

**WORKING CAPITAL MANAGEMENT AND FIRMS'
FINANCIAL PERFORMANCE IN TEA PROCESSING
COMPANIES IN NANDI COUNTY, KENYA**

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DECLARATION

I declare that this Research Project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

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D61/61345/2013

This Research Project has been submitted for examination with my approval as the University Supervisor

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DEDICATION

This research project is dedicated to my wife Monicah and my family at large for their inspiration, encouragement, understanding and prayers towards the successful completion of this course. I pay glowing tribute and gratitude to the Almighty God who has given me the wisdom to undertake this course.

ABSTRACT

Working capital management entails monitoring and utilizing of the two components of working capital, current assets and current liabilities, to ensure the most financially efficient operation of the company. The objective of the study was to determine working capital management on firm financial performance of tea processing firms in Nandi County, the study was based on Pecking Order Theory, agency theory, aggressive theory and cash conversion cycle, the population of interest in this study consisted of 9 tea processing firms in Nandi County. The study adopted secondary data collection method obtained from financial statements for the last five years (2011 to 2015). Descriptive statistics was used to arrive at the findings of the study, Correlation and regression analysis were used in the study to identify the nature and extent of the effect of working capital management on firms' financial performance. The data were analyzed by use of SPSS package to produce the correlation as well as regression analysis. The study concludes that efficient management and effective control of inventories help in achieving better operational results and reducing investment in working capital. Effective management of receivables lead increase in firm's size, realized through increased total sales consequently increasing recycling of funds and generating higher profitability, improved liquidity will enabled the tea processing firms to meet its financial obligations, tea processing companies that have low average return on asset and return on equity have negative cash conversion cycle. Larger tea processing firms have advantages such as a greater possibility of enjoying economies of scale enabling more efficient production, a greater bargaining power over both suppliers and distributors or clients and that a high debt-to-equity ratio indicates that tea processing firms may not be able to generate enough cash to satisfy its debt obligations. The study recommends that Tea processing companies should maintain leverage ratio at an optimal level. This is based on revelation that too much debt can be dangerous for firms and its investors as uncontrolled debt levels can lead to credit downgrades while at the same time low debt-to-equity ratios may also mean that a company is not taking advantage of the increased profits that financial leverage may bring. Tea processing firms should create a credit collection policy spelling out the practices and procedures used by the company to collect overdue accounts receivable.

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LIST OF ABBREVIATIONS / ACRONYMS

ACP	-	Average Collection Period
AP	-	Average Payments
APP	-	Average Payments Period
AFFA	-	Agriculture Fisheries and Food Authority
ASE	-	Athens Stock Exchange
CCC	-	Cash Conversion Cycle
EATTA	-	East Africa Tea Trade Association
EBIT	-	Earnings before Interest and Tax
FS	-	Firm Size
ICC	-	Inventory conversion cycle
ICP	-	Inventory Conversion Period
ISE	-	Istanbul Stock Exchange
KTDA	-	Kenya Tea Development Agency
MALF	-	Ministry of Agriculture, Livestock and Fisheries
NPV	-	Net Present Value
NSE	-	Nairobi security exchange
P	-	Price
ROA	-	Return on Assets
ROE	-	Return on Equity
ROI	-	Return on Investments
SME	-	Small Microenterprise
SSEs	-	Small Scale Enterprises
TCE	-	Transaction Cost Economy
TSE	-	Tehran Stock Exchange
TRFK	-	Tea Research Foundation of Kenya
WC	-	Working Capital
WCM	-	Working Capital Management

CHAPTER ONE: INTRODUCTION

1.1 Background

Working capital management encompasses monitoring and utilizing of current liabilities and current assets which are the two components of working capital, in order to ensure most financially operation of the businesses. The working capital structure and liquidity analysis is a key role in the process of wealth maximization of shareholders Shin and Soenen (1998). WCM helps in ascertaining the success or failure of firms in terms of financial performance because of its effect on firm's liquidity and profitability Vahid et al (2012).

The conservative theory of working capital is characterized by the management of high amounts of inventories, accounts receivable, marketable securities, cash and use of long term capital to fund all long lasting asset requirements to satisfy seasonal demands. Aggressive theory of managing WC emphasizes management of smaller holdings of liquid cash, inventories, marketable securities, accounts receivable and financing all seasonal. The moderate approach lies between the aggressive and conservative approaches where short term assets are funded using short term liabilities and that fixed assets are funded by long term liabilities (Brigham, et al. 1999).

The economy of Kenya is largely dependent on agriculture. Tea industry in Kenya acts as an important industry in the agriculture sector. Tea exports amounted to about KShs96 billion in 2011. Waithaka (2012), making tea the leading foreign exchange earner. Tea growing and manufacturing activities are majorly undertaken in the rural set-ups and contribute significantly to the economic development of the rural communities and development of rural infrastructure. Nandi County is one of the

leading counties in tea processing and it's an important industry that improves the living standard of most people in the rural area within Nandi County.

1.1.1 Working Capital Management

Working capital is funds required to meet daily operations of the organization business, which are the short-term drivers of an organization (Harris, 2005). Atrill (2006) defined net WC as a net of the current assets and liabilities that continuously flow into and out of the business that are important for daily operations.

Surveys have shown or indicated that managers utilize substantive time on issues pertaining WC decisions. The purpose is that current assets are repetitively being transformed to other forms of assets (Rao, 1989). Companies are responsible for paying Current liabilities when they are taken into account on a timely basis.

1.1.2 Firms' Financial Performance

Firms' financial performance is how a firm can utilize its business assets in order to earn revenues Brigham et al (1999). It's a measure of a firm's general financial strength within certain duration; it can be applied to compare like companies within equal sector or to relate sectors in totality. It focuses on three specific areas which include accounting measures, market measures and some firms employ both of them Richard et. al (2009).

Accounting measurement involves calculation of financial events in form of hours, money and other items or a quantifiable element that is used to associate and assess accounting data and the several accounting measurements in order to provide a favorable view of the general health of the firm by permitting varying methods of evaluation and comparison (Ittner and Larcker 2008). Market based measures are

policy tool that incorporate price and markets variables in order to eliminate adverse environmental externalities.

1.1.3 Tea Processing Companies

Tea was first started in Kenya in the year 1903 by GWL Caine and was planted in Limuru, Commercialisation of tea first happened in the year 1924. In tea production, Kenya is placed position three after China and India, Kenyan tea tops as foreign exchange earners. Currently most multinationals are embarrassing the used of plucking machines which has contributed in provision of employment to many Kenyan especially in rural areas.

The role of managing the SSH lies with the KTDA and currently KTDA has sixty six tea factories serving more than 600,000 SSH cultivating more than 120,000 ha, placing Kenya in third position in tea production Waithaka (2012). Tea in Kenya is controlled by MALF who have a directly responsible to the government, AFFA are the Tea Directorate who oversees tea industry in Kenya, KTDA who are agents of small scale trades, EATTA facilitates tea trade in southern Africa and East Africa and Tea Research Foundation of Kenya (TRFK) who carry out tea research.

There should be sufficient planning and efficient management of the working capital to ensure that excess funds generated during favourable weather conditions or season are optimally invested as this will prevent the closure of business, enhance profitability which will at the same time ensure that the firm's value is maximized, and working capital management cannot therefore be underestimated.

1.1.4 Working Capital Management and Financial Performance

Jose et al. (1996) established that there exist a significant statistical proof for an inverse relationship between aggressive liquidity management and return on assets

due to a fast Cash Conversion Cycle for manufacturing firms. Therefore, a faster cash flow was evident to be associated to greater profitability.

There is a considerable relationship between Cash Conversion Cycle and profitability but put more weight on avoiding sub optimization and improved for one company on the behalf of the other companies in value chain. They emphasized that Cash Conversion Cycle should be examined strategically from a supply chain perspective. Moreover they stressed that squeezing buyers and suppliers or distributors on good payment terms for the focal firms only earns short term returns. Jose (1996)

Efficient working capital management is important for attaining both profitability and liquidity of a company or business. An inefficient working capital management may result to tie up of funds in idle assets hence, reducing the profitability and liquidity of a firm. Padachi (2006)

1.2 Research Problem

Value of a firm can be maximized by having an optimal level of WC (Deloof, 2003). According to (Afza & Nazir, 2007) companies attempt to keep a optimal level of WC that maximizes value Efficient management of WC is necessary for the survival and success of the tea industry that needs to be more emphasized in order to contribution to economic growth and improve performance (Padachi 2006). Management of WC targets at having an ideal balance in each of the WC components, which are receivables, inventory, payables and cash since it's an ultimate portion of the general corporate strategy in order to build value for the firm, and also it contributes towards competitive advantage (Deloof, 2003). Too much investment in WC may provide low profitability and on the other hand lower investment may bring in poor liquidity Waithaka (2012).

However, Tea industry in Kenya which is one of the most important industry that contributes to the country's economic growth in the recent past has experienced low performance which has led most tea firms to reduce cost by downsizing its operation, reduction of payment of tea bonus to small scale farmers and still tea firms are finding it difficult to give their employees salary increment that lead to strikes in major tea estates in Kenya. The low performance was brought about by unfavorable economic conditions revolving around the tea industry Gesimbaet. al (2015). In order to have a competitive edge or even sustain operations in such situation, working capital should be managed in the most prudent manner.

In a study done by Ragen (2014) on the relationship between WCM and financial performance of manufacturing companies in Nairobi County established that there exist a negative association between firm performance and average collection period. Similar study was done by Chebet (2015) and she found out that working capital management as a significant component of financial performance since it directly affects the profitability and liquidity of the company Management.

Studies conducted in Kenya to explore working capital management on firms' performance have not addressed working capital management in tea processing firms, it's important to point out that this is one of the leading industry in the country bearing in mind that it contribute immensely in the country's exports, Local studies on WCM in tea industry have majored on those agricultural companies listed in NSE the study represented a small percentage of tea processing firms and for which it exclude companies not listed in NSE. It is against this context that this study was carried out. This study sought to reduce the gap by answering the following research question: What is the effect of WCM on financial performance of tea processing firms in Nandi

County? And to what extent does each working capital components affects financial performance of tea processing firms in Nandi County.

1.3 Research Objective

The objective of the study was to determine working capital management on firm financial performance of tea processing firms in Nandi County.

1.4 Value of the Study

The study will make valuable contribution to the following areas and people;

The study will enable management of tea processing firms to strengthen management of working capital components. The firms will be in a position to appreciate the key role and importance of WCM as a measure of improving firm's performance.

Tea board of Kenya as a regulatory body will be in a position to know the extent to which working capital affects the performance of tea processing firms and hence provide regulatory measures to cap chances of failure as a result of poor management of working capital.

Scholars and academicians can use findings of the study to build on the theory of WCM and its utilization in firm's performance.

CHAPTER TWO: LITRATURE REVIEW

2.1 Introduction

This chapter focuses on theoretical and empirical literature. Literature was reviewed from various sources including internet sources, books, journals, working papers, periodicals, and reports from various sources.

2.2 Theoretical Review

The objective of WCM is to give enough support for continuous functioning of the normal business operations of a firm Bringham et al (2007). WCM focuses on the management of current liabilities and current assets of companies Guthman et al (2011). Efficient WCM increases company's cash flow hence increasing return to shareholders and firms' growth opportunities. There are many theories that relate to the management of working capital and include the following.

2.2.1 Pecking Order Theory

This theory is based on information asymmetry; it says that the cost of funding of investment increases with asymmetric information. It was first developed by Donaldson in 1961 and it was further improved by Nicolas Majluf and Stewart C. Myers in (1984), and that financing emanates from diverse sources that includes; new equity, debt and internal funds. Finance managers have a better understanding of company's risks, prospects and value than outside investors.

The theory states that firms mostly prefer internal financing and the use of debt instead of common stock in case of the need for external funds Ogundipe et al (2012). Internally generated funds have no transaction costs and the use of debt signals positive information while the use of ordinary shares signals negative firm information Rheman et al (2007).

The theory explains the maintenance of high levels of cash reserves and most liquid assets that ensure obligations are met as they arise and avoid the use of external funds Cooper et al (2003).

By using a conservative financing approach, a firm gets easy access to credit and is seen as safe by potential investors. According to the theory, firms should use an aggressive WC policy by maintaining a smaller level of current assets and large supplier financing. This ensures a high level of internal funds to finance the firm's operations without issuing of debt or equity. The pecking order theory is relevant in the management of WC of firms operating in highly uncertain environments, as the managers responsible should be able to trade-off between the conservative and aggressive financing strategies to optimize a firm's performance.

2.2.2 Agency Theory

Jensen and Meckling (1976) originated this theory; it explains the contracts, and relationships that prevail in a business among the different stakeholders like shareholders who are the principals and the managers who are the agents. Despite the shareholder objectives that managers are supposed to achieve, most do not meet this objectives because of non-rational opportunistic behavior of the most manager's which brings agency conflicts or problems (Jensen, 1994). To reduce agency conflicts or problems the principals as the owners of business are forced to incur in agency cost in order to monitor the operation of managers, agency cost is the monitoring expenses used by the owners of business, bonding expenditure and the outcome loss because of separation of ownership and control Jensen (1986).

This theory is important especially to tea processing firms whose majority of shareholders (farmers) do not run day to day operation of the business hence

managers as agents may make decisions that may lead to inappropriate management of working capital.

2.2.3 Aggressive Theory of Working Capital

The aggressive theory is applied where the firm plans to undertake high risk and where short-term finances are used to finance fixed and current assets Rao (1989). This approach is characterized by low interest rates. However, it's important to note that that the risk related with long-term debt is lower than short-term debt, it applies mostly to companies or firms working in a stable economy. A company with an aggressive WC policy provides short credit periods to their customers, has a small amount of cash in hand and holds minimal inventory.

2.2.4 The Cash Conversion Cycle Theory

The CCC operates as an inclusive measure of WC as it indicates the duration of time between expenditure for the acquisition of raw materials and the collection of sales of finished goods (Padachi, 2006).

2.3 Empirical Studies

Mugo (2014) conducted a study on association between WCM and financial performance of petroleum and energy firms listed at the NSE, data was analyzed by adopting descriptive statistics for the period of 2003 to 2012. The study found out that the management of WC in energy and petroleum firms in Kenya is not a major factor that influences the profitability in the sector.

Wanjiku (2013) studied the effect of WCM practices on the financial performance of SME in Kenya. Her objectives were to establish the WCM practices on financial performance of SMEs in Kenya. She sampled 100 SMEs for the period (2009-2010). Eighty nine responses received. She asserted that most of the SMEs have not formed a

formal WCM policy. The study concluded that there is a significant positive association between financial performance and WCM of SMEs in Kenya.

Nyamao et al (2012) did a study research to find out the effects of WCM practices on the financial performance of (SSEs) in Kisii South Sub County. They took up a cross-sectional review research design; they found that WCM practices were minimal amongst SSEs since they do not use acceptable WCM practice or routines.

Mathuva (2009) did a study research on the impact of WCM on financial performance of companies listed in NSE. He used a sample of 31 firms listed in NSE and the data was collected between 1993 to 2008. The research established that, an adverse association exists between the duration of time when the cash is received from the clients and firms productivity. Companies that are profitable enjoy smaller time for the collection of cash from their clients in comparison to less profitable ones.

Ogundipe, et al (2012) undertook a study to examine the influence of WCM on market value of companies. This study used Tobin Q, ROI, EBIT, and ROA as the dependent variables o the other hand the independent variables were CCC, total debt to total asset ratio, current liabilities to total asset ratio, current ratio and current asset to total asset ratio. By using and multiple regression analysis and correlation techniques, they indicated that there is a negative association among market valuation, firm's performance and CCC. They concentrated on short-range financing choices.

Vahid,et al (2012) did a research study to ascertain the influence of WCM policies on the firms' profitability and value of companies in the TSE and they adopted panel data. The results of the study established that application of an aggressive financing policy and conservative investment policy contains an undesirable impact on company's value and profitability.

Sen. M (2009) conducted a study on listed firms in ISE (Istanbul Stock Exchange) in order to check out the relationship with the working capital. Based on the study, there is a negative association amongst variables of WC. The research pointed out the key role of the directors of finance act as catalysts or moderators to improve the output and performance of the company.

Lazaridis and Tryfonidis (2006) used a sample of 130 firms listed in the (ASE) between 2001-2004. They established that there is a negative relationship between CCC and gross operating profit. They further reveal that managers can generate more profits for their business by handling correctly CCC and keeping accounts receivable, accounts payable and inventory to an optimal level.

Afza and Nazir (2007) established a negative relationship between the profitability measure of firms and financing policies and degree of aggressiveness of working capital investment for 208 public limited companies listed in Karachi Stock Exchange between the years 1998-2005. They measured profitability and Tobin Q as a firm performance. Profitability and Tobin Q and produced almost similar results.

Şamiloglu and Demirgüneş (2008) conducted a study of listed manufacturing firms in (ISE) for the years 1998-2007. They sampled 5,843 firms; they did analysis of the firms by adopting the use of multiple regression models. Empirical evidence of the study indicated that accounts receivables period, inventory period, leverage and impacts firm profitability negatively; at the same time growth in sales impacts positively firm profitability.

2.4 Conceptual Framework

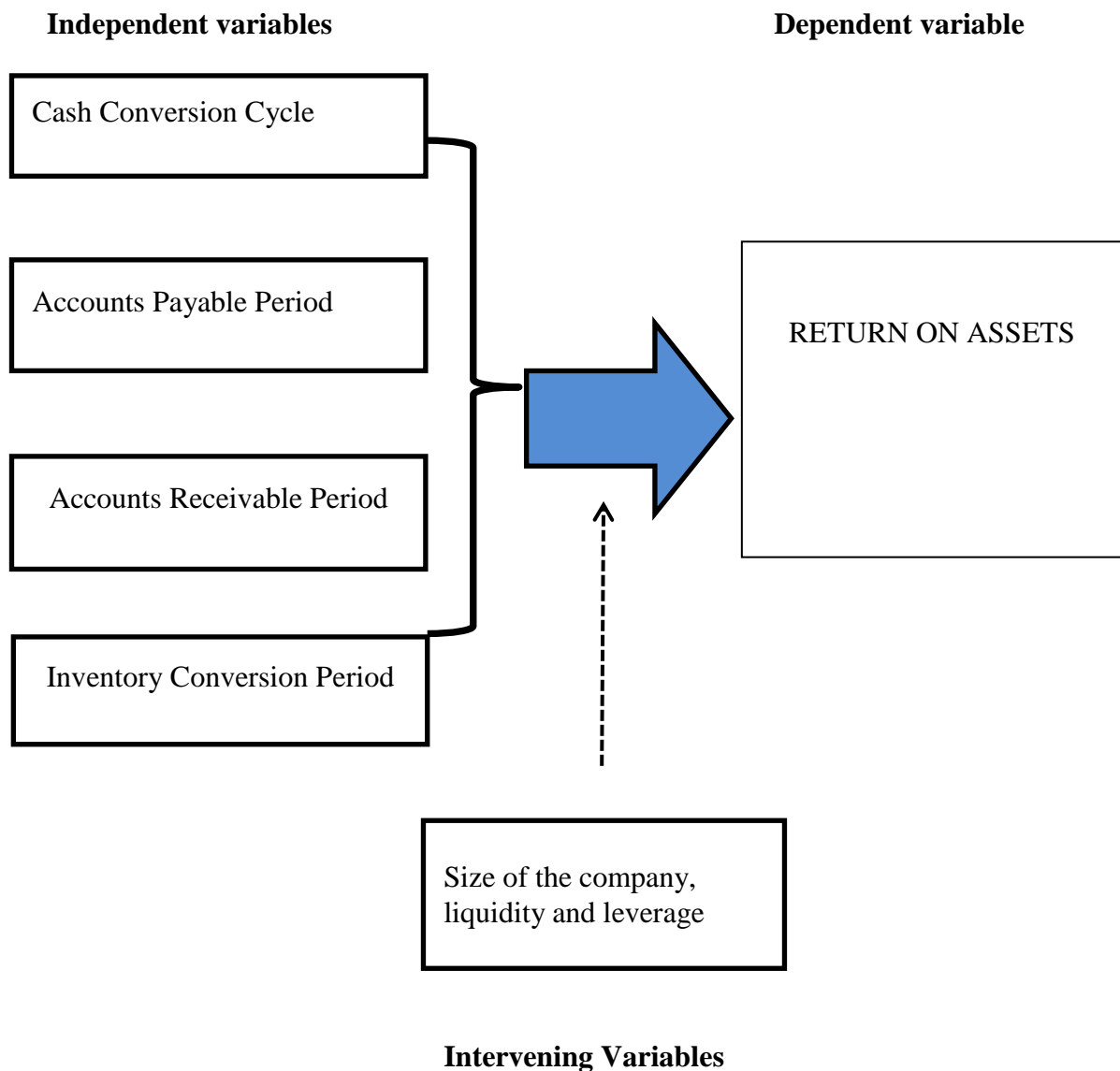


Figure 2.1: Conceptual Framework

Source: Author (2016)

2.5 Summary of the Literature

WCM is an important aspect of finance because it directly influences the liquidity; profitability and firm's performance of a company and that efficiency of a company's WCM have lasting effect on company performance.

Working capital refers to a company's current liabilities and current asset. An optimal level of WCM is required to contribute and enhance the creation of a firm's value

positively. In order to arrive at an optimal WCM, managers of the firm should be in a position to manage the trade-off between liquidity and profitability.

A review of prior literature reveals that WCM has effect on the performance, liquidity and profitability of a firm. It has been established that different sector companies have varying levels of working capital and they will always work towards maintaining the optimal level of working capital in the short term. From the literature it is evident that none of the studies has been in a position to come up with a model that will aid managers in establishing an optimum WC under various or different industries.

Few studies have been done in the Kenyan context majoring on WCM; from these empirical studies it's shows that much has not been done to determine the WCM on firms financial performance. Therefore, there is need to determine if there exists any association between WCM and financial performance specifically in tea industry in Nandi county.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter examines the research methodology and design of the study. It highlights the research design variables and provided a bigger view of the selection and description of the target population. The data collection techniques, research instruments and data analysis procedures that was used in this study are explained in depth in this chapter.

3.2 Research Design

The research was conducted using a descriptive research design which involved analyzing of secondary data. The required information was acquired from annual financial statements which was secondary source backing my research. Descriptive study tries to define or describe an item, often by generating a profile of a set of people, events or problems through the catering of data and classifying the frequencies on research variables. Cooper and Schindler (2003)

3.3 Population

A population of study is a specified set of services, group of things, people, households, firms, elements or events which were being examined Ngechu (2004). (Mugenda&Mugenda, 2003) stated that a population is an entire group of objects, events, or individuals containing similar attributes that follow to a given identification. The population of study composed of 9 tea processing firms in Nandi County. *Appendix 1*

3.4 Data Collection

Data collection entails assembling of empirical justification or facts in order to have more knowledge about a phenomena, answer issues or questions that led to

undertaking of the research. The study used secondary data collection methods which were obtained or collected from financial statements for the last five years (2011 to 2015), and it included latest audited annual reports. Secondary data was the main source of data collection and data collection sheet was used. *Appendix 2 and 3*

3.5 Data Analysis

Data analysis is concern with arranging, accounting for and elaborating further on the data; that is, making an insight of the data in terms of respondents and defining the situation by taking in to account themes, patterns, regularities and categories Cooper et al (1992). Descriptive statistics was used to reach at the findings of the research.

Regression analysis and correlation was adopted in the study to point or show the extent and them nature and of the effect of WCM on firms' financial performance. The data were analyzed by use of SPSS package to produce the correlation as well as regression analysis.

The model of regression below was applied to ascertain the relationship.

$$ROA_{it} = \beta_0 + \beta_1(APP_{it}) + \beta_2(ICP_{it}) + \beta_3(ACP_{it}) + \beta_4(CCC_{it}) + \beta_5(FS_{it}) + \beta_6(Lit) + \varepsilon$$

Where:

ROA = Return on Assets

APP = Average Payment Period

ICP = Inventory Conversion Period

ACP = Average Collection Period

CCC = Cash Conversion Cycle

FS = Firms Size

L= Leverage

In this model, ROA was applied as a measure of firms' financial performance for the sample companies which shall form the dependent variable. The other measures of WCM shall form the independent variables for purposes of the research study.

Table 3.1: Operationalization of the Variables

Dependent	Return on Asset (ROA)	ROA= $\frac{\text{Total income}}{\text{Total assets}}$
Independent/Explanatory	Accounts Receivable Period (ARP)	ARP= $\frac{\text{Average Trade Receivables}}{\text{Credit Sales}} \times 365 \text{ days}$ Annual
	Accounts Payable Period (APP)	APP= $\frac{\text{Average Trade Payables}}{\text{Annual Credit Purchases}} \times 365 \text{ days}$
	Inventory Conversion Period (ICP)	$\frac{\text{Average Inventory}}{\text{Cost of Sales}} \times 365 \text{ days}$
	Cash Conversion Cycle (CCC)	Accounts Payment Period - Accounts Collection Period
Controls	Company size,	= (Ln Assets) Natural Log of Assets
	Liquidity =Current Ratio (CR)	CR= $\frac{\text{Current Assets}}{\text{Current liabilities}}$
	Leverage (L)	DAR= $\frac{\text{Total Debt}}{\text{Total Asset Ratio}}$

3.5.1 Test of Significance

Coefficient of Correlation (R) was used to establish the dependent variable being financial performance and the various metrics of WC as the independent variables. Coefficient of Determination (R²) was used to measure total variation of return on assets as dependent variable as the performance indicator that was accounted for by the variation in the independent variables. t –test was applied to test the importance of WCM variables as predictors of firm financial performance of tea processing firms. F test was applied to measure the importance of the general model explaining performance through the independent variables. The test of significance was done at the individual company level and then compared for all the companies in the sample.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter discusses analysis and findings of the research. The objective of this study was to establish the effect of WCM on firm financial performance of tea processing firms in Nandi County, period of the study was 2011 to 2015.

4.2 Descriptive Statistics

Descriptive analysis presents the mean, standard deviation, maximum values and minimum values of the different variables. Table 4.1 to 4.2 provides descriptive statistics for the main variables used in this study. The descriptive analysis of all the variables in the study is relate to the 6 tea processing firms in Nandi County.

Table 4.1: Descriptive Statistics: ROA, APP, ICP, ARP, CCC, Leverage, Log of Assets

Variable	N	N*	SE		StDev	Minimum	Q1	Maximum
			Mean	Mean				
ROA	30	0	0.06	0.01	0.08	-0.05	0.00	0.31
APP	30	0	124.80	14.70	80.50	8.00	49.10	305.40
ICP	30	0	169.00	54.20	297.10	24.40	58.40	1287.80
ARP	30	0	62.50	8.14	44.56	4.64	24.90	216.78
CCC	30	0	62.30	15.20	83.40	-82.20	6.80	267.80
LEVERAGE	30	0	0.65	0.06	0.34	0.14	0.36	1.11
LOG OF ASSETS	30	0	8.92	0.05	0.28	8.45	8.63	9.32

Source: Research findings (2016)

From the above findings the minimum time taken for a company to collect cash from receivables is 5 days while the maximum is 217 days on average it took 8 days with a standard deviation of 45 days. Cash conversion cycle used to check the efficiency of working capital management is on average 15days and standard deviation is 83 days.

Tea firms receive payment after sales after an average of 54 days and a standard deviation of 44 days. It takes an average 54 days to sell inventory the minimum time required to sell inventory is 24 days with standard deviation of 297days while the maximum time taken by a company is 1289 days which is a very large time period to convert inventory into sales . Firms wait an average of 14 days to pay purchases with a standard deviation 81 days. Return on assets for tea processing firms is 6% with a standard deviation of 8%.

Table 4.2: Descriptive Statistics ROA, APP, ICP, ARP, CCC, Leverage, Log of Assets by Companies

Variable	Company Name	N	N*	Mean	Std.Deviation	Minimum	Maximum
ROA	CHEBUT/ KAPTUMO TEA DL	5	0	0.00362	0.00276	0.00099	0.00752
	KOISAGAT	5	0	0.0687	0.0541	0.0094	0.1116
	EMROK	5	0	0.0665	0.0524	0.0094	0.1116
	KAPCHORUA TEA	5	0	0.0862	0.0701	-0.0149	0.1709
	KIPCHABO TEA	5	0	-0.005	0.0328	-0.0538	0.0382
	SOEP	5	0	0.1618	0.0988	0.0763	0.3126
	APP	CHEBUT/ KAPTUMO TEA	5	0	101.1	34.5	50.4

	DL							
	KOISAGAT	5	0	88.4	64.9	30.6	192.8	
	EMROK	5	0	78.7	95.5	8	219.9	
	KAPCHORUA							
	TEA	5	0	156.3	103.8	29.9	305.4	
	KIPCHABO							
	TEA	5	0	156.3	103.8	29.9	305.4	
	SOEP	5	0	168	32.4	128.8	201.1	
	CHEBUT/ KAPTUMO							
ICP	TEA	5	0	61.9	23	24.4	86.8	
	DL							
	KOISAGAT	5	0	159.8	127.7	45.3	303.5	
	EMROK	5	0	532	640	45	1288	
	KAPCHORUA							
	TEA	5	0	63.4	24.5	33.9	100.3	
	KIPCHABO							
	TEA	5	0	107.2	75	57.3	230.3	
	SOEP	5	0	89.2	24	58.6	118.7	
	CHEBUT/ KAPTUMO							
ARP	TEA	5	0	20.88	11.67	4.64	35.43	
	DL							
	KOISAGAT	5	0	36.01	20.01	14.38	59.74	
	EMROK	5	0	35.65	19.38	14.25	56.14	
	KAPCHORUA							
	TEA	5	0	117	56.3	83.4	216.8	
	KIPCHABO							
	TEA	5	0	68.6	24.8	37.6	96.8	
	SOEP	5	0	96.8	22.9	65.5	118	
	CHEBUT/ KAPTUMO							
CCC	TEA	5	0	80.2	23.2	45.8	104.1	
	DL							
	KOISAGAT	5	0	52.3	72.5	4.4	176.4	
	EMROK	5	0	43.1	102.4	-40	203.6	
	KAPCHORUA							
	TEA	5	0	39.3	125.8	-82.2	219.7	
	KIPCHABO							
	TEA	5	0	87.8	118.8	-61.1	267.8	
	SOEP	5	0	71.2	39.9	34.9	135.6	
	CHEBUT/ KAPTUMO							
LEVERAGE	TEA	5	0	0.35912	0.00947	0.34625	0.36994	
	DL	5	0	1.0307	0.1014	0.8578	1.1099	

	KOISAGAT						
	EMROK	5	0	1.0327	0.0971	0.8678	1.1099
	KAPCHORUA						
	TEA	5	0	0.1747	0.0319	0.1401	0.2112
	KIPCHABO						
	TEA	5	0	0.828	0.0906	0.6975	0.9315
	SOEP	5	0	0.4931	0.0417	0.4347	0.5337
	CHEBUT/ KAPTUMO						
LOG OF ASSETS	TEA	5	0	9.2158	0.0307	9.1782	9.2605
	DL						
	KOISAGAT	5	0	8.5138	0.0375	8.4517	8.5433
	EMROK	5	0	8.6493	0.0361	8.6192	8.7106
	KAPCHORUA						
	TEA	5	0	9.2779	0.0473	9.196	9.3177
	KIPCHABO						
	TEA	5	0	8.9559	0.057	8.899	9.0319
	SOEP	5	0	8.9306	0.0167	8.9085	8.9455

Source: Research findings (2016)

From the above table maximum ROA for the all the firms in the study was 31% and 7% as minimum with a standard deviation of 9% showing that the tea firms investments on assets has considerable significant in making WC decisions it shows that SOEP had the highest average ROA of 16.18% while the lowest was kipchabo with -.5% with a standard deviation of .0988 and 0.328 respectively . The duration that it takes for the firms to pay its payables was high at 305days and minimum of 8 days. Emrok pays its payables within 78days on average with standard deviation of 219 day while SOEP takes the longest average time of 168days to pay its payables.

The shortest time for inventory to be converted into cash was at 34days with a standard deviation of 23days. Chebut tea has the shortest time to convert its inventory at 62days with a standard deviation of 86 days.

On account receivable period, the minimum time that it took for receivables to be received was 21days that Chebut Tea Company had with the longest period being 117

days which Kapchurua Tea Company takes to receive its receivables with a standard deviation of 135 days and 217 days respectively for both companies.

Cash conversion cycle from the table above was at maximum of 268days and on average CCC is at 39 days presented by Kipchabo Tea Company with a standard deviation at 221days. On leverage the company which is has a highest average leverage was DL Koisagat Company at 1.0327 with a standard deviation of 1.1099 while the less levered company was Chebut Tea Company at 0.35912 with a standard deviation of 0.36994. Firm size as indicate by the log of assets on average was at 9.2158 for Chebut Tea Company while the lowest average was at 8.5138 for DI Koisagat.

4.3 Inferential Statistics

4.3.1 Correlations Analysis

Pearson correlation analysis was conducted after the descriptive analysis in order to indicate a linear affiliation between the explanatory and predicted variables. It, therefore help in ascertaining the strengths of association in the model, that is, which variable best explained the effect of WCM on firm financial performance of tea processing firms in Nandi County.

Table 4.3: Correlation: ROA, APP, ICP, ARP, CCC, Leverage, Log of Assets

	ROA	APP	ICP	ARP
CCC				
APP	0.020 (0.915)			
ICP	-0.216 (0.252)	0.203 (0.282)		
ARP	0.391 (0.033)	0.212 (0.262)	-0.162 (0.393)	
CCC	-0.189 (0.316)	0.853 (0.000)	0.283 (0.130)	-0.330 (0.075)
LEVERAGE 0.064 (0.737)	-0.090 (0.637)	-0.193 (0.307)	0.377 (0.040)	-0.468 (0.009)
LOG OF ASSETS 0.020 (0.916)	-0.109 (0.566)	0.213 (0.259)	-0.368 (0.045)	0.347 (0.060)
LOG OF ASSETS	LEVERAGE -0.916 (0.000)			

Cell Contents: Pearson correlation
P-Value (in brackets)

Source: Research findings (2016)

Pearson moment correlation was conducted as per the table above, the study showed that there exist a positive correlation coefficient between financial performance of tea processing companies and Average Payment Period, since correlation factor was 0.02; this association was realized not to be significant since the significant value was 0.915 more than 0.05.

The study established strong negative correlation between financial performance of tea processing companies and inventory conversion period as shown by correlation coefficient of -0.216, correlation between ARP and financial performance of tea

processing companies from the study was found to be positive as revealed by correlation coefficient of 0.391. This association was found to not to be significant since significant value was 0.033 which was more than 0.05, the study establish a negative correlation between financial performance of tea processing companies and firms size as shown by correlation coefficient of -0.109, and finally the study found negative correlation between financial performance of tea processing companies and leverage as shown by correlation coefficient of -.0.09 The finding differs from Mugo (2014) who found out that strong positive correlation between firms size and financial performance of firm.

4.3.2 Regression Analysis

Multiple regression analysis was used in this research study, to examine the impact amongst predictor variables. The conversion cycle could not be calculated and was dropped from the model that is the CC terms cannot be estimated. The model summary is presented in the table below.

Table 4.2: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.1348	0.3788	.2493	0.0679

Coefficient of determination is adjusted R squared which indicates the variation of the dependent variable as a result of deviations in independent variable. As shown in the above table adjusted R squared had a value of 0.1348 signaling that there was variation of 13.48 percent on financial performance of tea processing companies as a result of changes in average collection period, average payment period, firm's size, inventory conversion period, leverage and cash conversion cycle, at 95 percent confidence interval. This indicates that 13.48 percent changes in financial performance of tea processing companies could be accounted to average collection

period, average payment period, firm's size, inventory conversion period, leverage and cash conversion cycle.

Table 4.4: Analysis of Variance

Source	DF	Adjss	Adjms	F-Value	P-Value
Regression	5	0.06749	0.0135	2.93	0.034
APP	1	0.00097	0.00097	0.21	0.65
ICP	1	0.01019	0.01019	2.21	0.15
ARP	1	0.01352	0.01352	2.93	0.1
LEVERAGE	1	0.01566	0.01566	3.4	0.078
LOG OF ASSETS	1	0.0309	0.0309	6.7	0.016
Error	24	0.11069	0.00461		
Total	29	0.17818			

From the analysis of variance ANOVA statistics are presented in Table 4.4 above. The p-value for the regression model in the Analysis of Variance table (0.034) shows that the model estimated by the regression procedure is significant at a α -level of 0.05. This indicates that at least one coefficient is different from zero. The coefficient that is different from zero is that of log of assets with a p – value of 0.016.

Table 4.5: Regression Coefficients

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	2.84	1.10	2.58	0.016	
APP	0.000079	0.000171	0.46	0.650	1.20
ICP	-0.000072	0.000048	-1.49	0.150	1.30
ARP	0.000572	0.000334	1.71	0.100	1.40
LEVERAGE	-0.186	0.101	-1.84	0.078	7.51
LOG OF ASSETS	-0.301	0.116	-2.59	0.016	6.77

The regression equation as indicated from the table was

$$\text{ROA} = 2.84 + 0.000079 \text{ APP} - 0.000072 \text{ ICP} + 0.000572 \text{ ARP} - 0.186 \text{ LEVERAGE} - 0.301 \text{ Log of Assets}$$

The regression equation above revealed that keeping APP, ICP, ICP, firm's size and leverage, the financial performance of tea processing companies would be at 2.84. the study further established that a unit increase in average payment period would result to an increase financial performance of tea processing firms by a factor of 0.000079, a unit decrease in inventory conversion period would negatively change the financial performance of tea processing firms by factor 0.000072, a unit increase in average collection period would positively change the financial performance of tea processing firms by a element of 0.00572, a component decrease in firms size would positively change the financial performance of tea processing firms by a factor of 0.301 and that a small increase in leverage would positively change financial performance of tea processing companies by a factor of 0.186. However from a statistical perspective the only variable that has a predictive power was log of assets with a t-value of -2.59, cut off t-value is 2 or -2). The other variables are statistically not different from zero.

4.4 Discussion on the Findings

The study found out that there exist a positive correlation between average payment period and financial performance in tea processing companies. (Person correlation value = 0.65, P-value =0.001) the study also found that a unit change in average payment period will positively change financial performance in tea processing companies. Results from the descriptive statistics show that AP plays a significant role in managing WC since delaying payment of bills is a tools that management can use to access cheap source of funding also the opportunity cost of keeping or maintain large amounts of account payables may hinder negatively the business if discount is offered for early payment; tea processing companies should attempt to trail as much as possible their payments to creditors so that they maintain their business

relationship. The findings are in line with the research by Mathuva (2010) who shows that APP has a positive association with profitability.

Further the study noted that lagging in payment of AP to distributors and suppliers allows tea processing companies to be in access the better grade in terms of quality of branch products and could be flexible and inexpensive basis of funding. While lagging of these payables might be costly if a tea processing firm is given a discount for payment done on time. The findings are in support of the research by Mathuva (2010) who concluded that the association between APP and profitability is positive.

The study found that negative correlation between ICC and financial performance in tea processing (Person correlation value = -2.16, P-value = 2.52) the study also found that a unit change in inventory conversion period will negatively change financial performance in tea processing companies. The research also revealed that effective control and efficient management of inventories aid in reducing investment in WC and attaining better operational results. The results are related with the research done by Gupta et al (2011) that timely management of inventory has a notable influence on the profitability.

The research also established that efficient and effective management of inventories also ensures business survival and maximization of profit which is the main aim of every firm, an efficient management of working capital through proper and appropriate inventory management ensures a balance between profitability and liquidity trade-offs. This is consistent with, Mugo (2014). That low rate of gross profit may lead to a great bulk of trading transactions required to yield a reasonable sum of total profits, this finding contradicts with those of Lazaridis et al (2016) who reported that inventory turnover has a positive relation with profitability. Therefore,

with this inference, firms that report high gross profit margins are believed to have higher inventory turnover though the relationship is statistically insignificant.

The study found a positive correlation between average collection period and financial performance in tea processing companies. (Person correlation value = 0.391, P-value = 0.033,) the study also found a unit change in average collection period will positively change financial performance in tea processing companies. The findings are similar with the research done by Raheman & Nasr, (2007) who established that a credit collection policy that facilitates low average collection period will ensure the firms' improved liquidity and healthy cash flows position.

Results obtained from descriptive analysis show that effective management of receivables leads increase in firm size, realized through increasing recycling of fund and increased total sales hence generating higher profitability, improved liquidity will enabled the tea processing firms to meet its financial obligations and also be in a position to seize opportunities that may arise in the market thus tea processing firms should normally keep average collection period lesser than average payment period in order to reduce investment in receivables.

The study found a negative correlation between cash conversion cycle and financial performance in tea processing companies. (Person correlation value = -1.89, P-value = 0.3,) the study also found that a unit change in cash conversion cycle will negatively change financial performance in tea processing companies the findings differing from the research by Ragen (2014) who observed significant association of CCC with the return on investments of the companies.

Negative correlation between financial performance and firm size in tea processing companies was found in the study. (Person correlation value = -.109) the study also

found a unit change in firm size will negatively change financial performance in tea processing companies. The study also revealed that firm size plays an important role in explaining profitability and those larger or bigger companies are competitive than smaller companies hence enjoying a higher level of profits and they make use of economies of scale. The findings are in support of the research by Nyamao et al (2012) that firm size can impact its financial performance.

Results obtained from descriptive analysis show that size of tea processing firm is important in ascertaining the level of association a company has within and outside the environment it's operating in. Large firms have the greater impact on its stakeholders; they have some significant advantages such as advantage of scale of economies which may lead to a greater bargaining power over both clients or distributors or suppliers and better production. The findings are similar with the research by Padachi (2006) who established that big firms are mature and stable and they create higher sales because of the large production capability.

The study found a negative correlation between leverage and financial performance of tea processing companies. (Person correlation value = -0.09) the study also found that a unit change in leverage will negatively change financial performance in tea processing companies.

Descriptive results showed that too much debt can be dangerous for a financial performance of tea processing companies. Uncontrolled debt levels may lead to credit downgrades or worse. When the debt ratio is low, payment of loans will not take up larger portion of the firm's cash flow. It may also show that tea processing firms have a chance to use leverage to grow business. Overallly, high debt-to-equity ratios may

imply that tea processing firms may not have sufficient cash to satisfy its debt obligations.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the study findings, conclusion and recommendations. The objective of this study was to determine the effect of WCM on firm financial performance of tea processing firms in Nandi County.

5.2 Summary

The study found positive correlation between financial performance and APP in tea processing companies, the study also found a unit change in average payment period will positively change financial performance in tea processing companies Results from the descriptive statistics show that AP plays a significant role in managing WC because delaying bill payments is a mechanism that can be used by management to access cheaper sources of financing. On the other hand, the opportunity cost of maintaining large amounts of account payables may hinder negatively the business if discount is offered for early payment.

The study found a negative correlation between ICP and financial performance in tea processing companies. The study also found a unit change in inventory conversion period will negatively change financial performance in tea processing companies the research also revealed that effective control and efficient management of inventories helping reducing investment in WC.

The research also established that effective and efficient inventory management also ensures maximization of profit and business survival, an efficient management of WC using accepted and timely inventory management provides a balance between liquidity and profitability.

The study found a positive correlation between financial performance and ARP in tea processing companies, the study also found a unit change in average collection period will positively change financial performance in tea processing companies.

Results obtained from descriptive analysis show that effective management of receivables leads to improved liquidity which will enable the tea processing firms to meet and achieve its financial obligations and also be in a position to seize opportunities that may arise in the market thus tea processing firms should keep ACP lesser than APP in order to reduce investment in receivables.

The study found a negative correlation between financial performance and firm size in tea processing companies, the study also found a unit change in firm size will negatively change financial performance in tea processing firms.

Results obtained from descriptive analysis show that size of tea processing firm has an important role in defining the type of association the company adores to operate in both internal and external environment. Larger tea processing firms have some advantages such as a greater possibility of taking advantage of scale of economies hence enabling efficient production, greater bargaining power over both suppliers and clients, exploiting experience curve effects and setting prices above the competitive level.

The study found a negative correlation between leverage and financial performance of tea processing companies, study also found a unit change in leverage will negatively change financial performance in tea processing companies. When the debt ratio is low, payment of loans will not take up larger portion of the firm's cash flow. It may also show that tea processing firms have a chance to use leverage to grow business.

Generally, high debt-to-equity ratios may imply that tea processing firms may not have sufficient cash to satisfy its debt obligations.

5.3 Conclusions

The study concludes that there exists a positive association between average payment period and financial performance in tea processing companies. Delaying payment of accounts payable to supplier's permits tea processing companies to be in access of better grade in terms of quality of branch products and could be flexible and inexpensive basis of funding. While postponing of these payables might be costly if tea processing company is given a discount on payment done on time.

The study concludes that a unit change in inventory conversion period will negatively change financial performance in tea processing companies, effective control and efficient inventory management aid in attaining acceptable operational outcome and minimizing investment in WC. Credit collection policy that allows low average collection period will ensure the firms' healthy cash flows and improved liquidity position. Effective management of receivables leads to increase in firm size, improved liquidity and increase in sale hence enabling tea processing firms to meet its obligations.. Larger tea processing firms have some significant advantages such as advantage of scale of economies which may lead to a greater bargaining power over both clients or distributors and suppliers and more or better production.

5.4 Recommendations

Tea processing companies should maintain leverage ratio at an optimal level. This is based on revelation that too much debt can be dangerous for firms and its investors as uncontrolled debt levels can lead to credit downgrades while at the same time

companies with small debt-to-equity may imply that a company is not using advantage of the improved earnings as a result of financial leverage.

Tea processing companies should create a credit collection policy pointing out the procedures and practices to be adopted by the company in order to realize outstanding accounts receivable. This policy should allow for simultaneous use of a combination of several collection strategies that ensures that the firm not only improves its cash flow by shortened average collection period but also does not suffer bad debt losses.

Tea processing firms should normally keep average payment period higher than average collection period in order to reduce investment in receivables pay short time requirements hence minimizing cost of funds.

5.5 Limitation of the study

The research focused on tea processing companies for the year 2011 to 2015 a period of five year. However the target population size of the study is small considering the total number of registered limited liability companies in Kenya and hence the finding can't be generalized as true of all companies in Kenya. The period covered was also shorter and a longer period of more than five year is necessary.

The study relied on secondary data which were collected from audited financial statements of the sampled companies which are prepared in accordance with the GAAP and IFRS however there is a possibility of use of different accounting policies such as depreciation rate resulting into different outcome.

Lastly the time taken to carry out the study was not sufficient for the amount of detail and analysis the study involved. Detailed tests could be conducted to ascertain whether the same conclusion could be found when more variables are in considered

since other factors that may affect financial performance; WCM should therefore not be applied in isolation.

5.6 Recommendations for Further Research

The study objective was to establish the effect of WCM on firm financial performance of tea processing firms in Nandi County. Further studies can also be carried out to establish other various ways in which working capital components can be managed and how that will impact in the overall goals of businesses in Kenya. Other studies that could be carried out in future include; the relationship of WCM and financial performance of tea processing firms in Kenya which would ensure a more conclusive and reasonable conclusion is derived.

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APPENDICES

Appendix 1: Letter of Introduction



UNIVERSITY OF NAIROBI SCHOOL OF BUSINESS KISUMU CAMPUS

Telephone: 732160 Ext. 208
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 19134-40123
Kisumu, Kenya
0202659307 / 0720348080

Ref: CHSS-SOB D61/61345/2013

October 3, 2016

TO WHOM IT MAY CONCERN

The bearer of this letter Cheruiyot Kiprotich Davis

REGISTRATION NO: D61/61345/2013

The above named student is in the Master of Business Administration Degree Program. As part of requirements for the course, he is expected to carry out a study on "**Working capital management on financial performance in Tea Processing companies in Nandi County, Kenya**". He has identified your organization for that purpose. This is to kindly request your assistance to enable him complete the study.

The exercise is strictly for academic purposes and a copy of the final paper will be availed to your organization on request.

Your assistance will be greatly appreciated, thanking you in advance.

Sincerely,

DR. NIXON OMORO
ASST. COORDINATOR, SOB, KISUMU CAMPUS



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Appendix II: Tea Processing Firms in Nandi County

1. Nandi Tea Estate Limited
2. Emrok Tea Factory
3. SOEP, Sireet Outgrowers Empowerment & Producer Co. Ltd
4. Kapchorua Tea Factory
5. Eastern Produce Kenya Ltd
6. Chebut/ Kaptumo Tea Factory Company Limited
7. DI Koisagat Tea Estate Ltd
8. Kipchabo Tea Factory
9. Tindiret Tea Factory Limited

Appendix III: Data Collection Form I

Name of company/ Year	2015	2014	2013	2012	2011
Credit sales					
Purchases					
Cost of sales					
Earnings before interest and tax					
Interest Tax Net					
Income					

Appendix IV: Data Collection Form 2

Name of company/year	2015	2014	2013	2012	2011
Opening trade receivables					
Closing trade receivable					
Opening trade payables					
Closing trade payables					
Opening inventory					
Closing inventory					
Current assets					
Fixed assets					
Current liabilities					
Noncurrent liabilities					
Equity					

Appendix V: Originality Report

WORKING CAPITAL MANAGEMENT

ORIGINALITY REPORT

%8

SIMILARITY INDEX

%5

INTERNET SOURCES

%2

PUBLICATIONS

%6

STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Higher Education Commission Pakistan Student Paper	%1
2	Submitted to GESCI Student Paper	%1
3	Submitted to Ghana Technology University College Student Paper	%1
4	Submitted to Midlands State University Student Paper	%1
5	Folinas, Dimitris, and Thomas A. Fotiadis. "Investigating links between low-level inventory practices and business performance", International Journal of Logistics Systems and Management, 2016. Publication	%1
6	recil.ulusofona.pt Internet Source	%1
7	Submitted to Kenya College of Accountancy	<%1