

**COMPUTERIZED FUNDS TRANSFER SYSTEM AND CASH
MANAGEMENT AT KISUMU EAST DISTRICT TREASURY**

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DECLARATION

This Research Project is my original work and has not been submitted for an award in any University.

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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 parents; Mr. Andrew Oriwa and Mrs. Beatrice Oriwa, for their good work raising me and making sure that I got all that I needed to be successful in life and for their continued encouragement and support throughout my studies.

ABSTRACT

Computerized Funds Transfer System is an electronic exchange or transfer of money from one bank account to another either within a single financial institution or across multiple institutions, through computer based system. A silent revolution has taken place in the world's entire payment system aiming to improve cash management position. Cash management is the process of forecasting, collecting, disbursing, investing, and planning for cash a company needs to operate smoothly. The Government of Kenya in an attempt to reduce receipts and payments exposure risks introduced a computerized funds transfer system in 1992 and whose effects have not yet been known. The purpose of this study was to examine the effect of computerized funds transfer system on cash management, specifically the study sought to determine the privacy and security of cash transferred, assess time saved as well as productivity achieved by implementing computerized funds transfer system, explore the strategies to be put in place to improve computerized funds transfer system towards cash management and establish relationship between computerized funds transfer system and government cash management. The study was a case study and used theoretical framework model on cash management and based on a descriptive research design it examined and analysed the entire study area and drawn conclusion. Kisumu East District Treasury was chosen as suitable area of study because its among the few District treasuries in which CFTs was implemented as a pilot project and also due to its funds transaction with the CBK which was the implementing bank regarding government electronic funds transfer. Primary data was collected by means of self-administered questionnaires and interviews to the respondents comprising of the staff, heads of departments and accounts officer from the various departments. Records kept at the district treasury were used to collect secondary data. The descriptive and analytical statistics was used to examine findings and come up with conclusions. The findings were presented using tables and cross tabs. The results indicated that CFTs has led to increased security and privacy, cost reduction, time saving and productivity. There is also a significant relationship between computerized fund transfer system and cash management. In conclusion CFTs has led to effective and efficient cash management even though it is facing a few challenges. The study therefore recommends reinvention of the system to accommodate and offer adequate privacy of personal data, improved security and training of staff for sound cash management.

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ABBREVIATIONS AND ACRONYMS

AR	Accounts receivables
CFTs	Computerized funds transfer systems
CBK	Central bank of Kenya
CIPD	Computer Industry Development Potential
EFT	Electronic fund transfer
ICT	Information and communication technology
LTD	Limited
MFI	Micro Finance Institution
MIS	Management Information System
NGO's	Non-Governmental Organizations
RCA	Radio Corporation of America
UK	United Kingdom
US	United States
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Computerized funds transfer system is the electronic exchange, transfer of money from one account to another, either within a single financial institution or across multiple institutions, through computer-based systems (DiNapoli, 2010). According to Getembe et al (2013) computerized fund transfer system uses computer and electronic technology as a substitute for checks and other paper transactions. EFTs is initiated through devices such as cards or codes that you use to gain access to your account. According to Davidson (2004) cash Management is the stewardship or proper use of an entity's cash resources. It is a strategy and associated process of collecting, managing and short term investing cash to ensure financial stability and solvency. It is concerned with managing of cash flows in and out of the firm and balance held by the firm at a point of time by financing deficit or investing surplus cash (Pandey, 1999). Computerized fund transfers have created many benefits which helps both financial institutions and business men to perform their operations through the following; It has increased reliability through providing accurate information tracked from using debit and credit cards which saves money and reduce carbon reduced hard cash that is with electronic fund transfers, one can easily transfer money from one bank account to another without exchange of physical cash .The system does not only reduce hard cash but also abolish paper money and eliminate most crimes (Bitwababo, 2011).

According to the theory of computerized accounting system: Computerized accounting system involves the use of technological advances especially with the use of computers to create new types of accounting application to business in facilitating quick decision making (Burdick, 2010). It describes computerized accounting to be a modernization needs which most organization strive to achieve as a breakthrough in the accounting reforms despite the lack of sufficient knowledge to carry out computerized accounting (Kippers, 2004). The theory of financial intermediation depicts district treasuries as financial intermediaries that exist to overcome the informational asymmetries through provisions of liquidity through deposits and supply of finance to households and firms.

Globally, during the mid-1970's standard regressions explaining the demand for money underwent a well-documented shift. This shift was attributed to the adoption of more sophisticated methods of cash management practices by firms. Specifically, techniques were developed that allowed firms to perform a given level of transactions while holding lower money balances. However, changing

economic conditions alter the profitability of investing in new methods of managing transactions balances. For example, lower computer costs may make previously unprofitable procedure profitable and advances in computer technology may make new methods in cash management feasible. Firms are attempting to minimize the cost involved in carrying out transactions. These include the interest foregone on idle balances of cash (Dotsey, 1984). Financial managers have found modern computer technology helpful in improving cash management. Computerized funds transfer as an electronic exchange or transfer of money from one account to another was found to be potential for improving cash management in government by the US federal government (Niblack, 1976). Although computerized Funds Transfer is often considered a revolutionary development with far reaching effects, its development can be viewed as just another step in the evolution of the payment mechanism.

Cash is the most common form of payment. Government through the district treasuries used to collect hard cash at strategic points before banking the same and withdrawing bulk cash to pay off its cash obligations as well as drawing cheques for big payments. However, all these had the major disadvantage of being insecure, bulky and costly to produce. There were risks associated with handling hard cash and paper cheques. These included rampant cases of stealing on transits by armed robbers and cashiers entrusted with the same in government offices. The cheque leafs could be stolen and forged signatures could be used to cash these checks. Government officers were wasting many working hours whenever they could queue the whole day at the District Treasury to be paid their travel imp rests and monthly salaries through cash payroll. The worrying safety and security of paper check and liquid cash used in the payment system brought in rapid changes in government cash management (Abor, 2004). The Government of Kenya in an attempt to reduce receipts and payments exposure risks introduced a computerized funds transfer system in 1992 and whose effects have not yet been known even though institution as well as individual consumers have enjoyed its use and benefits. The district treasury therefore computerized their system in order to manage their cash flows which are becoming dynamic in transaction banking and therefore an important job in today's scenario.

1.1.1 Computerized Funds Transfer System

Computerized fund transfer is a system of transferring money from one bank account directly to another without paper money exchanging hands (TanBeng, 2000).Computerized funds transfer

system is a cluster of technologies that offer execution of financial transaction by electronic message without necessity of paper instrument of exchange (Getembe et al, 2013). Money Transfer Services refer to services in which money or funds can be transferred from one location to another with the help of several methods. Mukwana and Sander, (2003) noted that the methods are quick, dependable, and easy to process; with which money can be sent or received all over the world without any hassles.

Technological advances have made it possible to conduct financial transactions in a faster, safer, and more efficient manner, both by speeding up traditional payment methods and by facilitating the introduction of new methods. Technical innovation has played a central role in the evolution of the financial services industry over the past fifty years. Advances in information processing and communications technologies, in particular, have fundamentally changed the nature of financial services by influencing the manner in which these services are created, delivered, priced, received, and used (Congress Report, 1997).

Mullei (2003) outlines national payment system where a silent revolution was taking place in the World's entire payment system. The Central Bank of Kenya is aware of the numerous benefits of an efficient payment system in the effective implementation of the monetary policy operations and financial stability. The CBK policy is to encourage the public to move to non-cash payment instruments through the use of computer applications and communication technology within the Kenya financial sector.

1.1.2 The concept of Cash Management

Cash management means the management of liquidity in order to meet the day---to---day commitment. The result of poor focus on cash management often means that the financial assets are bound (Babil, 2012). Waltson and Head (2007) explained Cash management as the concept which is concerned with optimizing the amount of cash available, maximizing the interest earned by spare funds not required immediately and reducing losses caused by delays in the transmission of funds. According to Zimmerer et al (2008) cash management is the process of forecasting, collecting, disbursing, investing, and planning for cash a company needs to operate smoothly. They further added that cash management is a vital task because it is the most important yet least productive asset that a small business owns. A business must have enough cash to meet its obligations or it will be declared bankrupt. Creditors, employees and lenders expect to be paid on time and cash is the required medium of exchange. Cash Management in government is

misconceived as synonymous to budget exciting, accounting control or debt management, instead of a practice that aims to cost effectively manage government cash and their risks.

The aim of cash management is to maintain adequate control over cash position to keep the firm sufficiently liquid and to use excess cash in some profitable ways. Cash management has therefore been defined by Johnson and Aggarwal (1988) to involve managing the money of the firm in order to attain maximum interest income on idle funds. The Chartered Institute of Bankers of Nigeria (2000) also explained that the role of cash management is to plan, monitor and control the cash flows and the cash position of a company maintaining its liquidity. Akinsulire (2006) further opines that cash management involves the efficient collection, disbursement and temporary investment in cash.

In addition, Pandey (2005) opined that cash management is significant because it constitutes the smallest portion of the total current assets, yet management considerable time is devoted in managing it. Pandey further discussed that the recognition of cash as both a valuable resource and an operational necessity for business is core to cash management in the short and long term. Cash management assumes more importance than other current assets because cash is the most significant asset that a firm holds. Cash is unproductive unlike fixed assets or inventories; it does not produce goods for resale, notwithstanding management's considerable time is devoted to managing it. The primary purpose of cash management is therefore to reduce cost. However, a cost-benefit analysis of cash management is also needed. Such costs of cash management include cost of interest payments, cost of collection, cost of disbursement of funds (Uwuigbe et al, 2012).

Technology can make our lives easier and our governments more efficient. For local governments, the use of cash management technologies requires the review of current procedures to ensure that they are authorized under existing laws and that the design of internal controls is appropriate for securely processing transactions electronically. Some of the newer technologies can speed up the recording and depositing of receipts and can help ensure that disbursements are properly recorded, while reducing the cost of processing these transactions. Traditional internal controls, such as written policies and procedures, authorizations, segregation of duties and monitoring, however, are still important considerations when implementing these technologies (DiNapoli, 2010).

1.1.3 Computerized Funds Transfer System and Cash Management

FMCBC Recommended practice (2005) states that, implementing electronic methods of payments and collections in Canada can provide a municipality with greater efficiency and

reduced administration costs. Also, electronic commerce and cash management has the ability to increase the protection of information used in payment fraud, and can also reduce the occurrence of lost or stolen cheques. Furthermore, there can also be reduced administrative time lags for bill payment by taxpayers, reduced paperwork, and accelerated payments and availability of funds. Since this is a new payment system and evolving technology, whose full impacts are unknown, it has given rise to user privacy and security when payment is transferred direct into one's bank account. Since it is an inter-institutional direct funds transfer, it eliminates physical security measures for handling cash and checks as well as check loss, theft and forgery.

According to DiNapoli (2010), Technology can make our lives easier and our governments more efficient. For local governments, the use of cash management technologies requires the review of current procedures to ensure that they are authorized under existing laws and that the design of internal controls is appropriate for securely processing transactions electronically. Some of the newer technologies can speed up the recording and depositing of receipts and can help ensure that disbursements are properly recorded, while reducing the cost of processing these transactions. Traditional internal controls, such as written policies and procedures, authorizations, segregation of duties and monitoring, however, are still important considerations when implementing these technologies. DiNapoli notes that as new electronic technologies continue to emerge in the commercial sector, they will certainly migrate to government as well. Our laws and our internal controls therefore need to adapt and embrace these new technologies as they will provide opportunities for increased efficiency and cost reductions in the processing of financial transactions, as well as new opportunities for fraud.

According to Niblack (1976) the common factor in EFT systems is that they speed the transfer of funds by communicating information relating to payments by electronic means rather than by use of paper instruments as is predominant today. Thus, EFT systems are designed to replace manual processes with electronic data processing and to speed the flow of funds through high speed data transmission. It is reasonable to expect marginal costs of making a transfer through EFTS to be less than through the check system; average costs of transfers could also be lower, if a sufficiently large volume is achieved.

1.1.4 Kisumu East District Treasury

District treasuries are under the ministry of finance and are mandated to carry out financial operations on behalf of the government at the district levels. The ministry of Finance derives its mandate from the constitution of Kenya, Cap VII sections 99-103 which provides for proper budgetary and expenditure management of government financial resources. Kisumu East District Treasury has the mandate of overseeing the district financial expenditures, implementing and formulating financial issues of the whole district.

The government in an attempt to ensure sound cash management introduced computerized payment method in 1992 through the Central Bank of Kenya, Cash Management Improvement Act of 1992 whose vision and strategy was to build the payment system in Kenya and the region to world class standards with far reaching benefits. This was then rolled down to central government operations in 2007 in which all accounting officers were informed of the decisions to adopt an electronic payment method in place of cash and check system and prepare an accurate database of suppliers and staff. The ministry established computerized funds transfer system in 2010 at the Kisumu East District Treasury in an attempt to reduce receipts and payments exposure risks (Treasury, 2014). Kisumu East District Treasury falls under the Ministry of Finance in the Government of Kenya. CFTs play a central role in making payments and revenue collection at the treasury, thus influencing cash management.

1.2 Research Problem

A silent revolution has taken place in the world's entire payment system aiming to improve cash management position. Dotsey, Dundore, Karthick and Niblack depict CFTs to be having a positive correlation with cash management. However, Bitwababo (2011) argues that though CFTs have impact on cash management, the relationship is weak sending an overall negative signal to the stake holders and management that CFTs alone cannot fully manage institutional cash but also strengthening other means because there are some activities which cannot be detected by computers such as money laundering and other related activities which requires tight supervision from the management. Getembe (2013) and Mukwana (2003) also raised some concerns on the costs, privacy and security of CFTs. Davidson (2004) also states that CFTs is not a perfect system, therefore customers should still be inspecting their financial statements for any possible errors and frauds.

Kisumu East District treasury uses computerized funds transfer systems, in accordance with applicable lawsto process numerous financial transactions for the various departments and its clients (Treasury, 2014). Despite its use in revenue collection, disbursements of funds and making payments its impacton cash management at the treasury are not fully known. An analysis of the concern is necessary because the primary function of treasury is cash management and control of monetary flows of organizations and liquidity positions that will lead to improvements in the results of the treasurydepartment and in those of the remaining departments (JMIB, 2011).

Since CFT is an evolving technology whose impacts are not known it has given rise to three issues: user privacy, system security and consumer equity (Gibbons, 1982). In very recent years three principal concerns about CFT privacy emerged. One about the extent to which personal data in CFT systems are or might be disclosed to third parties: two, the possibility of Government or private surveillance through CFT systems and data files: and three, the right of consumers (users) to see, challenge and correct their personal data in CFT systems. Although other systems of funds transfer are more prone to theft and other financial crimes, it is still uncertain to what extent CFT system is safe or vulnerable (www.iosrjournals.org). Another unknown aspect of the new CFT system technologies is its economics. The impact of CFT system on the administration of business- to - business as well as on individual consumers or non - business environment cannot be ignored. Of great interest are those cost that are not quantifiable in monetary terms and analysis of the same is necessary (Onyedimwekwu, 2013).

According toBitwababo (2011),the management and control of cash is evidently a challenge affecting financial institutions such as banks and insurance companies. If it is not well addressed, it could result into collapse of some financial institutions which are financially weak especially the upcoming financial sectors. He notes that recently, there has been an increasing trend of money laundering in the country and this has made bank of Uganda have little intervention in managing such cash. All those have impact on cash management despite of computerized accounting systems that have been put in place.

Getembe et al, (2013) noted that there are various advantages associated with electronic money transfer system, even though various shortcomings affected the value of business process management among commercial banks in Kenya. A study on other institution will be necessary to establish the relationship between electronic funds transfer system and other business practices.

Despite its central role in business very little is known about the practical issues of computerized funds transfer system and cash management (Kytonen, 2004). Few studies have been done on CFTs especially the relationship between CFTs and cash management. This study therefore sought to unearth the impact of computerized funds transfer system on cash management and how cash is being managed at Kisumu East District Treasury and find answers to the following question: does the computerized funds transfer system affect district treasury cash management.

1.3 Objectives of the Study

The objective of the study was to examine the effects of computerized funds transfer system in cash management within Kisumu East District Treasury.

1.4 Value of the study

The study will be important to the Kisumu East District Treasury because of the information gathered will help in strengthening the effective and efficient cash management through a computerized payment system. The findings of the research will be useful to administrators and employees of the county treasuries as they shift from relying on personal experiences or subjective judgment or old-fashioned traditions of working to base the methods, decisions and actions on concrete knowledge of issues to achieve internal efficiency and strengthening cash management through a computerized payment system. Kisumu East district treasury is among the few District treasuries in which CFTs was implemented as a pilot project therefore the recommendations of the study will be useful to other government entities.

It is hoped that this study will yield data and knowledge that will be useful for proper planning and decision making in fund transfer and for institutionalization of a framework for management actions for running county treasuries and cash management. The government will also benefit, since the study intends to highlight weakness on computerized payments system by the government treasury and controls to put in place to improve in cash management.

The study will also be useful to professional prudent cash management researchers and scholars as a guide particularly when carrying out similar research in other areas and institutions other than Kisumu East District Treasury.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section deals with theoretical and empirical framework that guided the conduct of the study. The literature to be reviewed covers information relating to the theory of computerized accounting, the new development of computerized funds transfer system before looking at government cash management.

2.2 Theoretical perspectives

The study was based on the theory of computerized accounting, the theory of financial intermediation, system rationalism and segmented institutionalism approaches.

2.2.1 The Theory of Computerized Accounting

Computerized Accounting is a machine based electronic technology to accounting, with the computer instead of manual book-keeping. It is a partial substitute for manual completion of accounting information (Perez, 2005). Computerized Accounting practices assume that computer itself has a low probability of error but can be caused by human error and human frauds are increasing resulting into huge losses. These losses can be prevented by development of a strict internal control system on computerization of accounting process.

Kippers (2004) findings revealed computerized accounting is a modernization needs which most organization strive to achieve as a breakthrough in the accounting reforms despite the lack of sufficient knowledge to carry out computerized accounting. The traditional manual book-keeping is still in practice and long been accepted but current corporate governance are built on the basis of accounting manual to change the habit of forming methods are difficult. In particular, the confidentiality of computerized accounting, security gaps and thus reliability of computerized accounting data skeptical. Computerized Accounting, while largely reduce the workload of accounting personnel, but also increased the operators, maintenance personnel, positions, bringing many new demands. As the computerization of accounting is related to two kinds of accounting and computer expertise, the job accounting staff was to be trained though still there is

a gap between the level of actual requirements of operational capability and computerization.

2.2.2 Theory of financial intermediation

Allen and Santomero theory of financial intermediaries exist to overcome the informational asymmetries in markets. Governments and banks as particular type of financial intermediaries, perform different tasks related to these information asymmetries, among which are the provisions of liquidity through deposits and supply of finance to households and firms. Among various issues analyzed by financial intermediation literature is the relationship between government, bank and customers and monitoring activity that implies that firms and financial intermediaries develop long term relationships, thus mitigating the effects of adverse selection and moral hazard. Recent developments in ICT, together with new financial instruments have lowered informational asymmetries.

2.2.3 System rationalism and segmented institutionalism approaches

System rationalists typically emphasize the positive roles that computer technologies play in social life. Often they examine new capabilities of computing technologies or new areas in which they may be applied. CFTs therefore may be applied in cash management by various organizations. They place efficiency whether economic or organizational as the predominant value. Segmented institutionalists examine consequences of computerized technologies on many aspects of social life. It may be used to determine the impact of CFT on cash management. It therefore raises concerns such as privacy, security and costs that arise from CFTs (Kling, 1980).

2.3 Computerized fund transfer system

Gibbons (1982) outlines computerized funds transfer system as an alternative method of paying for goods and services and making a wide range of financial transactions that will increasingly challenge currency and checks as a dominant payment system. Concerns about privacy and security are stimulated by the nature of computer technology. Money transfer entailed moving money from one person to another or from one institution to another using an intermediary. Adkins (2010) says a money transfer or wire transfer is an order placed with a financial institution or wire transfer service provider to disburse funds a person had provided to another party, Banks and wire transfer providers have networks of affiliated financial institutions or agents worldwide that complete the requested transfer of funds on a person's behalf usually for a modest fee. Today the majority of money transfers are carried out by electronic transfer (EFT

using internet).

2.4 Cash Management

According to investopedia, cash management is the corporate process of collecting, managing and (short-term) investing cash. A key component of ensuring a company's financial stability and solvency. Frequently corporate treasurers or a business manager is responsible for overall cash management. CJVolks Associates (2002) describes Cash management to be the movement of funds through financial institutions to optimize liquidity. It is the management of corporate funds to increase interest income earned by maximizing investments and/or reducing interest paid by minimizing borrowings. Cash management uses the knowledge of funds movement through the banking system, coupled with banking services and other financial products, to optimize liquidity. It is the scheduled gathering of information about a company's cash flow, its receipts, disbursements, and balances. This information is used to manage these elements of working capital.

Westerfield et al, 1999 noted that it is important to distinguish between true cash management and a more general subject of liquidity management. The distinction is a source of confusion because the word cash is used in practice in two different ways. First, it has its literal meanings, actual cash on hand. However, financial managers frequently use the word to describe a firm's holdings of cash along with its marketable securities, and marketable securities are sometimes called cash equivalents or near cash. In our distinction between liquidity management and cash management is straightforward, they added. Liquidity management concerns the optimal quantity for liquid asset management policies. Cash management is much more closely related to optimizing mechanisms for collecting and disbursing cash, and it's this subject that we primarily focus on this study.

2.5 Computerized funds transfer system and cash management

According to Kytonen (2004) effective management of cash flows, technological and informational questions play a key role. Because cash management is becoming more sophisticated thanks to an increasingly complex world economy, centralization is a major theme and technology the main enabler and driving force. By centralizing the use of available cash, the treasury operations are able to use the surplus funds of one division to meet the deficit position of another and thus avoid borrowing, or at least reduce the cost of borrowing. Alternatively, any

surplus funds may be invested at higher returns in the money markets, adding to profitability. Information systems offered by banks and other suppliers were utilized more widely than before. These are clearly necessary for effective money market operations, which form an important part of modern cash management activities.

2.6 Empirical Review

Dotsey (1984) carried out a study on cash management through an interview of bank manager of Federal Reserve Bank of Richmond. He found that much of the use cash management technique involved computers and accounting equipments. In conclusion he noted that the use of many of cash techniques involved the rapid movement of money so that it may be invested in short term market instruments.

A study carried out in USA by Niblack (1976) on development of computerized funds transfer systems by Commercial Banks in Atlanta city revealed that many banks viewed computerized funds transfer as providing an opportunity for initiating new services and reducing costs, thus increasing profitability. Small banks viewed it as costly, they feared that they could not compete with large banks, which could afford the necessary computer equipment and as a result would be forced out of the market if computerized funds transfer system was to be fully implemented in Massachusetts-USA, Dundore (1985) carried out a study on implications of the computerized funds transfer system on Non-Financial Corporations within Boston city. He collected views from 52 managers of these Non-Financial Corporations and found out that there was a remarkable improvement on machine handling check and reduced clerical or administration costs of processing payments. The value of the deposit balances had also risen and commercial banks had not significantly changed their charges to business for such service. In his conclusion, he made that most of these corporations had reached the peak of the technology cycle in the payment process; a change in cost situation was imminent.

Minissian (1999) conducted a study on Management of Government Bank Accounts in Philippines. She found out that it was necessary to minimize the interval between the time when the cash is received and the time it was available for carrying out expenditure programs. He also noted that the major purpose of controlling cash was to avail cash until the payments were due and to minimize the transaction costs. Jose (2008) conducted a study on Treasury

management and cash management on Spanish firms. The findings reflect the idea that treasury management comprises of basic cash management. The theoretical concept underlying these findings were supported by the opinions of the treasury managers surveyed, who understand cash management as including not just liquidity management tasks but also other management of payment made and received.

Bitwababo (2011) carried out a study on computerized accounting systems and cash management in financial institutions. The findings indicated that there is a positive correlation between computerized accounting systems and cash management and the bank having achieved a lot from computerization. However the relationship is weak sending an overall negative signal to the stake holders and management that computerized accounting alone cannot fully manage institutional cash but also strengthening other means because there are some activities which cannot be detected by computers such as money laundering and other related activities which require tight supervision from the management.

Kytonen (2004) conducted a study cash management Behavior of firms and Its structural change In an emerging money Market and the survey evidence showed that firms have achieved significant technological progress (improving systems and methods) and significant behavioral changes (increasing professionalism) concerning cash management practices during the research period, referring to increasing opportunities for more effective cash management operations.

Osman (2009) conducted a case study on cash management of Logs & Lumber LTD, Kumasi. Purposive sampling was used to select ten (15) people from the management members, head of departments, staff and client. The conclusion of the study shows the issue of cash management is very crucial for the survival and growth of the company as a result the management has given prior attention by way of establishing a scheme to monitor the cash flow on a daily basis. The study has failed to pin point the effects of technology and in particular computerized fund transfer in the cash management

A Study on Customer Attitude towards Electronic Fund Transfer System in Thiruverumbur was conducted by Karthick S (2008), who came into a conclusion that Although EFT provides flexibility in performing financial transaction; fast and easy, individuals are still reluctant to adopt the system because of several reasons. First, the security and privacy are two elements in the perceived risk. Without a proper knowledge of the system, individuals are not interested to

test the system. Perceived usefulness, ease of use and consumer awareness has positive impact on the intention to adopt EFT while perceived risk has negative impact on it. This shows that bank customers anchor their EFT adoption intention to the beneficial outcomes and ease of use process of the system.

Vincent and Cull (2011) conducted a study on Cell phones, electronic delivery systems and social cash transfers: Recent evidence and experiences from Africa. The study noted that Physical delivery of cash is expensive, as the liquidity of the resource implies that it may be siphoned off as it passes through many sets of hands after leaving the implementer and before reaching the legitimate recipient. In addition to instances of fraud and corruption, the physical movement of funds may also face the risk of cash-in-transit heists. As a result, the costs of physically delivering cash transfers may represent a disproportionately high percentage of programme budgets. Information and communication technologies offer new opportunities for delivering cash transfers.

Evidence from transfer projects and programmes showed that the delivery of transfers “in cash” is costly and delivery costs can be a disproportionate burden on programme budgets. Accordingly, identifying more cost-efficient delivery mechanisms is important and states that electronic transfers offer the potential to convert “pull” delivery systems into “push” systems, whereby the organizer pushes delivery down to the level of the individual cash-transfer recipient reducing the management load on donors and implementers, and ensuring enhanced flexibility and convenience of access for recipients Vincent and Cull (2011).

Getembe et al. (2013) carried out a study on Electronic Money Transfer Systems and Business Process Management among Commercial Banks in Kenya and it investigated the value of electronic money transfer systems on business process management. It was a descriptive study that targeted 45 commercial banks. The study sought to find out the respondent’s important preference in electronic money transfer. The results indicated that 11 (55%) of the respondents preferred efficiency, 7(35%) preferred speed while 2 (10%) preferred reliability. None of the respondents preferred low cost of money transfer systems while majority 55% of the respondents preferred efficiency while minority (2%) preferred reliability. This indicated that managers were willing to bear the cost of money transfer system as far as it was bringing efficiency. Respondents further added that electronic money transfer facilitated them to live in a more

relaxed way since they could easily access banking services. They further commented that electronic money transfer systems has substituted traditional banking as well as reduced wastage. The study finding indicated that money transfer systems affected business process management in one way or another.

Mukwana et al. (2003) conducted a study on Money Transfer Systems: The Practice and Potential for Products in Kenya. This study aimed to identify the range of money transfer services operating in Kenya and how businesses and individuals, especially low-income earners use them. The study analyzed service features and gaps so as to gauge the opportunities and also the criteria for developing money transfer products and services in the microfinance industry. The findings show that commercial banks are the major players in money transfer business in Kenya, servicing mainly large users and, to a smaller extent, low-income users. Among the commercial bank instruments, telegraphic transfers, electronic funds transfers and bank drafts are typically used for large value transfers, as they offer the cheapest service for the transfer of large amounts.

Michael (2011) carried out Kenya case studies on e-payment. The results show that when it comes to making electronic payments in Kenya, there are a handful of options available to people, primarily checks, electronic funds transfer and mobile money. The government has embarked upon a comprehensive modernization effort in its recent years. Mobile money is also dwarfing other payments methods and is continuing to grow. It therefore concluded that moving cash payments to the use of mobile money has clearly had beneficial impacts on the organizations using it. While some of the benefits are also a result of other efficiency improvements, like in the Ministry of Lands example, the improvements in payment delivery are immediately obvious to the groups that choose to employ mobile payment solutions over cash.

2.7 Summary of the Empirical Studies

Dotsey (1984) in his studies concluded that many questions surrounding computerized funds transfer system development could not yet be answered definitely, since they depend on costs, regulations and other factors which had few or no data. He concluded that payment methods affected the transaction costs of cash outflows and modern methods of payment through computerized funds transfer system allowed the government to plan its cash flows more

accurately, simplify administrative and accounting procedures. Minissian (1999) came into a conclusion that payment methods affected the transaction costs of cash outflows and modern methods of payment through computerized funds transfer system allowed the government to plan its cash flows more accurately, simplify administrative and accounting procedures.

Mukwana et al. (2003) noted that there are costs, risks and problems involved with money transfers. It drawn a conclusion that Efficient and reliable communications and computer systems, including MIS, are essential in operating a money transfer service. To be competitive, an MFI wishing to enter the market would need to have the capacity and systems to provide either electronic or, at a minimum, telegraphic or fax transfer, and provide consistent service.

Although there were many advantages attached to money transfer systems, various short comings such as cost, long queues, losses as a result of foreign exchange and difficulty dealing with the technology of money transfer systems affected the value of business process management. Since the study was carried out on banking institutions, the researcher recommends a similar study to be carried out at other institutions to establish other practice that add value on business process management (Getembe et al. 2013)

Michael (2011) noted that the benefits associated with e-payment include cost reduction, efficiency improvements, and greater convenience for beneficiaries, improved revenue collection and enhanced security compared to cash. Vincent and Cull (2011) highlighted that the growing commercial interest shown by the private sector in electronic transfer mechanisms has broadened the options available to policy-makers when seeking the most appropriate delivery mode for public cash transfer programmes. Bitwababo (2011) depicts a relationship between CFTs and cash management and recommends a study on the same to be carried out in a different sector other than banking. The above studies have raised issues and concerns about computerized funds transfer system and these include: efficiency, productivity, privacy and security. This study therefore seeks to find answers to the following question: does the computerized funds transfer system affect district treasury cash management

CHAPTER THREE

RESEARCH METHODOLOGY

This section gives a preamble to the methodology that was adopted and used in this study. It describes the study design that was adopted to carry out this research, area of study, data collection procedure and analysis method.

3.1 Research Design

This paper was formed as a case study; this means that the study was a deep analysis of one individual unit; Kisumu East District Treasury. The reason was to get a deeper understanding on the subject and makes it possible to focus on the effects of computerized funds transfer system on cash management for Kisumu East district treasury (Rabianski, 2003). The case study is based on descriptive research. This research design was preferred because it is a qualitative approach thus enabled the researcher to capture different aspects of computerized funds transfer system compliance including opinions of the respondents, (Dundore, 1985). This research design was also preferred because of its ability to investigate a population with the view of describing and explaining it, drawing conclusions and generalizing to the target population (Oso and Onen, 2005). In this study the researcher collected data on privacy and security of the amount payable and transferred, cost implications, time saved aspect, productivity when computerization funds transfer system is used, challenges faced in the use of computerized funds transfer system and the strategies of improving the system towards cash management and finally establish the relationship between computerized funds transfer and cash management.

3.2 Data Collection

The study used both primary and secondary data. Primary data was collected from the A.I.E holders or departmental heads and accounts officers of the selected departments through administration of self-administered questionnaire and interviews. The researcher using questionnaires, interviews, discussion with selected individuals or groups of persons as well as document analysis techniques, collected data on privacy and security of funds transferable, cost implication, timesaving aspect and productivity of using computerized funds transfer system. Focusing on government cash management, the study specifically examined the effect of computerized funds transfer system on departments operating within the district. The questionnaire sought to assess the effects of computerized funds transfer system on cash

management. The interviews was conducted to treasury officials and departmental staff, employees and suppliers to obtain data required to meet specific objectives. Secondary data was acquired from the records held at the Kisumu East District Treasury on the departments operating in the study area.

3.3 Data Analysis

Descriptive statistics was used to analyze and summarize the data, involving measures of central tendency and dispersion where means and averages was used. The Pearson's chi square analysis was used to determine the significance of the variables. The computer package SPSS was also used to summarize the data collected for ease of analysis, cross tabulation and multiple response was used to analyze the data. The result is presented using tables. MANOVA analysis was used to establish the relationship between computerized funds transfer system and cash management.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

This chapter dealt with the findings and interpretation of data collected from the area of study. For quantitative analysis of the data, descriptive statistical methods were used. Collected and analyzed data was presented using various techniques including tables, charts, and cross tabs to illustrate different variables. The analysis is qualitative and twofold: one, on personal background information of the respondents and two, on issues related to the objectives of the study namely: secrecy and security of amounts transferable using CFTs, time saving aspect, cost implication and productivity of CFT systems in cash management.

4.1 Presentation of the findings

4.1.1 Response Rate

The study had a response return rate of 85.7%, whereby out of the 42 respondents who were sampled, completed and returned questionnaires were 36.

4.1.2 Background information on respondents

Information on respondent's total number, gender, age, education level and awareness of and use of computerized funds transfer system collected, analyzed, and presented as below:

Table 4.1 Total number of respondents based on gender

Gender of the respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid FEMALE	14	38.9	38.9	38.9
MALE	22	61.1	61.1	100.0
Total	36	100.0	100.0	

From the table 4.1 above the male gender respondents were more i.e. 61.1 percent than the female gender who were only 38.9 percent. The number of male respondents was much higher because computerized funds transfer system and cash management requires accounting and information technology knowledge that is mostly dominated and pursued by male individuals while the female individuals tend to shy away. The government has also been biased in its

appointment of employees, this has led to the introduction of the a third gender rule catering for the minority interest

Table 4.2 Respondents Age details

Age of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 30-40	10	27.8	27.8	27.8
ABOVE 40	21	58.3	58.3	86.1
BELOW 30	5	13.9	13.9	100.0
TOTAL	36	100.0	100.0	

From the table above, the majority of the respondents were elderly persons 21 in number representing 58.3 percent. This is because cash management is a very sensitive area that requires experienced and honest personnel. The elderly also view the area as lucrative that most of them seek transfer to the section. The youth were the minority i.e. 5 persons representing 13.9 percent this is because the employment rate of youths who are mostly clerks and technical staff has relatively reduced. The middle aged persons were 10 representing 27.8 percent. The number of middle aged is high because they have stayed in employment and have undergone in-service training for some time therefore is able to use the system effectively.

Table 4.4 Education levels of the respondents

Education level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid DIPLOMA	16	44.4	44.4	44.4
GRADUATE	7	19.4	19.4	63.9
HIGH SCHOOL	10	27.8	27.8	91.7
HIGHER DIPLOMA	3	8.3	8.3	100.0
Total	36	100.0	100.0	

The table above reveals that the district treasury has attracted players across all levels of education. Majority of the respondents had diploma level of education i.e. 16 respondents which translates to 44.4 percent due to the fact that most of them were employed as clerical officers who later pursued diploma education. The number of high school level is 10 (27.8%), which is a

bit more because initially individuals were being employed as clerical officers based on high school education however since the inception of computerized funds transfer system qualifications have been raised to diploma levels. Graduates are few because they tend to be attracted to managerial and higher positions.

4.1.3 Table 4.5 Means of funds transfer used by respondents

Means of funds transfer Frequencies

		Responses		Percent of Cases
		N	Percent	
Means of Funds Transfer	CASH	3	6.1%	8.3%
	cash payment, CFT	2	4.1%	5.6%
	CASH, CFT	3	6.1%	8.3%
	CASH, CHEQUE	2	4.1%	5.6%
	CASH,CHEQUE, CFT	2	4.1%	5.6%
	CFT	13	26.5%	36.1%
	CHEQUE	2	4.1%	5.6%
	EFT	10	20.4%	27.8%
	EFT , CHEQUE	2	4.1%	5.6%
	EFT, CASH	2	4.1%	5.6%
	G PAY	4	8.2%	11.1%
	G-PAY	2	4.1%	5.6%
	M-PESA	2	4.1%	5.6%
Total		49	100.0%	136.1%

The above table indicates that most of the individuals use computerized funds transfer system even though they describe it using various names such as the G Pay system, EFT or CFT. Only two respondent use cash as a means of funds transfer.

4.1.4 Table 4.5 Information on the respondents’ usage of CFTs

Usage of CFTs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	2.8	2.8	2.8
	NOT USED CFT	5	13.9	13.9	16.7
	USED CFT	30	83.3	83.3	100.0
	Total	36	100.0	100.0	

The graph above shows that 30 respondents (83.3 percent) have used computerized funds transfer systems before, five respondents (14.3 percent) have not used computerized funds transfer system.

4.1.5 Table 4.6 Respondent's awareness and usage of computerized funds transfer system based on gender, age and education level

		AWARNESS OF CFTs		Pearson chi square	REMARKS	USAGE OF CFTs		Pearson chi square	REMARKS
		AWARE	NOT AWARE			USED	NOT USED		
GENDER %	MALE	55.6 %	5.6 %	0.246	Not significant	50%	8.3%	0.721	Not significant
	FEMALE	38.9%				33.3%	5.6%		
AGE %	30-40	27.8%		0.679	Not significant	27.7%		0.514	Not significant
	Above 40	52.8%	5.6%			47.2%	8.3%		
	Below 30	13.9%				8.3%	5.6%		
EDUCATION LEVEL %	Diploma	44.4%		0.138	Not significant	38.9%	5.6%	0.330	Not significant
						19.4%			
	Graduate	19.4%	5.6%						
						16.7%			
	Higher diploma	22.2%				8.3%	8.3%		
	High school	8.3%							

It was evident that majority of respondents are aware of computerized funds transfer system and have used the system. The difference on the respondents based on gender, age education level on awareness and usage of CFTs is minimal an indication that majority have used the system. This is because most of the departments have adopted the system being a requirement from the ministry of finance. It also reveals that 55.6 percent (18 respondents) of those who have used computerized funds transfer system are of male gender and 34.2 percent (12 respondents are of female gender. The number of male respondents was much higher because computerized funds transfer system and cash management requires accounting and information technology knowledge that is mostly dominated and pursued by male individuals while the female individuals tend to shy away from the field.

The table also reveals that there is no large variation between the genders on their awareness of CFTs ($p=0.246$, $\alpha=0.05$). The same applies to both age and education levels where by there is no

significant variation between the variables and awareness of CFTs. With $p=0.679$ and 0.138 respectively. In terms of usage of CFTs there is no greater variation between the variable and gender, age and education level. Where the $p=0.721$, 0.514 and 0.330 respectively.

4.1.6 Table 4.8 Respondents who worked at the treasury before implementation of CFTs

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	1	2.8	2.8	2.8
Not worked	6	16.7	16.7	19.4
Worked	29	80.6	80.6	100.0
Total	36	100.0	100.0	

4.1.7 Table 4.9 Respondents who worked at treasury before implementation of CFTs and the cash management concepts

		Worked at the treasury before implementation of CFTs		Totals	Pearson chi square	Remarks
		NOT WORKED	WORKED			
Privacy & security of amounts transferable	BENEFICIAL	5	27	32	0.000	Significant
	NOT BENEFICIAL	0	2	2		
	NOT SURE	1	0	1		
	TOTAL	6	29	36		
Cost implications	BENEFICIAL	2	19	21	0.000	significant
	NOT BENEFICIAL	0	5	5		
	NOT SURE	4	5	9		
	TOTAL	6	29	36		
Time spent on transactions	BENEFICIAL	5	25	31	0.668	Not significant
	NOT BENEFICIAL	0	3	3		
	NOT SURE	1	1	2		
	TOTAL	6	29	36		
Productivity achieved	BENEFICIAL	6	26	32	0.000	Significant.
	NOT BENEFICIAL	0	3	3		
	NOT SURE	0	0	0		
	TOTAL	6	29	36		

The above table indicates that the respondents who worked at the treasury before implementation of CFTs agree that CFTs influence cash management to a greater extent. 27 respondents who worked at the treasury before implementation of the system state that CFTs has greatly improved privacy and security of amounts transferable. ($p=0.000$, $\alpha=0.05$). CFTs also influences greatly the costs involved in transactions with 19 respondents who worked before its implementation stating that it has greatly reduced costs. ($p=0.000$, $\alpha=0.05$). With regards to time spent on transaction 19 respondents indicate that CFTs does not influence time spent on transactions to a greater extent. ($p=0.668$, $\alpha=0.05$). However CFTs greatly influence productivity and has led to increase in productivity($p=0.000$)

4.1.8 Table4.10 Relationship between the usage of CFTs and cash management

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.929	98.282 ^a	4.000	30.000	.000
	Wilks' Lambda	.071	98.282 ^a	4.000	30.000	.000
	Hotelling's Trace	13.104	98.282 ^a	4.000	30.000	.000
	Roy's Largest Root	13.104	98.282 ^a	4.000	30.000	.000
Usage_of_CFT	Pillai's Trace	.533	2.816	8.000	62.000	.010
	Wilks' Lambda	.506	3.047 ^a	8.000	60.000	.006
	Hotelling's Trace	.901	3.265	8.000	58.000	.004
	Roy's Largest Root	.806	6.243 ^c	4.000	31.000	.001

$\alpha=0.05$

The MANOVA analysis reveals that there is a significant relationship between usage of CFTs and cash management. These four numbers gives you the p-values for the four different multivariate tests. These results show that there is a significant effect of the independent variable which is the usage of CFTsand all the dependent variables which includes privacy and security of amounts payable,cost implications, time saving aspect and productivity achieved considered as a group.the findings reflect Bitwababo (2011) idea that there is a direct and positive relationship between computerized funds transfer system and cash management. It has been established that without CFT systems, financial institutions would find it difficult in putting in consideration its various benefits and assets on cash management.

4.2 Summary of data Analysis

4.2.1 Table 4.11 Privacy and security of the funds transferable using CFTs

	SECURE	NOT SECURE	NOT SURE	MEAN	STANDARD DEVIATION
Exposure to compromise & corruption	83.3%	8.3%	5.6%	4.56	1.081
Surety of the remittance of the funds	88.9%	5.6%	2.8%	3.78	0.681
Possibility of forgery	69.4%	11.1%	16.7%	3.53	0.810
Exposed to robbery / theft	75%	11.1%	11.1%	4.42	1.156
Data usage & protection	77.8%	13.9%	5.6%	3.58	0.841

Table 4.11 shows that 29 respondents representing 78.88 percent agree that a computerized fund transfer system has privacy and security. 4 respondents representing 10.0 percent say it is not secure. Three respondents 8.36 percent are not sure about the privacy and security of computerized fund transfer system. This indicates that computerized fund transfer system is offering adequate security and privacy even though there are concerns on the data usage and protection together with corruption that needs to be addressed. Michael (2011) also opines that EFT has led increase in security of amounts payable.

4.2.2 Table 4.12 Cost implication of computerized funds transfer system

	AFFORDABLE	EXPENSIVE	NOT SURE	MEAN	STANDARD DEVIATION
Transferring & disbursing costs	88.9%	2.8%	5.6%	2.11	0.523
Receiving costs	86.1%	5.6%	5.6%	2.14	0.543
Administrative costs	77.8%	13.9%	5.6%	2.22	0.591
Installation costs	27.8%	66.7%	2.8%	2.83	0.291
Social cost	41.7%	25.0%	30.6%	2.03	0.291

From table 4.12 above, the use of computerized fund transfer system is not as costly as other systems of funds transfer. 23 respondents 64.46 percent, ascertain that computerized funds transfer system does not involve high costs as other systems of funds transfer. Even though 24

respondents, translating to 66.7 percent believe that the installation costs are expensive when compared to other systems. Sending and receiving payments electronically means you no longer need to prepare and mail invoices and cheques. You reduce the cost of postage, cheque stock and return envelopes. Additionally, since the need to process large volumes of incoming cheques is removed, the employees are afforded the time to perform more value-added tasks. Studies by Dotsey (1984) and Michael (2011) also reveal that EFT has resulted to great cost reduction.

4.2.3 Table 4.13 Time spent on transferring funds when using computerized funds transfer system.

	LESS TIME	A LOT OF TIME	NOT SURE	MEAN	STANDARD DEVIATION
Transferring & disbursing time	91.7%	2.8%	5.6%	2.03	0.291
Receiving time	86.1%	5.6%	5.6%	2.94	0.475
Remitting time	88.9%	2.8%	8.3%	2.97	0.446
Preparation of records	77.8%	11.1%	8.3%	2.86	0.543
Storage & retrieval of information	77.8%	13.9%	5.6%	2.92	0.543

Above table 4.13, 30 respondents representing 84.4 percent agree that a lot of time is saved through the use of CFTs. Therefore it ensures cash management through its ability to process transactions faster and continuously. 13.9 percent individuals argue that storage and retrieval of information through CFTs takes a lot of time. 11.1 percent also state that preparation of records takes a lot of time. This could be due to the fact that most of the respondents are elderly and are not technological friendly leading to a long learning period. Karthick (2008) pointed out that EFT provides flexibility in performing transaction fast and easy thus saving time.

4.2.4 Table 4.14 Productivity of computerized funds transfer system.

	GAIN	LOSS	NOT SURE	MEAN	STANDARD DEVIATION
Volume of transaction per unit time	86.1%	5.6%	5.6%	2.14	.543
Value of transaction per unit time	83.3%	8.3%	5.6%	2.17	0.561
Units of labor involved	83.3%	8.3%	5.6%	2.17	0.561
Time taken to execute a transaction	83.3%	5.6%	5.6%	2.19	0.624
Reduction in accounting errors & omissions	80.6%	8.3%	8.3%	2.22	0.637
Cash reporting	77.8%	8.3%	11.1%	2.28	0.701
Accessibility for use to all persons	50.0%	27.8%	19.4%	2.64%	0.833
Service delivery	88.9%	2.8%	5.6%	2.11	0.523

From table 4.12 it is clear that 29 respondents representing 79.17 percent agree that use of computerized funds transfer is more yielding than other systems of funds transfer. Since the inception of computerized funds transfer system productivity has increased, this is evident from the increase in the number of volume and value of transaction per unit and the number of employees required to carry out a financial transaction has greatly reduced. This is due to its ability of multi-tasking. A study by Getembe et al. (2013) also reveals that usage of electronic money transfer has led to improved productivity among commercial banks.

From the findings, the benefits of CFTs include: Reduced errors: From the findings, 58.1% confirmed and agreed that computers reduce errors. This enables the treasury to handle large volume of transactions which are free from human errors hence efficient cash management.

Improved cash reporting: 77.8% agreed that cash management has greatly improved especially with the use of CFTs. Improved reporting enables financial analysts and managers to make timely decisions. Since inception of CFTs there has been increased efficiency, thus allowing the treasury to have accurate data and high volumes of transaction at a low cost.

Service delivery: there is a great consensus that service delivery has really improved and this is supported by 88.9% of the population. Individuals no longer queue at the district treasury to be issued with cheques or bribe others for their cheques to be released and salaries can also be drawn at an individual's convenience.

4.2.5 Table 4.15 Summary of the analyzed data.

	BENEFICIAL	NOT BENEFICIAL	NOT SURE
Privacy & security of funds	88.9%	5.6%	2.8%
Cost implications	58.3%	13.9%	25%
Time spent on transactions	86.1%	8.3%	5.6%
Productivity	88.9%	8.3%	

The above table on the summary of the analyzed data indicates that an average of 80.55percent of the respondents agree that computerized funds transfer system is all beneficial and gainful as far as privacy and security of the amounts transferable, cost involvement, time spent or saved and productivity are concerned. Averages of 9.025 percent disagree while 8.35 percent are not sure.

4.2.6 Table 4.16 Challenges facing computerized fund transfer system

Challenges facing CFTs use Frequencies

	Responses		Percent of Cases
	N	Percent	
system breakdown	9	17.6%	36.0%
material expenses	2	3.9%	8.0%
skills gap	6	11.8%	24.0%
Familiarization of the system	2	3.9%	8.0%
health hazards	3	5.9%	12.0%
lacks verification signature	3	5.9%	12.0%
double payment	1	2.0%	4.0%
Banks takes a lot of time to report errors	3	5.9%	12.0%
A lot of accuracy in keying Accounting numbers	3	5.9%	12.0%
Lack of knowledge& understanding	2	3.9%	8.0%
Cash withdrawal limits	2	3.9%	8.0%
inadequate infrastructure	6	11.8%	24.0%
Long learning period	3	5.9%	12.0%
Security & privacy concerns	6	11.8%	24.0%
Total	51	100.0%	204.0%

Among the responses given by respondents on major shortcoming facing computerized funds transfer systems was .System breakdown: 17.6% of the respondents agreed that computers face a problem of system breakdown. This is characterized by both mechanical problems and power shortages. This indicates that there is a high possibility of losing information and therefore the treasury may not be able to fulfill its financial goals. Bitwababo, 2011 also opines by stating that system breakdown is the major challenge facing computerized accounting system at Stanbic bank in Uganda.

Skills gap: 11.8% of the respondents stated that many of the employees lack relevant knowledge, skills and expertise to operate the system. This has in turn led to longer learning periods in which 5.9% suggest it as a challenge and the organization also undergoes extra cost of offering in service training to the staff to ensure effective cash management.3.9%also state that many employees experience a challenge with familiarization of the system due to periodical updating of CFTs by the government through the ministry of finance.

Inadequate infrastructure: this is marked with poor information communication structure, lack of direct connection with the bank and lack of clear guidelines / policies guiding infrastructure and problems of audit trail issues. The bank also takes a lot of time to report when there is an error in transferring; this is supported by 5.9% of the respondents. 5.9% of the respondents also argue that CFTs lacks signature for verification hence there must be a hard copy for reference before making financial transactions. Mukwana et al. (2003) depicts inadequate infrastructure to be hampering money transfer services in East Africa and suggests an increase in capacity of infrastructure.

Security and privacy concerns: 11.8% of the respondents agreed that there is an insufficient control over computerized funds transfer system which increases the risk that a district treasury may become the victim of cyber fraud and experience financial losses that may not be recoverable. Gibbons (1982) also pointed out security and privacy concerns as major issues in EFT.

Cash withdrawal limits: 3.9% of the respondents pinpoint it as a challenge where banks place cash withdrawal conditions in which withdrawals are only made once a week for every ministry with a maximum for Ksh. 700,000 which is not adequate.

4.2.7 Strategies for improving computerized funds transfer system towards cash management

Some of the responses given by respondents on strategies for improving computerized funds transfer system towards cash management were in-service training of staff, ICT infrastructure should be well planned and laid down before implementation of the system, segregation of duties, implementation of various safeguards, for example: Strong internal and data processing controls on all programs, Written agreements establishing procedures and risks, Dual controls for the authorization of non-repetitive and repetitive transactions, Establishment and use of passwords for authorized personnel to initiate transactions, Implementation and periodic review of internal controls that address access control, confidentiality of data, integrity of data, and other information security issues as appropriate. Others include Employing advanced authentication techniques and proper authorization of district treasuries and the staff.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The objective of this study was to examine the effects of computerized funds transfer system on district treasuries cash management in Kisumu East district. This chapter will discuss the findings of the research as presented in the previous chapters based on the respondents together with main and specific objectives. Conclusion will be derived from the findings established by the study and thereafter make recommendations. Finally limitations of the study will be stated.

5.1 Summary of the findings

The study based on the effects of computerized funds transfer system on district treasuries cash management in Kisumu East district. The study was based on the analysis of an individual unit. The findings as follows:

Preliminary finding of awareness and having or not having used computerized funds transfer system before indicated that whereas there is 94.4 percent awareness of computerized funds transfer, there is discrepancies in its use. Although 83.3 percent of the persons use computerized funds transfer system, 8.3 percent of the female gender have not been privileged to use it compared to 5.6 percent of their male counterparts. There is greater use of computerized funds transfer system among above 40 years aged persons i.e. 47.22 percent and less use 8.3 percent among the youth below 30 years of age. Preliminary findings also indicate that persons of higher education levels such graduates 100 percent have used computerized funds transfer system while those with low education for instance high school level 30 percent have not used it.

5.1.1 Computerized funds transfer and privacy and security of the funds transferred

The study established that issues of secrecy and security of computerized funds transfer system are of great concern to its user. Three principal concerns about computerized fund transfer system privacy arose in the study: the extent to which personal data in CFT systems are or might be disclosed to third parties by financial institutions, the possibility of Government or private surveillance through CFT systems and data files and the right of consumers to see, challenge, and correct personal data in CFT systems that might be used, for other disadvantageous ways. Although these issues were addressed in the Electronic Funds Transfer Act of 1978 (Federal Reserve's Regulation) and The Right to Financial Privacy Act of 1978; the study reveal that

substantial ground still need to be covered. The study noted that the use of Electronic Funds Transfer systems for surveillance purposes was not addressed by existing legislations. Computerized funds transfer system have some vulnerabilities that were detected in the study, these include: EFT crime is often difficult to detect because funds/data can be removed or manipulated by instructions hidden in complex computer software; the dynamics of the criminal action may be understood by only a few experts within the institution. CFT crime offers a sporting element, or intellectual challenge, that perhaps is as enticing to some as the opportunity for financial gain. This therefore interferes with the cash management in an organization.

5.1.2 Computerized funds transfer system and cost implication at the district treasury

The study established that the total costs of funds transfer through computerized funds transfer is much cheaper compared to other systems of funds transfer. However, there are some social costs suffered for instance, cost suffered in adjusting to the new system. CFT systems involve large total cost, much of which is associated with the expensive computer hardware necessary to operate these systems: computers, terminals, and communication links. Staff also have to be equipped with additional skills and employees and suppliers were expected to operate bank accounts for payments of their claims and salaries. Marginal costs of making a transfer through CFTS was less than through the check system; average costs of transfers could also be lower, if a sufficiently large volume was achieved.

5.1.3 Computerized funds transfer system and time saving aspect at the treasury

The study established that computerized funds transfer system offers fund transfer services that are time saving in many aspect. That the transferred are remitted and received within reasonable time without undue delays hitherto experienced when other systems of funds transfer were used. Information on remittance and receipt is send through telecommunication lines and is received at click of a button as opposite to use of post office that would occasion many delays. Preparation and retrieval of transaction records through micro files in the computer takes minimal time compared to other systems of funds transfer.

5.1.4 Computerized funds transfer system and productivity at the treasury

The study established that use of computerized funds transfer is productive in many ways. The system performs huge volume of transaction per unit time involving transactions of great value within a short period of time that other systems of funds transfer would not do. CFTs have also led to reduction in labor input per unit. Managers often became more robust and interesting after automation, while clerical jobs often diminished in scope, variety, and autonomy, leading to a decline in the number of employees especially the clerical staff. Service delivery also improved with its introduction. However, the study revealed that computerized funds transfer system is not accessible to all persons or organizations that would be willing to use it. In part, this contravenes the principle of equity, which advocates that a technology should not alienate or discriminate against a section or subgroup of a population for which it is designed.

5.1.5 Relationship between computerised fund transfer system and cash management

There is a significant and a direct relationship between computerized funds transfer system and cash management.

5.2 Conclusion

From analyzed data in chapter four above, table 4.6 and showing awareness of computerized funds transfer system, it is clear that 94.4 percent of persons are aware of computerized funds transfer system. However, tables on use of computerized funds transfer system indicate that only 83.3 percent have ever used the system distributed as 33.3% female and 50% male , 8.3% aging adults and 8.3% those with high school level, have not used it. This is an indication that more ground need to be explored to intensify use of the system to cover a fairly wider population to increase the systems productivity. The system should also be promoted among the youth to ensure effective cash management.

From the same analyzed table 4.11 on privacy and security of the system, indicate that 78.8 percent agree that the system is private and secure. Table 4.12 on the cost implication of computerized funds transfer system indicates that 64.46 percent accept that the new technology has significantly lowered the cost of funds transfer in all aspects. Table 4.13 and on time spent on transferring funds through computerized funds transfer system indicate that 84.4 percent of the persons agree that quite some time is saved when funds are transferred through computerized funds transfer system. Table 4.14 on productivity of computerized funds transfer system reveals

that 79.12 percent agreement that the system is productive and yielding since it affords greater volumes of transactions with higher value per unit time. Average of the above activities clearly testifies that 76.7 percent agree that the new technology has more benefits in terms of cash management than there are disadvantages thus preferred to other systems of funds transfer. From the analyzed data, it is evident that computerized funds transfer system has reduced the costs of funds transfer significantly and less time is now spent on funds transfer transactions. The system is more yielding/ productive in the sense that greater volume and higher value of transactions are transacted with reasonable short time and therefore, the system has positively influenced funds transfer to that extent. However, CFT system does not offer sufficient protection of personal data against unauthorized persons (third parties). Further CFT systems are still exposed to possible Governments and private surveillance and possibility of large data in CFT system to be destroyed or distorted by remote agents, creating malicious extortion, blackmail or terrorism, the technology is still wanting as far as privacy and security is concerned.

5.3 Recommendations

Basing on the conclusion above and in respect of the findings above, and foregone discussions in the literature review, this study establish that whereas computerized funds transfer system has revolutionized funds transfer globally, there is need to reinvent the system to accommodate and offer adequate privacy of personal data. Equally there is need to improve on its security to avoid possible destruction, distortion or manipulation of personal data in CFT system from the many access points for personal gains or malicious purposes. Also, recommend that the system be improved to increase its accessibility and use by all who might be interested to use it. Although CFTs was found to enhance cash management, the study found out that its shortcomings, limited attainment of sound cash management. The researcher therefore recommends an improvement in the efficiency of computerized funds transfer Systems so as to reap the maximum benefits out of them in terms of cash management.

5.4 Suggestions for Further Research

The study depicted security and privacy concerns that may lead to financial crimes therefore a study should be carried out on forms and effects of high profile/intellectual electronic funds transfer financial crimes especially in the district treasuries. In addition to that, in order to ensure effective and efficient implementation of CFTs to all the district treasuries and government

entities the researcher felt that further study should be carried out on challenges facing cash management and transfer.

The study also concentrated on the computerized funds transfer systems and cash management. However, there are other factors affecting cash management such as poor debt collection policies, high costs of operation and poor governance are areas for further research.

5.5 Limitations of the study

There are two limitations that need to be acknowledged and addressed regarding the study. The first limitation has to do with the extent to which the findings can be generalized beyond the case studied. The study was only focused in Kisumu East District Treasury due to the time factor and distance involved if one were to visit all the district treasuries in Kenya that would have made the cost of the study prohibitive and time consuming. Due to this, only Kisumu East District Treasury was considered. In addition, to that CFTs are applied to almost all sectors of the economy however the study focused on government operations therefore inferences cannot be made conclusively to commercial or private sectors

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APPENDIX I: QUESTIONNAIRE

Dear respondent,

I am currently carrying out research on **computerized fund transfer and cash management at Kisumu East District Treasury**. I am pleased to involve you in this research and request you to kindly assist by providing answers to questions in this questionnaire. Any information provided will be treated as confidential and used for the purpose of this study only.

Instruction: Please tick and fill in the appropriate spaces

PART 1: DEMOGRAPHIC OF RESPONDENTS

1. What is your gender?

Male Female

2. What is your age bracket?

Below 30yrs 30 – 40yrs above 40yrs

3. What is your education level?

High school Diploma Higher Diploma Graduate Others (specify).....

PART 2: AWARENESS AND BENEFITS OF COMPUTERISED CASH TRANSFER SYSTEM

1. Which means of funds transfer do you use in your transactions?

.....

2. Are you aware of computerized cash transfer system?

Yes No

If No, explain

3. Have you ever used computerized cash transfer system?

Yes No

If No, explain

4. Were you working at the district treasury before implementation of CFTs?

Yes No

If **Yes**, comment on the state of cash management in terms of privacy and security of funds, system and transaction cost, time saving aspect, productivity achieved, efficiency and effectiveness of the systems before and after implementation of CFTs.

Cash Management	Before implementation of CFTs	After implementation of CFTs
Privacy and security of funds		
Time saving aspect		
Costs involved		
Productivity achieved		
Efficiency and effectiveness		

5. What is your general comment on the effects of computerized fund transfer on your department's cash management? Respond by indicating **beneficial**, **not beneficial** or not **sure** where appropriate

Indicator	COMPUTERIZED FUNDS TRANSFER SYSTEM		
	BENEFICIAL	NOT BENEFICIAL	NOT SURE
Privacy and security			
Cost implications			
Time spent on transactions			
Productivity			

PART 3: PRIVACY AND SECURITY OF THE MEANS OF FUNDS TRANSFER

1. Compare the security and privacy of funds transfer through computerized funds transfer system and other systems of funds transfer under the following headings: Respond as (**secure or not secure**)

INDICATOR	COMPUTERIZED FUND TRANSFER SYSTEM		
	Secure	Not Secure	Not Sure
Exposure to compromise and corruption.			
Surety of remittance of the funds transferred			
Possibility of forgery			
Exposed to robbery/ Theft of the cash on transit			
Data usage and protection			

PART 4: COST IMPLICATION OF COMPUTERIZED FUND TRANSFER SYSTEM.

1. In terms of cost benefit analysis compare computerized fund transfer system with other means of fund transfer under the following headings by responding as **Affordable, Expensive or Not sure** where applicable.

COST INCURRED	COMPUTERIZED FUNDS TRANSFER SYSTEM		
	Affordable	Expensive	Not Sure
Transferring & disbursing costs			
Receiving costs			
Administration costs			
Installation costs.			
Social cost incurred.			

PART 5: TIME SPENT ON FUNDS TRANSFER TRANSACTIONS.

1. How do you rate time spent on transferring and receiving the fund, when they are transferred through computerized fund transfer system and other means of funds transfer. Respond by indicating **(less time spent to transfer funds / less time spent to receive transferred funds, a lot time spent to transfer funds / a lot of time spent to receive funds transferred or Not sure)** .Give approximate time spent for each case.

MEANS OF FUNDS TRANSFER	COMPUTERIZED FUNDS TRANSFER SYSTEM		
	LESS TIME SPENT	A LOT OF TIME	NOT SURE
Transferring & disbursing funds			
Receiving funds			
Remitting funds			
Preparation of records			
Storage & retrieval of information			

PART 6: PRODUCTIVITY OF THE MEANS OF FUNDS TRANSFER

1. Statements below relate to transaction carried out through computerized funds transfer system and other means of funds transfer. For each statement, state whether it is **Gain or loss** where appropriate.

INDICATOR	COMPUTERIZED FUNDS TRANSFER SYSTEM		
	GAIN	LOSS	NOT SURE
Volume of transactions per unit time			
Value of transaction per unit time			
Units of labor involved			
Time taken to execute a transaction			
Reduction in errors and omissions			
Cash reporting			
Accessibility for use to all persons			
Service delivery			

PART 7: CHALLENGES FACED IN THE USE OF COMPUTERISED FUND TRANSFER SYSTEM

1. Which challenges do you face in cash management because of using computerized fund transfer system?

.....
.....
.....
.....
.....

PART 8: STRATEGIES OF IMPROVING THE SYSTEM TOWARDS CASH MANAGEMENT

1. What are the strategies that need to be put in place to improve computerized funds transfer system towards cash management?

.....
.....
.....
.....

THANK YOU