THE EFFECT OF WORKING CAPITAL MANAGEMENT PRACTICES ON PERFORMANCE OF UNIVERSITIES AND COLLEGES IN KENYA

BY

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DECLARATION

I declare that, this research project is my original work and has never been presented in any other university or college for an award of degree, diploma or certificate.

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DEDICATION

I dedicate this research project to my dear parents Mr. and Mrs. Edward Maliti for laying the strong foundation to my life. My special dedication to my beloved wife Florence Munywoki and my dear son Leon, who have always remained my source of inspiration, joy and desire to excel through academically. I am deeply humbled to have you.

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ABBREVIATIONS

ACP: Average Collection Period

APP: Average Payment Period

CCC: Cash Conversion Cycle

CMP: Cash Management Practices

ICP: Inventory Conversion Cycle

ITP: Inventory Turnover Period

LEV: Leverage

LMP: Liquidity Management practices

NSE: Nairobi Securities Exchange

ROA: Returns on Assets

SPSS: Statistical Program for Social Sciences

WCM: Working Capital Management

ABSTRACT

Working capital management is focused on having an ideal balance between working capital variables namely, receivables, inventory, cash and account payables, its very critical in maintaining the corporate strategy and value creation in institutions, and it is one of the sources for competitive advantage in institutions (Deloof, 2003). The primary objective of the study is establishing the relationship between working capital management practices and financial performance of universities and colleges in Kenya.

Descriptive and quantitative designs were used in the study, and the population of interest constituted all Kenyan public and private universities for the period of five years from 2011 to 2015. The quantitative research design was used in arriving at the findings of the study.

The study found out that inventory turnover in days had negative relationship with Universities ROA, therefore financial performance will be improved by reduction in inventory holding days. APP has a huge positive association with Universities financial performance, CCC shows a significant negative relationship with Universities financial performance, thus the financial performance can be improved with small size of cash, ACP had a positive association with Universities financial performance.

The study concluded that the universities and colleges financial performance strongly relates to the efficiency in management of working capital components, the institutions ROA and value can be created through shortening of the cash conversion cycles, reducing inventory in days, increasing supplier payment periods and reducing collection periods.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The management of day to day operations of an institution is a very critical area (Joshi, 1994), the day to day operations is about the decisions and the valuation of these operating assets not forgetting financing the said assets, this is critical because it affects the institutions liquidity and the ability to meet its maturing obligations (Smith, 1980).

The objective of private sector institution is to maximize shareholders wealth, this entails making optimal investments and financing decisions in order to achieve these objectives, an organization must optimally manage its working capital and the financing for these assets and liabilities (Deloof, 2003).

Operating assets of the firm include cash, short-term investments for example marketable securities, treasury bills, accounts receivable and inventories all of which the firm needs to support its daily activities, the composition of short-term finances is comprised of account payables, and short-term loans for financing day to day operations (Eljelly, 2004).

An organization should manage and control its short-term investments effectively because they constitute a large part of the firm's scarce resources, on the other hand the firm should optimally use short-term financing on the day to day functions in order to provide enough liquidity to achieve its objectives (Van Horne & Wachowicz, 2004).

The overriding objective in management of current assets and liabilities is to ensure

Efficiency as much as possible, this is achieved by minimization of unnecessary operating assets and maximization of inexpensive short-term financing, the management of operating assets and short-term finances is commonly known as the working capital management or short-term financial management (Smith, 1980).

The operating cycle in working capital management is the duration between the institutions inventories purchases, wages and other expenditures outflows, and the cash and other inflows from the sales of its services. Operating cycle is comprised of three items, these are the payable days, receivable collection days and inventory turnover days, the cycle is important because it determines the amount of cash flows an organization needs, if the duration for accounts receivables and inventories conversion lengthens, or the time for payables conversion shortens, the operating cycle lengthens thus the investments in short-term financial management increases, if the operating cycle lengthens, it requires larger investments in working capital, however if the cycle shortens, then it requires less working capital (Shin & Soenen, 1998).

Short- term financial management is critical for success of any organization, no institution can achieve its objectives if it's unable to meet its daily obligations. All institutions should have robust strategies for managing each component of working capital (Eljelly, 2004).

1.1.1 Working Capital Management practices

Short-term financial management in not -for- profit organizations entails management of accounts receivables, accounts payables, short-term financing including use of credit facilities, short-term investments, and bank balances, these are necessary components in

The day to day running of any institution, not for profit institutions to play critical role in the Kenyan economy (Eljelly, 2004).

Cash inflows are critical in any organization, and growth is sustained by the ability in cashing in organizational short-term operating assets, for a manager tasked with planning of cash flows, the goal should be that all priority outflows be met fully out of operating cash flows, if this rule is violated then the organization will eventually get into traps of debts (Van Horne & Wachowicz, 2004).

In not for profit, there should be tradeoffs between short-term financial management, customer management, costs and risk associated with all these aspects of management. To optimize the overall short-term financial management performance of the organization, we need to recognize these tradeoffs and have continuous process improvement in place.

In Not -for -profit organizations, short- term financial management poses several concerns namely, procedures for their funding, liquidity profiles, sustainability of their projects, and growth of these funds received from donors and the most important aspect the control environment (Van Horne & Wachowicz, 2004).

A critical goal of short-term financial management in not for profit organizations is to ensure smooth operating cycle of its operations, it also ensures there is positive tradeoff in having sufficient cash flows for operations and ensuring that the organization is liquid, proper cash flows management comes in hand for the long-term survival of any firm, no organization is able to meet its day-to-day obligations effectively if the management of working capital is not good (Shin & Soenen, 1998).

Nonprofits may not be in business to make money through sale of goods and services, however they are in business as they employ people, they produce goods and provide services, and have bills to foot, this effectively means that nonprofit organizations should be run mostly in the same manner as for-profit businesses, but with some differences (Deloof, 2003).

A critical aspect of any not for profit finances is the tight control environment they operate in, these institutions need to have high ethical standards and having tight procedures for cash handling in order to prevent thefts and other frauds associated with cash (internal controls), these tight controls and cash handling procedures should be similar for both for-profits and nonprofits organizations (Deloof, 2003).

1.1.2   Organizational Performance

Management of cash inflows is concerned with the managing of cash into and out of an institution (Pandey, 2008). It seeks to have the cash cycle at a minimum cost possible, while at the same time having to achieve liquidity and control. Institutions hold cash resources for transaction motives for example conducting its business in the ordinary course, precautionary motives also provides a buffer to withstand some unexpected emergencies, speculative motives for investments in profit making opportunities and assets (Pandey, 2008).

Many local public universities rely on college fees paid by students who are privately sponsored and in module two, and for the government sponsored students fees is partly paid for them by the government and the balance is settled by the students, the college fees

(tuition revenue) forms bulky of the cash resources and is usually paid when the semester commences for some institutions and in other institutions the fees is paid during the course of the semester, however the problem arises in some institutions as the fees is received at once at the beginning of the semester and the cost of running the institution lasts the entire period of the semester, in other institutions the fees is paid as the semester progresses and this puts strain on the Universities scarce resources, for the government sponsored students the fees is received in the course of the semester and usually the amount is not enough, this leads to mismatch of the cash inflows and outflows as there are usually poor management of the two areas of short term financial management (Gok, 2012).

In private universities they usually get their incomes from school fees paid by the students, this school fees receivable is paid at the beginning of the semester and in others it is received during the course of the semester depending on an institution, the cost of running the institution lasts the entire period of the semester, this leads to mismatch of the cash flows and outflows as the institutions needs cash resources to run their programs, pay their bills and also pay their lecturers (Pandey, 2008).

The universities also generate cash flows from Grants received from donors, foreign governments and research institutions, they also receive funding from consultancies done by the universities through their scholars, they also receive cash flows from sale of their publications and books, these are usually rich sources of finances however they are not put into good use by the same universities thus leading to cash flow shortages and mismanagement (Gok 2012).

For the public universities they also receive funding from the government to run their activities and programs, the funding from the government is received in the course of the year however the funding is usually not enough to enable the universities conduct their activities effectively, the challenge for the finance managers in these institutions is usually how to deal with the budget shortfalls, here it's where the problem arises as the universities are usually not prepared or are ill equipped to deal with the budget shortfalls, this leads to the mismatch of cash resources thus leading to the problems bedeviling these institutions (Mulera, 2005).

University financing in Kenya especially the public institutions students get government sponsorship through the higher education's loans, these funds from Higher education loans board also form part of the universities cash incomes and the disbursements of the cash resources should be done at the commencement of the semester but in the near future there has been delays in the disbursements thus leading to cash constraints in the universities (Mulera, 2005).

Once the school fees is received the best practice would be investment in short-term maturing investments and assets to enable the universities generate extra cash flows and protect these resources from misuse, this practice would enable the universities release only enough resources to enable them operate normally, however this doesn't apply and thus the practices adopted are usually not the best in managing short-term assets (McLonely, 2000).

Although the institutions are partly funded by the government in recurrent expenditure, we

Need to understand the practices used in their working capital management and the plans they use in order to have optimum level of current assets, their sources of finances to these current assets, the measures taken to ensure sound liquidity is maintained. These public institutions are operating in a competitive environment of established and upcoming private training institutions, which are in business and employ qualified finance officers who are responsible for ensuring the liquidity, profitability and solvency of the businesses (Kungu & Kimani, 2014).

Institutions should also establish credit policies for the establishment of effective administration of debtors mostly fees paid by students. Most computer packages can produce a list of receivables showing the duration of time for which a debt has remained unpaid and these can be used by finance officers to pursue debtors, the finance officers should consider the character-willingness to pay, the capacity – student's financial position, and condition – economic or any other which may affect their ability (Pandey, 2008).

A critical aspect affecting the universities cash resources is the inventories held by the universities, these inventories usually comprise exam materials, foodstuffs for both staff and students, research materials, labs for conducting researches, spare parts for the universities assets, books already published and ready for sale, these inventories usually consume considerable cash resources for the universities, the same inventories are also subject to misuse and theft and thus become very critical to the institutions (McLonely, 2000).

One of the challenges facing higher training institutions in Kenya include, delayed salaries

For the staff especially the part-time lecturers, these delays usually affects the morale of the staff thus leading to mass exodus of good qualified staff and in the end the quality of education is compromised as the universities are not able to attract quality staff (Gok, 2012).

Another challenge facing the institutions is employee's strikes, these are usually organized by teaching and non-teaching staff and occur as a result of poor management of cash flows, these strikes usually affect service delivery to the universities as the concerned staff matters are not adequately addressed by their respective institutions, Students also organize strikes and this usually leads to loss of property and waste of time thus stretching the universities limited resources (Gok, 2012).

Other challenges are usually stoppages of supplies to the universities by their suppliers, the payables of the universities usually are not paid in good time, and the delays in payments leads to stoppage of supplies of critical materials like lab resources, food stuffs, exam materials etc., when this happens then the universities are usually constrained in service delivery (Ngaba, 1990).

The challenges to be addressed by universities include; inadequate facilities for teaching and other resources, mismanagement of scarce resources, wastefulness and unnecessary competition, many heads of institutions lack capacity to oversee and account for utilization of resources, and most finance officers not being in control of the finances of their institutions (Kungu & Kimani, 2014).

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Therefore institutions should establish policies for cash flows and plan for the same cash flows, through budgets, making good use of bank overdraft and deposit accounts, and cash frequently and time transactions to the best cash flow effects, an attempt to accelerate collections and slow up disbursement should be made so that maximum cash is available (Obulemire, 2006).

1.1.3 Working capital management practices and performance

Financing operating assets involves decisions on tradeoffs between risk and liquidity. The larger the size of liquid assets, the less likelihood of running out of cash, effective management of various components of operating assets, effective credit and collection procedures and inventory control have a bearing on the liquidity of an institution, all institutions require operating capital, only differing in composition of the components and the controls and policies implemented. There is no universally accepted strategy for financing operating capital; however there are principles that address short term financing policies (Smith, 1980).

Operating efficiencies leads to optimal utilization of organizations resources. Written policies relating to working capital management components improve efficiency, proper and up to date recording of the working capital components requires adequate and competent staff who can prepare reports to management for planning and decision making, preparation of all functional and master budgets enables an organization to chart its way forward and also to identify areas that need attention in advance (Deloof, 2003)

The cash receipts and payment patterns also affect the working capital requirement of

Institutions. If not properly synchronized, the institutions can experience cash deficits which affects their day to day operations. The rising prices means that higher amount of working capital will be needed (Smith, 1980).

Management of short-term financial management is moderately applied in higher learning institutions, even though each component has some form of control, there are inefficiencies in management of the accounts receivables in form of fees compared to management of inventory, cash or accounts payables. Planning aspect for the working capital components is not adequate except the cash component, receivables and payables are well synchronized and it manifests themself in operating inefficiencies (Kungu & Kimani, 2014).

Short-term financial management in Universities should not be left to intuition or the rule of the thumb. Each working capital component should not only have written policies, but such policies should be strictly followed and reviewed where necessary to incorporate the changing trends. Proper management of short-term financial management should bring about improved operating efficiencies. This may be achieved by adequate records relating to each working component, proper planning of cash flows to improve liquidity and maintaining of optimal levels of each short-term financial management component (Mulera, 2005).

Institutions should ensure that all key departments are computerized and employment of qualified accounts staff who will generate reports to management for decision making related to operating assets and short term financing, with computerization a full budgetary

Control system could be adopted which will include, inventory, accounts payables and receivables and cash budget. Inventory and cash control techniques could also be applied in a computerized environment. Credit control procedures for fees payment, suitable for these training institutions should be adopted (Obulemire, 2006).

Deloof (2003) held that an institution with larger revenues and having credit policy which is not stringent results in having longer and larger conversion cycles, the longer and larger conversion cycle leads to lower revenues, the relationship between longer and larger conversion cycles and liquidity is that it has a negative impact on the liquidity of a company if all other factors are held constant (Reheman and Nasir, 2007).

1.1.4 Universities and Colleges in Kenya

Kenya has thirty one local public universities, while the private ones are around fifteen, and several commercial colleges across Kenyan towns, these institutions serves both local and international students who are in search of higher education.

The Kenyan education sector is a key segment in the economy, this has led vision 2030 blue print experts on realizing the need for the education sector to grow to achieve these objectives over the period, this can only be achieved if there is growth in educational infrastructure, good research and proper funding of the education system, this funding depends on the variables that influence educational development of the institutions (Gok, 2012).

Performance of these higher learning institutions is affected by inefficiencies in short term financial management of the receivables in form of fees, inventories management, cash and

Accounts payables, the planning aspect for the working capital components is not adequate and these inadequacies manifest themselves in operating inefficiencies. Efficiency in working capital management of these institutions will largely depend on quantitative data which must be accurate and timely in order to aid in proper decision making (McLonely, 2000).

Most institutions have written policies on working capital practices, but such policies are not strictly followed, the policies should be reviewed where necessary to incorporate the changing trends, proper management of working capital should bring about improved operating efficiencies and this may be achieved by maintaining adequate records relating to each working component, proper planning of cash flows to improve liquidity and maintaining of optimal levels of each working capital component (Pandey, 2008).

1.2   Research Problem

The management of liquidity is critical for all businesses, if liquidity is not well managed, it leads to shortages of cash and the resultant problems of not meeting day to day obligations. Working capital shortages has generally been the biggest cause of failures of institutions in many countries (Rafuse, 1996). Short-term financial management in institutions is critical as its effects their profitability and risks, and in the end their value (Smith, 1980). Investments in short-term assets represent a very significant position of total assets, additionally, there is risk-return trade off; in that the optimal level calls for a balance between profitability and solvency by minimizing the total costs of liquidity and cost of illiquidity, the working capital management's objectives being enhancing profitability and liquidity (Pandey, 2008).

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This study arises from the need to manage working capital of higher learning institutions more effectively and efficiently keeping viability and continuity in view. In Kenya, many universities and colleges are struggling to thrive and run their day to day operations effectively. Many universities don't have proper short term financial management techniques which are critical for better performance. This research gap calls for the investigation on the influences of working capital management techniques on day to day performances of universities and colleges (Smith, 1980).

Globally, more emphasis has been placed on financial ratios as part of working capital management studies, but very few of them have researched on the working capital specifics. Johnson (1970) did his research by examining the cross-sectional stability of ratio groups for manufacturers. Short-term financial management is a very critical aspect in any institution, and in the end many organizations are unable to get their basic working capital needs. The strategic importance of short-term financial management has ignited various studies to focus on evaluation of working capital management and profitability relationships (Lamberson, 1995).

For local studies in Kenya on working capital management Ngaba (1990) carried out a study of Kenyan secondary schools working capital management practices, the conclusion of the findings was that many school lacked professionalism in managing their finances. Nyakindi (2003) studied short-term financial management policies on listed companies in Kenya, his findings held that no relationship existed between working capital management and profitability in these companies. Kithii (2008) studied working capital management

Practices and profitability relationships of companies listed in the NSE, the findings significantly showed negative relationship between profitability and cash conversion cycle

Specific studies on management of working capital and the performance of universities in Kenya are scanty, therefore this research is focused on examining these relationship at the universities. The outcome of the research will form a basis of future studies on short term financial management practices in higher learning institutions in Kenya. The study seeks to bridge the research gaps and hence give the importance of proper short-term financial management policies on liquidity of tertiary institutions, the findings will contribute immensely on improving working capital management practices in organizations.

1.3   Research Objectives

The study objectives are aimed at examining the effects of proper working capital management practices on financial performance of Kenyan tertiary institutions, the specific objectives are:

- To establish the working capital management practices of universities and colleges in Kenya.
- To establish the relationship between working capital management practices and the financial performance of Universities and Colleges in Kenya.

1.4   Value of the study

The research findings will be helpful to the management and staff of higher learning institutions, this is by suggesting proper ways of managing their institutions effectively and

Hence help them improve their financial performance, and managers will learn the best practices in the day to day operations of their institutions. This leads to improving the existing theory of finance and bridge the knowledge gaps on working capital management.

The study findings will assist regulators and policy makers in coming up with a new set of regulations that guides on working capital management practices, this will mainly help institutions like Commission for Higher Education and University Councils etc.

The study will also provide some insights to Kenyan Universities on the need of proper short-term financial management by managing their credit effectively, the study findings could be critical as they may lead and leave universities with proper short-term financial management practices and techniques.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews prior literature in relation to working capital management practices and financial performance. It is organized to adequately cover the theories and prior empirical literature on the effects of proper working capital management practices and financial performance.

2.2 Theoretical Framework

Different practices on working capital management have been studied extensively by many scholars using theories like trade of theory, cash conversion cycle theory, transaction costs theory, operating cycle theory, etc, (Jensen & Meckling, 1976). In our case four leading theoretical framework (i.e. Trade off, cash conversion cycle, operating cycle, and transaction costs,), have been presented to explain the modalities of WCM, and are the most extensively quoted theories in explaining the phenomenon.

2.2.1 Trade-off theory

This theory is focused on the liquidity- solvency and profitability trade-offs of an organization and was advanced by Smith (1980). This findings signals importance of trade-offs between the objectives of proper working capital management practices and liquidity, the theory also found out that in pursuit of liquidity leads to a negative effect on institutions solvency and profits. Dash & Ravipati (2009) found out that decisions leading on increasing liquidity leads to reduction in profitability.

Trade off theory is advanced to show that bigger institutions are not likely to fail due to diversification hence reduction of risks on their programs and services, as their main objective is managing their liquidity, and in case of universities and colleges they have wider sources of funds. Large institutions can source large inventories on credit and delay in payment of their suppliers (Dash & Ravipati, 2009).

Relationship between liquidity and solvency is inverse and the main findings as put forward by Eljelly (2004) found out that proper management of liquidity is to plan and control short term assets and liabilities in a way that reduces most of financial risks and avoiding unnecessary investment in the assets.

2.2.2 Cash Conversion Cycle Theory

The theory analyses both sides of short-term financial management, according to Padachi (2006) this theory is more advanced as compared to other theories of working capital management that use ratio analysis in making decisions, and it's about breaking down various working capital components. The CCC is computed by breaking down various components of working capital. The CCC is computed by subtracting the payables period (360/annual payables turnover) from the summation of the inventory conversion period (360/annual inventory turnover) and the receivables conversion period (360/annual receivables turnover) (Padachi, 2006).

Since, all the components are expressed by number of days, the CCC can further be explained by the duration of time between outflows of cash that are engaged in the production of services and the inflows of cash from the sale of the services and accounts

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Receivable collection (Arnold, 2008).

2.2.3 Transactions costs theory

This theory is about actual costs accounting for provision of good and services and it accounts for all the costs involved namely, coordination costs, transaction costs, search costs and contracting costs. Inclusion of all these costs are considered for complete decision making and not just the pricing of universities courses but its actual wellbeing (Williamson, 1996).

Transaction theory is about the basic theoretical framework that analyses relationship between universities and its students, the theory studies the two sides of the transaction processes, one is about where the transaction starts up to where it ends, it also focuses on reviewing on where the transaction starts and also explains the transaction costs that result to an institutions in managing its economic activities (Williamson, 1996).

The whole process of information provision is to adequately meet stakeholder's need for more information in decision making (Mian & Smith, 1992). The strategies institutions use is to scale down on the transaction costs, this enables the institutions to have strategies whose benefits are believed to be more than the costs, for example in management of inventories, institutions are keen to minimize holding and ordering costs, in accounts payable institutions will use cheaper credit, it means institutions invest where there are bigger marginal returns, this implies less working capital investments, and the lower the transaction costs the better the returns and liquidity (Howorth & Westhead, 2013).

On the other hand institutions may focus on one area of short-term financial management

that is believed to have better returns and better liquidity (Howorth & Westhead, 2013), this means institutions which have adequate resources invest in working capital areas which have high returns hence improving their liquidity. Blinder & Maccini (1991) studies proposed institutions holding huge stocks were able to minimize their ordering costs, but on the other side they had to deal with increased holding costs of their inventories. Thus an institutions had to weight the benefits versus the costs of working capital management practices so as to maximize their liquidity, again delaying payments to your suppliers reduces costs of external finance for working capital.

2.2.4 Operating Cycle theory

Operating cycle theory addresses one side of short-term financial management, it is a measure of operating activities of a firm, and that is provision of good and services, and incomes collections from debtors. Credit collection policies directly affects accounts receivables either positively or negatively and the frequency of conversion of receivables into cash (Richards & Laughlin, 1980).

In short-term financial management, giving the students relaxed credit policies makes the institutions revenues to decrease in the short term but the liquidity will be increased in long run. When this analysis is applied to current asset accounts components, the theory may not depict the true picture as it suggests that current liabilities may not be important in operations of the firm. The use of accounts payables to finance the firm's activities cannot be ignored, as it is important to put current liabilities component in the study to improve the analysis and consequently give a true position (Richards & Laughlin, 1980).

2.3 Determinants of Performance

The most important determinant of Kenya university performance is college fees paid by students, the fees comes in two ways, namely module two college fees, and for the government sponsored students fees is partly paid for them by the government and the balance is settled by the students, this forms the forms bulky of the cash resources at the universities, however the challenge with this is that the students numbers may vary and thus affecting the universities cash flows, another challenge on reliance of College fees is that the budgets based on college fees are also affected by adverse changes in economy thus affecting the universities performance (Gok, 2012).

Kenyan public institutions are partly financed by the government, however the institutions have faced difficulties in getting the funds from government in the recent past due to budget constraints.Some universities have entered into foreign partnerships to finance their activities and this has enabled them alleviate their financial difficulties, the financial limitations is the main challenge they face yet the expectations for quality education is quite high, these challenges faced by the universities have made them outsource some activities in order to reduce their costs, increase their incomes, increase their efficiency and meet their strict demands (Mulera, 2005).

Universities should establish policies for cash and plan cash flows through budgets. An attempt to accelerate collections and slow up disbursement should be made so that maximum cash is available. Cash holding costs is about interest incomes losses, loss of purchasing power and cost of holding limited cash includes reduction of supplier goodwill, opportunity losses, reduction of discounts claims and borrowing costs increases

(McLonely, 2000), Institutions of higher learning should establish credit policies for the effective administration of debtors (Pandey, 2008), thorough collection procedures should be firmly established for all the debtors.

Operating efficiencies should be put in place thus leading to optimal utilization of working capital resources of the universities. Written policies relating to working capital components should be put in place to improve effectiveness and efficiency in managing short-term financial management. Proper and up to date management of the working capital components requires adequate and competent staff who can prepare reports to management for planning and decision making (Pandey, 2008).

Institutions of higher learning have also established profit generating activities, this indicates that the institutions do not solely depend on the school fees paid by the students, in an attempt to bridge the gap between the budgetary allocations and actual expenditures some universities have established Enterprises and Services centers charged with the responsibility of promoting and coordinating income-generating activities in the universities, the income-generating activities management should be separated from the core activities of the universities, while making sure that the same incomes from these activities contributes to the universities wellbeing (Mulera, 2005).

2.4 Review of Empirical Studies

Samiloglu (2008) researched on the effects of shorter financial management on profitability of Turkish firms for the period 1998-2007. The results held that, long inventory turnover periods, lengthy accounts receivables period, and short accounts payables periods had

Negative effects on profitability of the firms. Cash conversion cycle and size of firm's assets was proved to have no significant effect on firm's profitability.

Ganesan (2007) studied the efficiency of firm's working capital management in telecommunication industry. The evidence gathered showed that day's working capital inefficiencies‖ negatively affected the firms profitability in the short run, but was not significant enough to negatively affect the firms profitability.

Wanjiru (2013) examined the financial management practices of Local NGOs and pointed out that there is need for further study on the adequacy of the financial management systems in local NGOs targeting donor agencies, lack of proper financial management practices among NGOs have posed a great obstacle of getting funding and hence putting their sustainability at risk.

Ngaba (1990) did a research on working capital management in Kenyan secondary schools using a case study of secondary schools of Kikuyu Sub County. Data was collected by questionnaire and the conclusions showed there was preparation of cash budgets. The major source of cash was fees and cash collections were banked daily. In receivables management, to remind students of overdue debts, letters were sent to their parents urging them to settle their debts. Evidence showed lack of professionalism in management of school funds. It also observed that competent personnel to manage school finances.

Mulera (2005) carried out a study on cash balances on public universities in Kenya, evidence showed that proper working capital management practices are moderately

applied, the findings revealed that there is greater inefficiencies in management of the accounts receivables in form of fees compared to management of inventory, cash or accounts payables, he found that public universities in Kenya face a challenge of financing their operations due to reduced government grants causing delay in payment of recurrent expenditures and actual wellbeing of the universities.

Simiyu (2007) examined Universities in Kenya and concluded that they hugely depended on national government funding for most of their budgets. The institutions also receive funds for their activities and research externally, there has been a lot of pressure on these training institutions in the region to reduce their budgets and programs due to decline in government funding. The institutions are dealing with this by instituting a broad array of activities that enable them get extra resources to boost the little resources received from the exchequer.

Obulemire (2006) examined the budgeting in secondary schools noted that the size in terms of student population had no effect on the occurrence of deficit or surplus in the school operations. He noted that the number of students in schools was mostly considered as the key budget factor and most schools had no plans to lead them towards attainment of their objectives, he found that finance officers were not qualified to hold their positions in schools because they lacked knowledge concerning idle funds, cost and cash balances.

Williamson (1996) studied ways in which short-term financial management is managed, this is because of the great consequences it has on the solvency of any institution, his study was supported by other studies such as (Obulemire, 2006), the study showed that certain

Levels of working capital requirements are potentially profit maximizing, other studies showed working capital management impacts on day to day activities of institutions and are geared to increase their liquidity.

2.5 Summary of literature Review

Short-term financial management is a critical component of any organization as it directly influences the solvency and performance of the organization. Short-term financial management is about an institutions short-term assets and short-term liabilities. An ideal short-term financial management focuses on contributing favorably to the institutions value, and arriving at the ideal working capital, managers should ensure the tradeoff between liquidity (meeting current dues) and profitability/performance (size of earnings) is good at all times.

Prior literature review shows evidence of significant relationship between financial performance and working capital management. It has also been found out that different universities have different levels of working capital and each will always try to maintain their levels in the short term. The risk behaviors preference of the institutions management was also found to have a direct effect in the level of current assets and current liabilities. For risk-averse managers, it was found out that such firms will hold a high proportion of current assets compared to the current liabilities and vice versa for risk seeking managers. Additional evidence shows that many institutions have varying needs of working capital as many will maintain a certain level of working capital to enable them meet their day to day requirements.

Evidence from the literature on prior studies is that, no study has come up with a conclusion which enables industry leaders to optimally manage working capital in varying environments. Few studies have been conducted in the Kenyan context touching on working capital management practices, from these empirical studies it's clear that few studies have been put forward to determine these relationships.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The study is focused on establishing relationships between working capital management and universities liquidity, it discusses the higher learning institutions and the variables to include in the research, it also shows the methods used to study the research problem, different description and measures of universities working capital and liquidity is carried out, it also discusses the many tests on the effectiveness and robustness of the data analysis techniques to be used.

This chapter also highlights the methods used by researchers to undertake the research. These methods include the design, the population, the sample design to use, data collection instruments and data analysis.

In determining if a relationship exists between variables in the study a set of design elements and procedures to use from both financial reports and questionnaires are to be used in the study, any relationship among the variables are to be analyzed using correlation, frequency percentages and regression models.

3.2 Research Design

Kerlinger (1973) defines it as the research plan for investigation to enable solve research questions. Mugenda &Mugenda (1999) also defines research design as the outline of getting answers to the research problems, it's basically the way investigation to a phenomenon is carried out.

This study is aimed at examining the managerial perspectives into the existence of

Relationships between short-term financial management practices and universities liquidity, the researcher is required to obtain and analyze the results obtained from the financial data and data from higher learning institutions officers (Denzin, 1970).

The research will use both descriptive and quantitative research design, the reason for this is that both descriptive research and quantitative research provides information on characteristics of the population and it provides the general overview of the research (Denzin, 1970).

3.3 Target Population

Population in a research study is explained as groups of, services, events, people, elements, grouping of similar things etc. being studied, this makes target population similar or homogeneous, it is also defined as the group of events, individuals, or objects consisting of some characteristics that have some conformity (Mugenda & Mugenda, 2003).

Population of interest in the study consists of all the Kenyan public and private universities for a duration of five years from 2011 to 2015, this gives an entire population of 46 universities.

3.4 Sample Design

Research design guides the researcher in collection, analysis and interpretation of the facts observed and obtained, it also assists in identifying and classifying the elements or characteristics of the subject (Cooper & Schindler, 2003). Kothari (2004) defines a sample as a representation of units from the entire group with an aim of representing it and it should be as representative as possible of the entire population. Spiegal (2008) defines a sample

As a part of the total population.

The study will be based on financial statements and reports of higher learning institutions in Kenya, the study only considers the institutions that have continuously operated over the entire period between 2011 and 2015, The study will be a census survey in which all the universities and colleges in Kenya will be studied, any new incumbents during the period of study will not be included in the sample due to non-availability of past historical data

3.5 Data collection Instrument

Data collection is gathering empirical evidence in order to gain insights about a situation and answer research questions. Primary data is defined as first-hand information received from a respondent. Primary data for the research was obtained from the Finance officers, and Accountants of the universities, this is because the officers are directly involved with the management of working capital in their respective universities hence are able to provide the appropriate information. Questionnaires were used in collection of data and the respondents were able to explain further their experiences in the management of short term financial management (Kothari, 2004).

Robson (2002) proposed that it was proper to issue a preliminary notification to the targeted respondents before the actual questionnaire is sent out. The purpose for this is to easily access the organization with a view of conducting successful survey, and consequently yielding higher responses. The study aims at achieving a response rate of 60%, and if this is not achievable respondents would be reached via Phone and emails (Robson, 2002)

3.6 Reliability

Joppe (2000) defined it as the extent to which research findings convey some consistency overtime, reliability also means that the results of any study can portray all the characteristics of the entire universe, and shows that these results can be replicated in a different study with the use of similar methods Gill & Johnson (1997.

3.7 Data Analysis

Data analysis begins after data collection and goes all the way up to the point of interpreting the results. This process involves organizing, analyzing and explaining that data obtained from the research process; its aim is to put some sense out of the data obtained from the respondent's noting patterns, themes, categories and regularities (Kothari, 2004).

A descriptive analysis and inferential statistical techniques are to aid in analysis of the raw data, the analysis will use tables, graphs, charts, percentages and frequencies, and this will assist in presenting the collected data for ease of analysis and interpretation. Multiple regression will analyze all the quantitative data and further analysis will be done by use of Statistical Package for Social Sciences (SPSS).

Data analysis by multiple regression will examine the effects of working capital management practices variables on the universities financial performance, it will take the following equation.

$$Yit = \beta_O + \beta_1\,ACPit + \beta_2\,APPit + \beta_3\,LMPit + \beta_4\,ITPit + \varepsilon$$

Where:

Y : Returns on Assets (ROA) to measure of universities performance

Yit : Is the Returns on assets of University i at time t (i=1, 2 ….46 Universities).

β₀, 1.... 4 : Constants representing direction to which each variable influences

Financial performance of the universities.

ACP : the average collection period demands

APP : the average payment period

CMP : cash management practices

ITP : the inventory turnover period

ε : the error term

Xit : The different independent variables of universities 'i' at time 't'.

t : is the Time = 1, 2 ……5 years

To complete the regression analysis, correlation analysis is to be carried out to analyze the working capital management practices and universities financial performance. Test of significance will be done on the variables using t-test at a 95% level of significance, Pearson correlation coefficients is also to be calculated so as to examine the relationship among these variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The study carried out two different types of data analysis; firstly being descriptive analysis and secondly being inferential analysis. Descriptive analysis aids in describing critical matters of the phenomena under the research while at the same time providing clear information on the variables in the study, the inferential analysis adopted Pearson correlation, regression analysis and t-test statistics, Pearson correlation examines the degree of association between variables in the study, regression analysis aids in estimating the relationships between working capital management and universities performance as a returns on assets.

4.2 Data Analysis and Findings

Secondary and Primary data on 30 Universities and University colleges was considered in the analysis, the research had two different data analysis approaches; firstly being descriptive analysis and secondly being inferential analysis, descriptive statistics included mean, standard deviation, minimum and maximum of the sample characteristic variables were computed. The research also carried out inferential statistics to determine in depth relationship between the variables i.e. correlation, regression and tested the hypothesis using Pearson correlation coefficient.

4.2.1 Descriptive statistics

The study found out the importance of evaluating the performances of universities' financial performance variables under consideration i.e. Inventory turnover period (in days), Cash Conversion period, Average Payment Period (in days), Average collection period (in days). The standard deviation, mean, minimum and maximum values were computed as shown in Table 4.1

Below.

Table 4.1: Summary statistics of Financial Performance Variables

Varriables	Mean	Std deviation	Minimum	Maximum
Inventory turnover period (In Days)	80.24	32.03	0.004	120.84
Average Payment Period (In Days)	110.40	99.75	12.55	600.50
Cash Conversion period	47.75	78.90	320.65	190.50
Average collection period (In Days)	50.72	0.420	0.065	4.824

Source: Computed from the Research Findings from year 2011 to 2015

Table 4.1 above shows the results of the variables in the analysis. Information about the frequency of observations was provided and included the mean, dispersion and data variability. From these findings inventory turnover period, the average payment period was 80.24 days and 110.40 days respectively, cash conversion period had a mean of 47.75 days, average collection period 50.72 days.

4.2.2 Correlation analysis

The study analyzed the association between study variables and the universities' returns on assets as indicated by Average payment period (in days), Inventory turnover period (in days), Average collection period (in days) and Cash conversion period. From the prior researches previously

Undertaken, a positive relationship is expected to occur between the study variables and the universities' financial performance as indicated by returns on assets. Table 4.2 below explains the correlation coefficients for the study variables.

Table 4.2: Correlation Analysis

Varriables		Financial performance/ROA
Inventory turnover period (In days)	Correlation p- value	-0.218 (0.00)
Average payment period (In days)	Correlation p- value	0.257 (0.00)
Cash Conversion period	Correlation p- value	-0.285 (0.00)
Average collection period (In days)	Correlation p- value	0.213 (0.00)

Source: Source: Computed from the Research Findings from year 2011 to 2015

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

Table 4.2 indicates the correlation analysis on the universities financial performance variables as indicated by the return on assets. The result shows that universities financial performance variable inventory turnover has a negative correlation of -0.218. Net collection period is also positively correlated by return on assets with a value of 0.213. Net payment period is also positively correlated by 0.257. Cash conversion period is also negatively correlated by -0.285. Universities financial performance (ROA) is negatively correlated with the two variables of working capital management, namely Cash Conversion period and Inventory turnover period in days with the

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Value of -0.285 and -0.218 respectively.

4.2.3 Regression Analysis

Multivariate linear regression analysis was conducted so as to establish if there existed any relationships between the variables in the study and the financial performance of the universities and colleges in Kenya. The regression equation will therefore be:

$$Yit = \beta_O + \beta_1\ ACPit + \beta_2\ APPit + \beta_3\ LMPit + \beta_4\ ITPit + \varepsilon$$

Table 4.3: Regression Coefficients

Varriables	Unstandardized Coefficients		Standardized Coefficients		
	Beta	Std error	Beta	T	Sig
(Constant)	8.103	0.435	0.000	2.336	0.021
Inventory turnover period (In Days	0.331	0.55	0.023	1.132	0.046
Average payment period (In Days)	0.377	0.344	0.074	1.646	0.028
Cash conversion period	0.554	0.284	0.031	1.278	0.048
Average collection period (In Days)	0.623	0.264	0.068	1.753	0.081

Source: *Source: Computed from the Research Findings from year 2011 to 2015*

The coefficient of regression in table 4.3 above was used in coming up with the model below:

Y = 8.103+ 0.331X1 + 0.377X2 + 0.554X3+0.623X4

As per the regression model computed, and all the factors taken into consideration, Return on assets was 8.103 for the years under consideration, Data analysis indicated and taking all the independent variables at zero, a unit increase in inventory turnover period leads to 0.331 increase in ROA, a unit increase in average payment period leads to 0.377 increase in ROA, a unit increase in cash conversion period leads to 0.554 increase in return on assets, a unit increase in average collection period leads to a 0.623 increase in ROA. The Beta Coefficients gives contribution measures for every variable in the model. Large values shows that a change in one unit of predictor variable has a huge effect on the criterion variable. The t and Sig (p) values give a rough indication of the impact of each predictor variable – a big absolute t value and small p value shows that the predictor variable is bearing a huge impact on the criterion variable. At 5% level of significance and 95% level of confidence, average payment days had 0.028 level of significance, average collection days had 0.081 level of significance, inventory turnover had 0.046 level of significance and cash conversion cycle had 0.048 level of significance.

Further studies on hypothesis testing were carried out between the study variables and universities financial performance. The study findings are shown below.

Table 4.4: Working Capital Management Vs Universities Financial Performance

Varriables	Universities Financial performance/ROA
Working capital management Pearson Correlation	0.784
Sig. (2-tailed)	0.000
N	30

Source: Source: Computed from the Research Findings from year 2011 to 2015

A Pearson coefficient of 0.784 and p-value of 0.000 shows a strong, significant, positive relationship between working capital management variables and universities financial performance. Therefore basing on these findings the study rejects the null hypothesis that there is no relationship between working capital management and universities financial performance and accepts the alternative hypothesis that there exists a relationship between working capital management and universities financial performance as measured by either a surplus or a deficit.

4.3 Summary of Findings and Interpretations

The study considered two different types of data analysis; firstly being descriptive analysis and secondly being inferential analysis. The descriptive analysis helped in describing the relevant aspects of the phenomena and providing detailed information on each variable. Inferential analysis used the Pearson correlation and the regression analysis. The study evaluated the performance of the financial variables under consideration i.e. Inventory Turnover period in days, Cash Conversion period, Average collection period and Average Payment Period in days. Their means, minimum and maximum values and standard Deviation were determined.

The findings showed that average payment period and inventory turnover period is averagely 110.40 days and 80.24 days respectively, cash conversion period had a mean of 47.75 days, and the average collection period was 50.72 days. Furthermore maximum inventory turnover period was 120.84 with average payment period of 600.50 recording the highest.

The study further measured the degree of association between the study variables and the financial performance of universities (Average payment period in days, Cash conversion period, Inventory turnover period in days and Average collection period), will significantly improve financial performance of universities.

The result showed that universities financial performance variable returns on assets has huge effects on average payment period and was positively correlated by 0.257, while Inventory turnover was negatively correlated by -0.218. Cash conversion period was also negatively correlated by a value of -0.285 and average collection period with a positive correlation of 0.213. Universities Return on assets is found to be positively correlated with two important variables of working capital, i.e. Average collection period in days and average payment period in days with the value of 0.213 and 0.257 respectively.

Further tests to indicate whether the study variables had any relationship with universities financial performance, P-value of 0.000 and a Pearson coefficient of 0.784 indicated a significant, positive relationship. Findings of this research rejected the null hypothesis that there existed no relationship

Between working capital management and universities financial performance and accepted the alternative hypothesis that there existed a relationship between working capital management and universities financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter highlights the key elements of the research findings and makes final conclusions based on the final results. All the conclusions arrived at are based on the information gathered and recommendations from the findings and further research areas also put forward. The section presents the findings from the study in comparison with what other researchers have discussed under their literature reviews.

5.2 Conclusions

The research study investigated relationships between working capital management practices and financial performance for Kenyan universities and colleges. Analysis of data has been carried out by applying both inferential and descriptive statistics for the time period from 2011 to 2015. This was based on the working capital components namely cash, accounts receivable, accounts payable and inventories.

The study found out that inventory turnover in days has negative relationship with Universities surpluses meaning that Universities financial performance can be improved by reducing inventory in days. APP has a huge positive association with Universities financial performance, showing that if supplier's payment period is increased then the overall Universities financial performance improves too. Cash Conversion period shows a significant negative relationship with Universities financial performance, this implies that the Universities financial performance can be improved

With small size of cash and the rest to be invested in short-term maturing investments. ACP has a positive association with Universities financial performance, showing that if customer's receipts period is reduced then the overall Universities financial performance improves too.

The study has largely concluded that the universities and colleges financial performance strongly relates to the efficiency in management of working capital components whereby the institutions Return on assets and value can be created through shortening of the cash conversion cycles, reducing inventory in days, increasing supplier payment period and reducing collection periods of the debtors etc. hence increasing it cash flows.

5.3 Recommendations

The universities and colleges should focus on speeding up collection periods and delaying payments to creditors. Delays in making payments enables the institutions have more cash to run their activities but the delays should not be too extreme to create poor relations with the universities suppliers. Good collection procedures may lead to increasing student's population and this may increases the universities and colleges performance/surpluses, there needs to have excellent and professional customer relations followed in these exercises.

Universities and colleges management ought to come up with their unique working capital drivers that enables them develop their working capital management policies and practices that is in line with their overall models and strategies.

Universities and colleges management should focus on technology to improve their working capital management efficiencies and other activities. This aids in accurate forecasting of their activities, however these technologies needs a lot of support especially at their initial stages

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Because introduction of new technology has its shortcomings.

Universities and colleges management should have a dedicated section for debt collection and task them with the responsibility of accounts receivable collections and the section should have contacts with the students and other debtors even before the debt is due, this enables them collect the debts from time to time and also show that the students are their valued clients.

5.4 Limitations of the study

There were huge problems in accessing important and critical financial data from the respondents, most institutions felt that confidential and sensitive information may be spread to the general public, the researcher had to inform them that the data was for academic research only and was not meant for any other use.

Time for data collection and analysis was also a very huge challenge, some respondents delayed in giving feedback however the researcher had to make frequent reminder calls. It also involved lots of travelling to deliver and collect the questionnaires whose costs were borne by the researcher.

The study findings should also not be generalized to all universities and colleges but can be used as a study point for other universities and colleges in developing countries as they almost face similar challenges as opposed to universities and colleges in developed countries.

Working capital changes from time to time depending on different economic conditions, and the research findings may not significantly show the correct effects of working capital management practices on financial performance of universities and colleges for the period under consideration.

5.5 Suggestions for further research

Further research studies should be carried out for longer time periods and as frequently as possible. A similar study should also be carried out on the working capital management and financial performance of universities and colleges in Kenya and including more financial variables and putting into consideration the prevailing economic situations in the country as opposed to this study which considered only four working capital management variables.

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APPENDIX 1: UNIVERSITIES AND COLLEGES IN KENYA

List of Public Universities

1. University of Nairobi

2. Kenyatta University

3. Jomo Kenyatta University of Agriculture and Technology

4. Moi University

5. Masinde Muliro University of Science and Technology

6. Egerton University

7. Maseno University

8. Technical University of Kenya

9. Technical University of Mombasa

10. Chuka University

11. Dedan Kimathi University of Technology

12. Jaramogi Oginga Odinga University of Science and Technology

13. Karatina University

14. University of Eldoret

15. Laikipia University

16. Maasai Mara University

17. South Eastern Kenya University

18. Multimedia University of Kenya

19. University of Kabianga

20. Pwani University

21. Kisii University

22. Meru University of Science and Technology

23. Taita Taveta University College

24. Muran'ga University College

25. Kirinyaga University College

26. Cooperative University College of Kenya

27. Kibabii University

28. Garissa University College of Kenya

29. Rongo University College of Kenya

30. Embu University College of Kenya

31. Machakos University College of Kenya

List of Private Universities

1. Daystar University

2. Kabarak University

3. KCA University

4. Kenya Methodist University

5. Mount Kenya University

6. St. Paul's University

7. Strathmore University

8. United States International University

9. University of Eastern Africa Baraton

10. Africa Nazarene University

11. Catholic University of Eastern Africa

12. Adventist University of Africa

13. Africa International University

14. Management University of Africa.

15. Pan Africa Christian University

APPENDIX II: QUESTIONNAIRE

Working Capital management practices in Kenyan Universities and Colleges

The purpose of the Questionnaire is to understand Working capital management practices employed by local Universities and tertiary colleges, and how they are affected by these practices in the running of their day to day activities and consequently their liquidity, all the information provided in the questionnaire will be treated with strict confidentiality.

Part A: General Information

A1: Job Tittle:

A2: What are the main University or college primary teaching activity? I.e. is a business school, Medical School etc. (Mark with X or tick where applicable)

(   ) Medical School
(   ) Business School
(   ) Tertiary college
(   ) School of Economics
(   ) Accounting College
(   ) Any other, please specify

Part B: Working Capital management practices

The purpose of the section is to examine the working capital management practices employed by the Universities and tertiary colleges.

B1: Please mark with X or Tick where applicable

	1	2	3	4	5
	Least important	Less important	Important	More important	Very important
How important is working capital management in your institution?					
How important is operational performance to your Institution?					

B2: On Average how long does your institution take to pay its credit suppliers and part-time lecturers? (Mark with X or tick where applicable)

(   ) Less than one Month (< 30 days)
(   ) One to two months (30 - 60 days)
(   ) Three to four months (61-120 days)
(   ) More than four months (> 120 days)

B3: On Average how long does your institution take to receive cash from its credit customers/ Students? (Mark with X or tick where applicable)

(   ) Less than one Month (< 30 days)
(   ) One to two months (30 - 60 days)
(   ) Three to four months (61-120 days)
(   ) More than four months (> 120 days)

B4: On Average how long does your institution take to sell its books/research materials? (Mark with X or tick where applicable)
(   ) Less than one Month (< 30 days)
(   ) One to two months (30 - 60 days)
(   ) Three to four months (61-120 days)
(   ) More than four months (> 120 days)

B5: On Average what is the length of your institution's Operating cycle? (Mark with X or tick where applicable)
(   ) Less than one Month (< 30 days)
(   ) One to two months (30 - 60 days)
(   ) Three to four months (61-120 days)
(   ) More than four months (> 120 days)

B6: Fill in the table below by marking with X or Tick where applicable

	1	2	3	4	5
	Never (more than 120 days)	Sometimes(6 1-120 days)	Quite Often 30 - 60 days	Often (within a month)	Very Often (Within a week)
How often do credit customers-students pay on time?					
How often does your institution review its debtors aging schedule?					
How often does your institution review its accounts receivable policies?					
How often does your institution review its inventory/books levels?					
How often does your institution make early payments to your suppliers and part time lecturers?					
How often does your institution review its accounts payable policies?					
How often does your institution manage its working capital?					
How often does you source for external financing					

	for your working capital?					

Part C: Financing Working Capital

The purpose of the section is to find out how Institutions finance their working capital.

To what extend does your institution use the following external sources of finance to finance its working capital needs? (Within a span of six months Mark with X or tick where applicable)

	1	2	3	4	5
	Never (less than once	Sometimes (1 – 2 times)	Often(3-6 times)	Quite Often (7-10 times)	Very Often(more than 10 times
Bank Overdraft					
Short term loans					
Medium term loans					
Long term loans					
Cash from operations					

Part D: Working capital management Challenges

The purpose of the section is to investigate the challenges Institutions faces when managing their working capital

D1: Kindly rate the following working capital challenges ranging from the least important to the most important (Mark with X or tick where applicable)

Challenge	1 Least important	2 Less important	3 Important	4 More important	5 Most important
Cash is not readily available when needed					
Insufficient time to manage working Capital					
Difficulties in determining the right levels of working capital					
Difficulties in identifying risks associated with working capital					
Difficulties in determining working capital needs of the institution					
Difficulties in managing high inventory levels					
Difficulties in collecting trade receivables					
Difficulties in paying trade receivables in time					
Difficulties in cash flow management and forecasting					
Lack of capital management skills					

D2: To what extend does your institution use the following working capital management tools/ techniques (Mark with X or tick where applicable)

WCM Technique	1 Not at all	2 Seldom	3 Sometimes	4 Most times	5 Always
Extending payment periods to students					
Aggressive collection Policies					
Aging of Debtors					
Reducing stock levels					
Setting credit limits					
Projected cash budgeting					
Analysis of financial and operating leverage					
Any other (please specify)					

E: How does your working capital management practices affect your institutions operating performance?

The purpose of this section is to find out how Universities measure their operational performance and the effect of working capital management practices on operational performance

E1: To what extend do you rate the importance of managing working capital to the University?
 Very important [   ]   Important [   ]   Not important [   ]

E2: What is your university's working capital financing policy?
  Conservative [   ]   Moderate [   ]   Aggressive [   ]

E3: **Accounts Receivable Management**

 a)   What is your accounts receivable payment policy?
    1 – 15 days [   ]   16 – 30 days [   ]   30 days and above [   ]

b) What is the bad debt percentage of the accounts receivable?
Less than 1% [ ]   1%-5% [ ]   5%-10% [ ]   11%-20% [   ]   over 25% [   ]

c) What percentage of your fees income constitutes credit to students?
1 – 15 % [   ]   16 – 30 % [   ]   30 % and above [   ]

E4: Accounts Payable Management

a) Do you purchase goods on credit? Yes [   ]   No [   ]
If yes to the question above, what percentage of your purchases constitutes credit?
1 – 15 % [   ]   16 – 30 % [   ]   30 % and above [   ]

b) What is your accounts payable payment policy?
1 – 15 days [   ]   16 – 30 days [   ]   over 30 days [   ]

c) What motivates you to pay your creditors in good time?
Discounts [   ]   Reduced prices [   ]   after sale services [   ]

Any other (specify)..

d) Do you have an accounts payable control system in place? Yes [   ] No [   ]

If Yes please explain……………………………………………………………

e) Do you maintain a good relationship with creditors?   Yes [   ] No [   ]

If no to the above question, how does that affect your operations?
……………………………………………………………………………..

E5: Liquidity (Cash) Management

a) What factor motivates the holding of cash by your university?
Precautionary motive [   ]   Transaction motive [   ]
Speculative motive [   ]   any other (specify)………………………

b) Do you prepare cash budgets? Yes [   ] No [   ]

c) How do you manage the difference in your required cash in case of shortfalls? …………..
……………………………………………………………………………………...............

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d) How do you control the proceeds generated on a daily basis?

Keep it in office cash till [   ]   Keep it in the bank [   ]
Spend the proceeds [   ]   others (specify)..............................

E6: Inventory Management
a) Do you have a re-order level policy? Yes [   ] No [   ]

b) What percentage of stock represents your minimum re – order level?
   1 - 10% [   ]   11 – 20 % [   ]   21 – 30% [   ]

c) What percentage of stock represents your maximum re – order level?
   51 – 60% [   ]   61 – 70% [   ]   71 – 80% [   ]   80% and above [ ]

d) What influences re-ordering quantities or levels?
   Inflation [   ]   Shortage Costs [   ]   Price Discounts [   ]
   Availability [   ]   Storage Costs [   ]   Demand based on order [   ]

e) What is your inventory turnover period?
   1 – 15 days [   ]   16 – 30 days [   ]   over 30 days [   ]

F: Any other comments with regards to working capital management (please explain in the space provided below)

Thank you for your time and responses.

APPENDIX III: RAW DATA ANALYSIS

University/Variables	2011	2012	2013	2014	2015

University Of Nairobi

The average collection period demands	60	57	54	55	65
Inventory turnover period	90	85	82	81	92
The average payment period	105	116	109	111	120
Cash conversion period	50	42	61	58	57

Kenyatta University

The average collection period demands	57	51	63	72	66
Inventory turnover period	89	81	90	91	86
The average payment period	110	111	109	116	119
Cash conversion period	55	52	56	51	61

Moi University

The average collection period demands	59	56	61	71	62
Inventory turnover period	81	86	82	84	81
The average payment period	116	112	106	108	111
Cash conversion period	45	49	47	43	44

Jomo Kenyatta University of Agriculture and Technology

The average collection period demands	52	56	58	51	48
Inventory turnover period	76	81	74	86	84
The average payment period	111	108	114	116	108
Cash conversion period	50	47	51	52	48

Egerton University

The average collection period demands	51	53	54	47	56
Inventory turnover period	81	78	86	84	82
The average payment period	110	114	112	109	114
Cash conversion period	50	45	49	51	53

Maseno University

The average collection period demands	49	50	52	51	50
Inventory turnover period	78	81	80	83	82
The average payment period	110	116	108	111	114
Cash conversion period	50	46	51	48	49

Technical University of Kenya

The average collection period demands	51	53	52	47	49
Inventory turnover period	76	79	82	81	84
The average payment period	110	116	114	112	109
Cash conversion period	50	46	49	51	52

Chuka University

The average collection period demands	51	49	52	53	52
Inventory turnover period	81	79	83	84	81
The average payment period	111	109	114	113	110
Cash conversion period	47	49	46	48	47

Karatina University

The average collection period demands	52	49	51	51	52
Inventory turnover period	80	81	79	81	80
The average payment period	110	111	109	108	110
Cash conversion period	49	47	47	46	45

South Eastern Kenya University

The average collection period demands	51	50	52	49	48
Inventory turnover period	80	81	83	79	78
The average payment period	111	108	110	111	108
Cash conversion period	46	46	47	45	49

Maasai Mara University

The average collection period demands	50	51	49	48	51
Inventory turnover period	81	80	82	79	80
The average payment period	110	109	112	108	109
Cash conversion period	47	46	49	50	46

Multimedia University of Kenya

The average collection period demands	50	52	49	51	50
Inventory turnover period	80	81	79	78	80
The average payment period	111	109	112	109	108
Cash conversion period	47	46	49	50	46

University of Kabianga

The average collection period demands	51	49	50	53	52
Inventory turnover period	81	80	79	81	82
The average payment period	110	111	109	114	112
Cash conversion period	47	46	49	51	50

Kisii University

The average collection period demands	51	52	49	49	51
Inventory turnover period	80	81	79	82	81
The average payment period	108	107	111	112	108
Cash conversion period	46	45	49	50	50

Pwani University

The average collection period demands	50	51	48	52	51
Inventory turnover period	81	80	78	82	81
The average payment period	110	109	114	112	106
Cash conversion period	45	48	42	48	46

Muran'ga University College

The average collection period demands	51	50	49	48	50
Inventory turnover period	80	79	78	81	82
The average payment period	110	108	109	110	111
Cash conversion period	17	48	45	49	50

Kirinyaga University College

The average collection period demands	51	48	52	49	50
Inventory turnover period	81	80	78	77	81
The average payment period	111	115	109	600	111
Cash conversion period	47	48	48	47	50

Embu University College of Kenya

The average collection period demands	51	50	49	50	48
Inventory turnover period	80	81	78	83	82
The average payment period	114	108	112	109	110
Cash conversion period	48	50	47	51	52

Machakos University College of Kenya

The average collection period demands	51	52	54	48	52
Inventory turnover period	80	81	78	79	81
The average payment period	111	110	108	109	110
Cash conversion period	47	47	46	50	51

Daystar University

The average collection period demands	50	51	50	48	49
Inventory turnover period	81	80	78	79	81
The average payment period	110	111	109	110	108
Cash conversion period	47	46	47	48	46

Kabarak University

The average collection period demands	51	50	48	49	50
Inventory turnover period	80	81	78	82	79
The average payment period	111	108	109	112	114
Cash conversion period	48	51	50	49	45

KCA University

The average collection period demands	50	51	48	49	51
Inventory turnover period	81	80	78	79	80
The average payment period	110	109	111	112	108
Cash conversion period	47	45	48	50	48

Kenya Methodist University

The average collection period demands	51	48	53	54	47
Inventory turnover period	80	82	81	78	74
The average payment period	114	115	116	108	111
Cash conversion period	50	51	45	48	48

Mount Kenya University

The average collection period demands	50	52	48	51	48
Inventory turnover period	78	78	79	81	75
The average payment period	110	111	108	106	112
Cash conversion period	46	45	45	48	47

St. Paul's University

The average collection period demands	50	51	48	49	51
Inventory turnover period	80	79	76	79	81
The average payment period	111	110	108	109	114
Cash conversion period	45	42	48	50	41

Strathmore University

The average collection period demands	51	53	52	49	50
Inventory turnover period	81	80	82	81	78
The average payment period	114	112	116	118	109
Cash conversion period	48	47	45	49	52

United States International University

The average collection period demands	51	48	53	52	48
Inventory turnover period	82	86	84	85	81
The average payment period	114	108	112	109	111
Cash conversion period	48	45	49	50	51

Africa Nazarene University

The average collection period demands	51	52	49	48	56
Inventory turnover period	82	83	86	81	80
The average payment period	114	116	108	111	115
Cash conversion period	48	51	50	49	48

Catholic University of Eastern Africa

The average collection period demands	56	54	55	49	52
Inventory turnover period	82	86	84	78	81
The average payment period	115	118	109	118	116
Cash conversion period	51	49	52	51	50

Management University of Africa.

The average collection period demands	53	51	48	52	53
Inventory turnover period	81	86	84	81	84
The average payment period	114	112	116	115	109
Cash conversion period	51	48	49	52	51