be to maximize liquidity while safeguarding their financial performance.

The findings reveals that financial performance is negatively related to inventory conversion period. It is recommended therefore that managers of tea factories should aim at reducing the inventory turnover period as much as possible. This will help tea factories reduce the costs linked with inventory holding, such as warehousing expenses and tying up of cash in inventories that could be invested in profitable projects. Tea factories therefore must make a trade-off between product superiority and haste of production.

The negative constant of the regression model reveal that there exists part of financial performance in tea factories that is independent from the working capital management variables employed. This study further recommends that apart from effective working capital management, tea factories should identify other factors and include them in their strategies to increase their financial performance.

5.5 Limitations of the Study

The study looked at the relationship between financial performance and working capital management of tea manufacturing factories in Meru and Tharaka Nithi Counties licensed by the Tea Board of Kenya. The findings are thus related to tea manufacturing factories in Meru and Tharaka Nithi Counties only hence any effort to generalize the results to other areas outside this scope ought to be thought carefully. The analysis of the results and conclusion made could have been unlike had the entire tea manufacturing factories in Kenya been included in the study. The population could also have an impact on the findings therefore they should not be considered assumed perfect.

Another limitation of the study was insufficient time taken to scrutinize details and in-depth analysis that a more extensive research needed due to the amount of data involved. With plenty time, detailed and thorough tests could have been undertaken to find out whether the conclusion made could have been different with increased variables and study population size.

There are other factors that may influence negatively on financial performance hence Working Capital Management (WCM) need not be applied in isolation. In regards to this, more studies that incorporate other factors which may touch on financial performance as well as working capital management would be helpful and objective to the management of tea manufacturing factories in Meru and Tharaka Nithi counties.

5.6 Suggestions for Further Research

As the study was carried out in Meru and Tharaka Nithi counties only, it is not prudent to generalize the findings to other tea manufacturing factories in Kenya. Further research should be done on working capital management in the rest of the counties in Kenya so as to be able to generalize the results. Studies should be done involving other firms other than the tea manufacturing industry as different sectors have different working environment. This might affect the findings on the relationship between working capital and financial performance.

Due to time constraints, a lengthier duration of time should be assigned for further research in order to acquire extensive analysis on the relationship between working capital management and financial performance of tea manufacturing factories. The research only looked at five years hence a further research can be carried out to establish the relationship between financial performance and working capital

management for a lengthy period. More studies that incorporate other variables that touch on financial performance of tea manufacturing factories would be necessary in establishing what influences financial performance of tea industry.

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APPENDICES

Appendix I: List of tea manufacturing factories in Meru and Tharaka Nithi counties licensed by the Tea Board of Kenya and have been in operation since 2011.

1. Kiegoi Tea Factory
2. Michimikuru Tea Factory
3. Imenti Tea Factory
4. Githongo Tea Factory
5. Kinoro Tea Factory
6. Kionyo Tea Factory
7. Weru Tea Factory

Source: (Tea Board of Kenya, 2014)

Appendix II: Data Collection Form

Company:

Item	2011	2012	2013	2014	2015
Raw material					
Receivables (account receivable)					
Sales					
Inventory					
Cost of Sales					
Payables (accounts payable)					
Purchases					
Raw material final payment					
Raw material initial payment					
Short term loans					
Long term loans					
Total Assets					

Appendix III: Summary of Data Collected for the Study

Factory	Year	ACP	ICP	APP	CCC	Factory size	Leverage	Financial Performance
Githongo	2011	56.09	45.31	16.46	84.94	7.03	0.05	55.5
Kionyo	2011	42.58	77.65	12.87	107.36	7.22	0.07	50.5
Michii	2011	49.88	82.66	20.99	111.55	7.25	0.03	49.3
Kiegoi	2011	82.13	54.02	30.55	105.6	6.71	0.41	44.41
Weru	2011	54.39	69.68	20	104.07	7.13	0.03	50.2
Imenti	2011	69.77	50.01	19.63	100.15	7.24	0.01	55.9
Kinoro	2011	84.69	53.6	21.15	117.14	7.2	0.04	50.5
Githongo	2012	49.6	55.14	17.53	87.21	7.06	0.03	54.01
Kionyo	2012	85.96	77.65	32.12	131.49	7.25	0.25	49.02
Michii	2012	91.31	73.04	23.94	140.41	7.26	0.06	45.21
Kiegoi	2012	71.3	47.48	19.63	98.75	6.76	0.2	46.63
Weru	2012	63.55	59.79	24.02	99.32	7.13	0.05	52.53
Imenti	2012	84.33	73.17	43.05	114.45	7.32	0.02	56.12
Kinoro	2012	55.81	65.24	18.14	102.91	7.22	0.03	53.45
Githongo	2013	71.3	50.73	23.63	98.4	7.17	0.01	54.62
Kionyo	2013	75.79	81.59	12.95	144.43	7.35	0.18	47.3
Michii	2013	87.85	97.8	58.57	127.08	7.28	0.03	43.75
Kiegoi	2013	54.91	92.08	66.91	80.08	6.7	0.23	43.82
Weru	2013	87.27	81.98	54.37	114.88	7.27	0.04	49
Imenti	2013	54.33	98.12	42.65	109.8	7.36	0.1	50.5
Kinoro	2013	65.73	75.72	13.99	127.46	7.32	0.02	48

Githongo	2014	45.33	90.56	24.47	111.42	7.13	0.01	45.7
Kionyo	2014	95.73	87.66	19.81	163.58	7.32	0.06	38.5
Michii	2014	78.25	82.97	36.45	124.77	7.34	0.01	47.6
Kiegoi	2014	82.36	75.28	51.57	106.07	6.62	0.05	35.01
Weru	2014	97.88	81.06	46.41	132.53	7.22	0.03	43.2
Imenti	2014	89.51	80.48	51.34	118.65	7.32	0.07	50.5
Kinoro	2014	94.21	83.14	25.89	151.46	7.33	0.03	41.8
Githongo	2015	54.45	63.04	12.76	104.73	7.14	0.02	51
Kionyo	2015	82.24	78.9	30.04	131.1	7.38	0.03	48.2
Michii	2015	80.73	86.96	30.15	137.54	7.31	0.05	45.1
Kiegoi	2015	92.34	90.03	52.61	129.76	7.25	0.22	46.7
Weru	2015	86.94	55.41	15.66	126.69	7.2	0.1	48.3
Imenti	2015	71.65	61.05	21.28	111.42	7.24	0.07	52.5
Kinoro	2015	65.63	70.45	15.46	120.62	7.23	0.02	48.5