

**DETERMINANTS OF CHANGE IN INFORMATION TECHNOLOGY SYSTEMS
AT COMMERCIAL BANKS IN NAIROBI COUNTY, KENYA**

BY

MARTIN LELE MITAU

**A Research Project Report Submitted In Partial Fulfilment Of The Requirement
For The Award Of The Degree Master Of Arts In Project Planning And
Management Of University Of Nairobi**

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DECLARATION

This research project report is my original work which has not been presented to any university or other institution of higher learning in Kenya for the award of any degree.

Signed: _____ Date _____

Martin Mitau

Reg. No: L50/71945/2014

This research project report has been submitted for examination with my approval as the University supervisor.

Signed: _____ Date _____

Dr. Catherine Wainaina

University Of Nairobi

School of Continuing and Distance Education

DEDICATION

I dedicate this research project report to my wife, Mourine Lele for her love, wisdom and support.

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ABSTRACT

The main purpose of the study was to assess the determinants of change in information technology systems at Commercial banks in Kenya. This study was guided by the following objectives. To assess the influence of top management support on change in information technology systems at Commercial Banks in Kenya. Establish the influence of firms' resources on change in information technology systems at Commercial Banks in Kenya. Establish the influence of organizational culture on change in information technology systems at Commercial Banks in Kenya and to assess the effect of employee training on change information technology systems at Commercial Banks in Kenya. This study adopted a descriptive study design. A descriptive study was chosen since it is able to give information without changing the environment due to its observable nature. Stratified random sampling procedure was used to arrive at the sample of the employees who will take part in the study. This study used primary data collected using questionnaires. The questionnaires included both open and closed ended in line with the objectives of the study. Collected research data was processed by the use of a computer Statistical Package for Social Science version 20.0 programmes to analyze the data. Multiple Regression model was used to establish the relationship between the independent variables and the dependent variable (change in IT systems) and the strength upon which the independent variables affect the dependent variable. The study found out that top management streamlined process to effect IT systems change; coordination of activities by top management resulted in change in IT systems; inadequacy of banks' ICT personnel negatively impacted on IT systems change;. strategic allocation of resources ensured a smooth change of IT systems at the bank; organizational norms were the set of foundation for IT systems change; the IT systems change strategy must be aligned with organizational acts; mentoring programs influence to improving IT systems change in our bank; training affects staffs interest positively thus resulting in IT system change. The study concluded that top management support was a significant determinant of change in information technology systems at commercial banks; firm's resources had significant effect on change in information technology systems at commercial banks; organizational culture was a significant determinant of change in information technology systems at commercial banks; there was statistically significant association between employee training and change in information technology systems at commercial banks. The study recommended that top management of all banking institutions in Kenya should actively support the change in information technology systems by stream ling process to effect IT systems change; banking institutions in Kenya should avail sufficient and required resources to employees; banking institutions in Kenya should strive to create strong organization cultures which bind employees together to the organization; all banking institutions in Kenya should improve the training programmes in their organizations by introduction of mentoring programmes, monitoring and evaluation of the training programmes. This will affect staffs interest positively in all the banks.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Operations of business organizations have currently changed due to development in Information and Communication Technology ICT. Indeed, development in ICT has enhanced revolutions of sharing, distributing and gathering information and this brings about competitive advantage among business organizations (Mwega, 2014). Application of networks that are supported by computer systems has brought a lot of changes in the way of competition among businesses globally. Today, organizations have realized the role of ICT in enhancing competitive advantage and they are leveraging on this fact to enhance their performance (Bruche, 2000). Businesses are today faced with competing environments and this necessitates the need to optimally utilize resources and ICT is one of these resources organizations are using in enhancement of effectiveness and efficiencies in processes (Zhou, 2008). The banking industry worldwide has been known to apply technology in the operations in search of operational efficiency and effectiveness. Banks have automated most of their operations to reduce reliance on human capital. However, from time to time, commercial banks upgrade their ICT which means they have to interfere with the way things have originally been done (CBK, 2015).

Change management has become an essential area for organisations to embrace as the operational environment has become largely dynamic following increased effects of globalization and development in information communication and technology. This has introduced many disruptions in many industries in the form of new social forces. According to Paton and McCalman (2008), in order for business organizations to fully and effectively exploit change, there is need to understand the variables and circumstances within the environment that the business operates interact with each other. Organizations should put in place progressive and effective change management strategies as this indicates the future direction of the business and survival and perpetuity of the business. There is however a number of factors that should be put in place for an organization to effectively implement change.

Several scholars have defined organizational change differently. In view of Markus (2004), organizational change refers to plans put in place by a business enterprise aimed at improving productivity and performance of staff, teams and organization as a whole by changing structures within the organization, behavior of staff and technology. Causon (2004) indicates that there are several features of the lives of the organization and change is one of it. On the other hand, Burnes (2000) viewed organizational change as the strategies put in place by an organization to develop and implement the planned strategies of the organization.

According to Johnson and Scholes (2008), business entities come up with modified ways of staying competitive in their environments since the old ways of operating continuously get outdated from the market. Rose and Lawton (1999) indicated that due to increased need for effectiveness, ethical and market concerns, evaluation of performance and efficiency, service institutions keep on witnessing lots of changes. Today, all stakeholders of the business enterprises are continuously demanding for improvement in quality of the products and this has intensified pressure on management which has enhanced the organizational change philosophy (Burnes, 2009).

There are several factors that inhibit effective implementation of change within organizations. According to Kotter and Heskett (1992), cultural values of the organization affect implementation of change within an organization. Business organizations that have remained successful in the past are likely to retain their cultural values even though this may prevent implementation of change in the organization. In view of Ansoff and Sullivan (1993), change refers to any unplanned or planned shift from one event to the other. Ansoff and Sullivan (1993) further indicated that change brings effect to the whole organization, it enhances attainment of effectiveness and it is long term in nature. On a globe scale, organizational change management plays an important role and it is also influenced by external and internal factor either negatively or positively.

According to Burnes (2000), management of organizations is today with faced with the decision of coping with both the dynamic environment in which they operate given the constraints, challenges and threats. Strategic management entails understanding the firm's current strategic position, identifying the strategic choices available to it, and translating these strategies into action. The complexity of information technology coupled with intensive globalization indicates that management team in organizations easily access new products, ideas and services compared to the past (Gurstein, 1999). Therefore, managers should enhance their ability of managing change in order to handle a surge in information and time taken to take decisions.

Change management entails planning and coordinating the transition from one state to another in an organization. According to Todd (1999), change management refers to a systematic and structured means of attaining progressive behavior modifications. Organizational change can be strategic or operational.

Operational change is geared towards ensuring activities of an organization are accomplished in the best manner possible. On the other hand, strategic change is a critical restructuring of business organizations or the future direction of the businesses. All changes take place under certain contexts which invariably include forces that operate to bring about change. Corporate strategies usually come in three areas that is analysis, development and implementation. Lynch (1999) states that there are two main approaches to corporate strategy including the prescriptive approach, which includes strategy analysis and strategy development followed by strategy implementation. Then there is the emergent approach to strategy which holds that strategy development and strategy implementation are essentially interrelated.

The CBK is tasked with regulation of the banking sector in any country. The central bank of Kenya has a mandate of formulating and implementing monetary policies that enhances sound liquidity in the country. The banking sector was liberalized in the year 1995 and this removed the exchange controls. Various information on commercial banks in Kenya, effective interest rates are published by the Central Bank of Kenya CBK (CBK, 2014).

Commercial banks in Kenya are united under the Kenya Bankers Association (KBA). The Kenya Bankers Association safeguards the interests of the banking sector while at the same time addressing issues that affect members. Kenya has a total of 46 commercial banks and non financial institutions; 15 micro finances and 48 exchange bureaus (CBK, 2015).

Both commercial banks and non financial institutions have similarities in common as they offer retail and corporate banking services to customers. However, only a small number of banks which are large in size offer other services for example investment banking (KBA, 2015). The banking sector is affected by a number of issues for example increased demand of nontraditional services, frequent change in laws and regulations and coming up of nontraditional players offering financial service products.

1.2 Statement of the Problem

Information systems implementation processes involves a long range of planning for finance, human resources, services, technical expertise, hardware and software capabilities needed to make use of the information services opportunities which come up in the organization. Bidy, Boostra and Kennedy (2005) argues that in order to implement ICT strategies smoothly, it is important to design ICT strategies with other functional strategies such as corporate, production, finance, marketing and human resource. According to Doherty and Horne (2002), some of the issues that face ICT implementation include budget constraints, resistance to change among internal and external stakeholders, poor planning, lack of skills, lack of communication and involvement by staff and lack of infrastructure like power, networks and content.

The process of automation of manual processes is at the centre of enabling organization success, enhancing competitive advantage, integrating business systems, enhancing performance and availability of business systems, reducing costs through automation and finally improvements in work environments. During the implementation of system, many opportunities exist for things to go wrong (Maguire, 2002). There is several reason leading to poor use of libraries. According to Haliso (2011), there is inadequate

commitment by friends, absence of strategy dealing with ICT and inadequate staff of ICT who are properly trained and skilled.

Locally, Mukhongo (2013) established that ICT is an enabler of strategic advantage to help the organization to achieve the organization's goals and objectives. In another study, Mwinzi (2015) established that organizational structure, lack of constant review of strategies, resource allocation, institutional policies and inadequate financial resources were the main challenges in strategy implementation in information and communication technology (ICT) start-ups.

The existing studies have concentrated on general change management in organizations and not IT systems implementation at Commercial banks. This study therefore sought to fill the gap in research by assessing the determinants of change in information technology systems at Commercial banks in Kenya.

1.3 Purpose of the Study

To assess the determinants of effective information technology systems at Commercial banks in Kenya.

1.4 Objectives of the Study

This study was guided by the following objectives. To:

- i. To determine the influence of top management support on change in information technology systems at Commercial Banks in Kenya.
- ii. To determine the influence of firms' resources on change in information technology systems at Commercial Banks in Kenya.
- iii. To determine the influence of organizational culture on change in information technology systems at Commercial Banks in Kenya.
- iv. To determine the influence of employee training on change information technology systems at Commercial Banks in Kenya.

1.5 Research Questions

This study aimed at answering the following questions:

- i. How does top management support influence change in information technology systems at Commercial Banks in Kenya?
- ii. What is the influence of firm resource on change in information technology systems at Commercial Banks in Kenya?
- iii. What is the influence of organizational culture on change in information technology systems at Commercial Banks in Kenya?
- iv. How does employee training influence change in information technology systems at Commercial Banks in Kenya?

1.6 Significance of the study

This study would provide immense contributions to current literature with regards to determining future research gaps concerning the determinants of effective information technology systems change at Commercial banks in Kenya by future researchers, academicians and scholars.

The study would also help policy makers concerning the automation of bank operations and their effects on banking industry stability and strength. The policy makers would use the findings of this study to develop an IT implementation framework to foster a stronger banking industry.

The research findings would be of great importance to information technology since they would be furnished with important information that would aid them to understand the various challenges in change management so that they can prepare in advance on how to deal with them.

The findings of this study would also be valuable to future researchers and scholars by acting as empirical sources of literature besides suggesting areas for further research.

1.7 Delimitation of the Study

The Researcher conducted the research mainly on the Nairobi branches of the 43 Commercial banks since most of them were easily accessed.

This researcher foresaw various limitations that may hinder the achievement of the study objectives. For instance, the fear by respondents to provide study information in that the information requested would be used for other purposes other than academic purposes. In this regard the researcher assured all respondents that the information gathered would be used for academic purposes only. The researcher also obtained an introduction letter from the University so as to introduce himself to the respondents.

The researcher also foresaw a challenge where the respondents may want to portray their banks positively thus fail to provide information of the prevailing status but rather provide data on the desired status. To overcome this challenge, the researcher set some questions in a repeated form to check on the respondents' consistence in answering.

1.8 Limitations of the Study

The target respondents were likely to withhold pertinent information for the study fearing that the information requested would compromise confidentiality. The researcher planned to address this by ensuring confidentiality of the information and guaranteed the management that the information would be shared with them for benchmarking and for making necessary improvements.

The study also acknowledged that not all information sought for this research would be in the public domain and to overcome this challenge the researcher sought permission to access the organizations' documentation which captures the required information.

1.9 Basic Assumptions of the Study

The researcher also assumed that the respondents would be truthful and hence provide accurate and reliable information that would be used for analysis. The researcher used the test retest method for enhancing consistency from the respondents.

1.10 Definition of significant Terms

Commercial Banks: These are financial institutions that provide various financial services such as accepting deposits and issuing loans (Paul & Das, 2015).

Firms Resources: Refers to stock of available factors that a firm owns or controls (Ngau and Kumssa, 2006).

Government Regulation: Government policies on banking matters set by the Central Bank of Kenya to regulate the operations of commercial banks in Kenya (CBK, 2012).

Information Technology: IT describes the process that a firm uses to acquire process and disseminate information. It is the use of computer applications to handle information within an organization (Stair & Reynolds, 2013). Information and Communication Technology covers a wide range of electronic technology for the information needs of a business at all levels (Mwangi, 2015).

Information Technology System: An information system refers to sets of part that are interrelated used in collection, retrieval, processing, storage and dissemination of information so as to support the ability to make decisions and controls within an organization. Information systems help workers and managers in analysis of problems, visualization of complex subjects and creation of new products (Laudon, 2000). Information system is a composition of computers and people who play a role in processing or interpretation of information. The term also refers to software that is used to run a computerized database (Baskerville & Wood-Harper, 2016).

Organizational culture: Refers to the dominant or commonly held attitudes, values and beliefs, the personal and organization norms, and the conscious and unconscious symbolic acts of the organization (Adkins & Caldwell, 2004).

Top management: They play an important role in strategy implementation by effectively allocating resources (Sascha, 2008).

Training: This is defined as activities geared towards reacting to gift desires. Training refers to the application of planned and systematic activities geared towards marketing of learning (Reynolds, 2004).

1.10 Organization of the Study

Chapter one has covered the introduction where it has introduced the concept and the context of the study. It has also presented the statement of the problem, purpose of the study, research objectives and questions. It also contains the significance of the study, scope, delimitations and definition of key terms. The next chapter is on literature review. The third chapter covers research methodology while chapter Four covers data analysis and interpretations; Chapter Five covers summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of theories on ICT systems. It further presents the empirical literature review on the effects of top management competence, organizational culture, communication and firm resource on information technology systems change. The chapter also presents the conceptual framework and summary of the literature reviewed.

2.2 Information Technology Systems

Information and Communications Technology influences the content and quality of operations thus creating value that enhances financial performance for the banks and customer satisfaction. ICT presents great potential for business process re-engineering of financial institutions. According to Berger (2003), information systems cannot be ignored by management in the contemporary business environment as it has significant role to play in enhancing organizational growth. Today, the use of ICT has gained lot of significance in the banking sector that helps in gaining of competitive advantage.

The current banking environment in Kenya requires that banks offer effective services to customers for satisfaction of their needs in order to stay competitive. Intensive competition has forced commercial banks to have in place decision support information systems (Wachira, 2013), in order to plan, forecast and provides estimates. This study will look at the effect of top management support, firm's resources. Organizational culture and employee training as determinants of information technology systems change in commercial banks.

Change in IT

2.3 Top Management Support and Change in IT Systems

According to Birken et.al (2015), top management in organization can show their support by availing sufficient resources, putting in place effective communication and

encouraging other staff on possibility of implementing ICT in their organizations. The middle management team are likely to optimize the top management support on their commitment by effectively communicating with the top management about the most effective support to enhance innovation. Ineffective leadership from top management is one of the key hindering factors in strategy implementation due to ineffective coordination. Clear and concise direction during ICT implementation is very crucial in foreseeing that the strategic plans formulated are properly put into action.

In view of Cater and Pucko (2010), poor leadership from the top and senior managers is one of the major setbacks of effective strategy implementation. It is important that top management are involved in coordinating the activities, reforming the processes and motivating employees to strategy implementation. According to Sascha (2008), top management play an important role in strategy implementation by effectively allocating resources. Mapetere, Mavhiki, Tonderai, Sikomwe, and Mhonde (2012) established that low involvement of leaders in implementation of strategies affects successful implementation of strategies.

Top management in some case are likely to demonstrate lack of commitment in provision of energy in implementation of strategies. It is the lack of commitment and support from top management that negative signals are sent among members in organization (Rapa & Kauffman, 2005). According to Aaltonen and Ikåvalko (2002), lack of top management support and existence of inappropriate and rigid organizational cultures inhibit implementation of strategies effectively. Once decisions about a strategy have been made by management, greater emphasis is given to how the strategy is converted into actions and results. This will call for different sets of managerial skills exercised by the top management (Thompson, Peteraf, Gamble & Strickland, 2012). Thus, managers at all levels should be involved not only involved with strategy formulation and identification but also with the execution of the means to implement the new strategies (John, Richard & Robinson, 2011). According to Thompson et al (2008), management of execution and implementation of strategy is aimed at provision of core activities within a business in a manner that is supportive.

According to Caldwell, Chatman, Lapiz, Self and Williams (2010), aggregate consideration of the effectiveness of leaders in different hierarchies significantly enhances performance through implementation of strategies. Strategy implementation considers different aspects which can either be directly or indirectly changed. Strategies that can directly be modified are so difficult to be controlled by strategic leaders. However, strategies that can be modified indirectly are even more difficult for management to change and control. Implementation of the selected strategies will depend on top management involvement in an organization. One of the key challenges in strategy implementation is making sure that employees accept the strategy and ensuring that their capabilities are directed towards the strategy and the business. Therefore, the role that top management plays in strategy implementation has far reaching affect compared to other factors (Rajasekar, 2014).

A study was conducted by Al Shaar, Khattab, Alkaied and Manna (2015) to examine effect of top management support and innovation. The population of the study comprised of 210 industrial companies. Validity and reliability of the research instruments was determined by Factor Analysis. The study established that synergies between information technology, organizational structure and are affected by top management support. Moreover, synergy information technology and organizational structure does not mediate the effect of top management support in innovation product innovation, process innovation. The study concluded that top management support affected innovation.

Obonyo and Kerongo (2015) conducted a study to investigate determinants of effective strategy implementation and performance. The study was conducted among commercial banks. The research design adopted was descriptive. The study established that the most significant and critical element that drive change in organizations is top management. Moreover, leaders who have are charismatic effectively communicate visions of the company while mobilizing resources required to effectively implement the strategies.

Titus, Mburu, Korir, Muathe and Obere (2013) examined organizational factors influencing inter-organizational adoption of ICT by institutions of higher learning in Kenya. The research design adopted was cross-sectional descriptive survey. The study used both quantitative and qualitative data. The study found that top management support

was found to motivate information technology systems due to the fact that the management allocates resources needed for the adoption of information technology systems to gain greater access to information system based resources in the universities.

Kariuki (2014) established ought to identify the factors affecting success of IT projects at the Commercial Bank of Africa by way of investigating the degree to which organisational objectives, top management support, user involvement and project managers' competence each affect the end project outcomes. The researcher adopted the descriptive approach to research design. The study found that immense wealth of good will that has been created by top management within all ranks of the organization should be channeled to improving the success rate of future projects. The study further revealed that top management must immediately address revolve around the continuous training and development of project management teams which currently seems to be lacking as well as creating and entrenching a change management framework to govern all IT change initiatives going forward

Koech, Gichunge and Thuo (2016) assessed the effect of top management support on ICT implementation. The study was carried out at the Kenya Forest Service. A descriptive research design was adopted. The study established that a strong change in strategic implementation of information systems is explained by infrastructure, end-user training, top management support and expertise. In conclusion, effective implementation of strategy requires that senior staff persuade employees.

2.4 Firms' Resources and Change in IT Systems

According to Ngau and Kumssa (2006), resource refers to stock of available factors that a firm owns or controls. Resources undergo conversion into final products or services. Sufficient resources are a crucial factor in strategy implementation. Lack of or inadequate resources may lead to the failure of strategy implementation which in most cases takes more time than expected or planned (Schaap, 2012). According to Okumus (2003), there should be a process of ensuring that all necessary resources including time, financial resources, skills and knowledge are made available during strategy implementation. Effective allocation of resources requires careful consideration of time available for

completion of the process, procedures of allocating and securing resources, knowledge and information requirements and cultural issues within an organization. According to Sterling (2003), some strategies experience failure as inadequate resources were availed to enhance implementation. There are four key resources within an organization for example finances, technology, people and information.

According to Brinkschröder (2014), staff in organization form key strategic resources and therefore it is important that organizations effectively make use of the skills and competencies of staffs at right time and places. The challenge to management is therefore to allocation of these resources to their most effective and useful tasks and projects besides coordination and integration of the activities of the functions and participating employees (Pryor, Anderson, Toombs & Humphreys, 2007). However, it is sometimes necessary to make adjustments of some resources aimed at improving the processes and this implies that management should put in place proper monitoring systems.

Chisenga (2004) further noted that resources mostly inadequate ICT personnel and lack of funds mainly contribute to failure in strategy implementation. Muturi (2014) further identified that resources could also include abilities and skills of management and employees, adequate time, adequate training and instructions and also sufficient funding.

Implementation involves processes by which organizational resources reflect in the activities and choices necessary for actualization of strategic plans (Kuchru, 2005). With reference to the resource based view (RBV), competition anchors on the capabilities and resources that exist in an organization or that which an organization might intend to develop in order to attain sustainable advantage (Henry, 2008). Organizational resources can take a tangible nature such as physical resources, financial resources or human resource (Henry, 2008). Henry (2008) stresses that RBV emphasizes on organization's inner capabilities in developing strategy to accomplish both superior performance and sustainability in service delivery.

Mwaura (2013) sought to examine strategic planning strategies at Chase Bank. The study was done in Kenya. The researcher adopted a case study design. The study revealed that Chase bank had embraced a number of strategy implementation practices for example

allocation and management of resources; establishment of a chain of command, monitoring of results and evaluation of effectiveness and efficiency.

A study was done by Thong (2001) to establish how resource constraints affect implementation of information system. The study was done in Singapore. The study used mixed methods like partial least square and structured equation modeling to test the hypothesis. The study established a number of resource barriers for example technical expertise and financial constraints. The study recommends that small businesses ought to expand the level of information system expertise by engaging experienced and skilled consultants. Small business should also invest sufficient fund for investment in information systems.

Another study was done by Saeed and Bampton (2013) to investigate how ICT affect performance. This study was done in Libya in the banking sector. The study reviewed empirical studies on use of ICT in the banking sector. The study established that poor state infrastructure affects performance of the banking sector in Libya. Moreover, government intervention was seen as the major factor behind lack of ICT implementation.

2.5 Organizational Culture and Change in IT Systems

Organizational culture refers to the dominant or commonly held attitudes, values and beliefs, the personal and organization norms, and the conscious and unconscious symbolic acts of the organization (Adkins & Caldwell, 2004). Alvesson and Sveningsson (2015) point out that organization culture informs how responsibilities and authority is distributed within an organization in line with informal rules/regulations created and maintained that define what is right or wrong. According to Galpin (2007), when an organization built a strong culture through entrenchment of work place values, there are strong potential of unleashing lots of movements and energies as this create frameworks that enable people work. Organizational structure entails value systems and norms that organizations share in common. Organizational structure is a basis of strategy implementations. Successful development and implementation of strategies require alignment with the culture of the organization.

Therefore, there should be establishment of goals and objectives in organizations for supporting organizational culture while embracing strategy over a period of time (Sadri & Lees, 2001).

Organization culture is diverse and unique just as one's personality. If staff in an organization strongly becomes resistant to change, it will interfere with strategy implementation process. On the other hand, if employees in organization readily embrace change, strategy implementation becomes easier (Stanleigh, 2016).

In order to strengthen the cultural interactions, there is need to observe specific processes in development of consistent activity systems (Denning, 2011). When management attempts to come up with capabilities underlying effective cost drivers and values, there is development of culture due to market feedback. A strong culture is likely to emerge in a well performing organization because of the severe and frequent restrictions that markets can bring on organizations. However, weak culture is set back in strategy implementation as opposed to strong cultures (Buell, 2010). According to Mehta and Krishnan (2004), strong cultures support shared sense of belief in beliefs, norms and other virtues and this binds employees towards a common objective of strategy implementation. Weak organizational cultures are characterised by low pride in ownership of work, there is few values uniting staff into political groups. Weak organizational structure offer little assistance towards strategy implantation.

According to Metric (2014), there is proof of the link between achievement of organizational performance and organizational culture. Leaders and managers in organizations have obligations to undertake evaluation of culture strategy fit and alignment of culture. Meldrum and Atkinson (2008) established that in organizations where cultures are strong, there is strong inclination towards improved performance over a period of time. Moreover, firms that are characterised with strong culture

Some organizations are characterized by strong organizational cultures which ease the process of strategy implementation. Effective strategy implementation enhances performance of these organizations. Holt (2004) indicates that 52% of all businesses fail because management is unable to separate structure and culture hence the failure to

resolve issues affecting implementation. Through the guidance of the organizational culture, strategy implementation plans are broken into activities which guide delegation of different tasks to people. This encourages innovation and quick adaptation to changing conditions as well as strategy implementation.

According to Ahmadi, Salamzadeh, Daraei and Akbari (2012); organizational culture is related with strategy implementation. Different organizations have different types of organizational cultures and these affect strategy implementation.

Hrebniak (2006) on the other hand revealed that poor communication skills in organizations with low levels of accountabilities bring about failure in strategy implementation. Brenes and Mena (2008) established organizations with strong cultures leads to successful implementation of strategy. The authors further indicated that 86% of the successful firms align the culture with strategies. Barajas, Cabrera and Cabrera (1999) conducted a study on organizational culture as a determinant of technology assimilation in Europe. Organization culture forms a basis of comprehending and managing the manner in which staff in organizations behave. Organization culture also plays an important role due implementation of change within an organization. The authors concludes that change in technology have significant effect on business processes. New technologies disturb all other subsystems within an organization. For a business to successfully assimilate a new technology in operation, other subsystems within an organization ought to adapt to new equilibrium while absorbing the disruptions brought about by changes in technology.

Wanjohi (2014) analyzed the effects of organizational culture on change management practice in the Kenyan media industry. This research was conducted through a cross-sectional survey of the media houses in Kenya and the type of data collected was both qualitative and quantitative in nature. Organizational culture is a major determining factor of how any organization embraces and implements change. The implications of this study on policy is that it shall facilitate the development of more clearly articulated understanding of change management and ensure organizational culture is evaluated in the process of change

2.6 Employee Training and Change in IT systems

The role of employee training is to help in upgrading the knowledge of staff to enhance the competitive ability of an organization. Employee training also enhances the skill sets of employees in enhancing organizational performance. Competitiveness in an organization comes about when every employee performs excellently. The main agents of improved performance in an organization are employee coaching and mentoring (Potts, 1998). Training programs in organizations help in changing staff to be equal with the future wants of the organization at management and professional level. According to (Reynolds, 2004), training is defined as activities geared towards reacting to gift desires. Training refers to the application of planned and systematic activities geared towards marketing of learning. Training involves the use of formal procedures in importing information while facilitating people to acquire required abilities that help in performance effective performance of their jobs.

An analysis of how training influences performance was done with a case of KWFT by Sila (2014). Descriptive research design was employed by the researcher in achieving the objectives of the study. The findings of the study indicated that attitude of employees; job satisfaction and service delivery are significant determinant of performance of employees in organizations.

Eric (2012) did a study to examine how training and development affected the level of performance of the employees. The study used survey study methodology. It was established that some organizational issues existed for example low support from management to put in place employee training and development programmes. Moreover, training and development positively affected the performance of employees.

Al Fawzan (2003) did a study on how modern systems affected performance of employees. The study was done in South Arabia. The study established that 61 percent of the respondents were not aware of specialized programmes in technology field. Among the most important findings of the study 61% of respondents do not know for specialized training programs in the field of modern information technology. Moreover, most of the respondents were in agreement that the use of modern management information systems

is characterized by existence of financial and administrative constraints besides psychological and operational constraints.

2.7 Theoretical Framework

A theory is a set of properly argued ideas intended to explain a phenomenon; theories are scientific predictions or explanations of what the researcher expects to find (Creswell, 2014). A theoretical review therefore, examines theories related to the research problem from which the researcher constructs a theoretical framework.

2.7.1 Resource Based View (RBV) theory

Resource Based View (RBV) theory is one of the concepts applied by modern competitive firms in the dynamic business environment when formulating, implementing and monitoring strategies (Thompson, Gamble, and Strickland, 2012). In contrast, capabilities describe the capability of the firm in deployment of sufficient resources to enhance performance.

Therefore, capabilities help firms to effectively utilize resources and this creates potential of output. It is important to note that resources form part of the capability of the firm, however, it is capabilities of the firm that significantly contributes towards competitive advantage for a business firm (Thompson et al., 2012).

The theory indicates that the primary determinants of performance of a firm are the resources in possession by the company. According to Zingier (2002), resources include capabilities, assets, organizational functions and different sources of information in control by the firm. RBV emphasizes that resources significantly contribute towards efficiencies through cost reduction while at the same time enhancing willingness to pay for the product of the firm. A firm can gain competitive advantage by transferring some of the efficiency achieved to the customer.

The theory indicates that the internal capabilities and resources are the major sources of competitive advantage over other firms.

The theory helps in development of distinct resources and competencies while applying them to produce values that are superior in nature. If a business organization can keep these unique, competitive advantage can be gained through them (Pearce & Robinson, 2011).

2.7.2 Technology Acceptance Model (TAM) theory

This theory has been used from long time in guiding studies that explain (Bagozzi, 2007). The theory gives an analysis of the reasons why adopters either reject or adopt information technology use in organizations. The theory also gives a prediction of the attitudes in the use of system. The theory gives much of the focus on perceived usefulness. Perceived usefulness indicates the degree that an individual believes the use of a certain system would likely enhance performance.

According to Park (2009), TAM is adapted from the Theory of Reasoned Action (TRA) which is tailored in modelling user acceptance of information systems. TAM has been indicated to predict the user behaviour of information technology (Park, 2009).

There are two important elements forming the basis of TAM and these are perceived ease of use and perceived ease of use (Chuttur, 2009). The main characteristics of the perceived use are features and the design of the system while the core mechanism that underlie perceived usefulness is effort (Sentosa and Nik, 2012).

The Technological Acceptance Model has been used in many areas in assessing the behaviour of users for example www (Lederer, Mauping, Sera, & Zhuang, 2000), mobile banking (Lule, Omwansa, & Waema, 2012), multimedia (Lau & Woods, 2008) and healthcare (Chau & Hu, 2002).

2.8 Conceptual Framework

The conceptual framework illustrates issues relating to change management in Commercial Banks in Kenya, Furthermore and provides a critical analysis of these factors, which are; Top Management support, Firms' Resources, Organizational culture and Employee Training, that form the objectives for this study and how each of them contribute to the success or failure in the implementation of IT System change in an

organization, forming the independent variables. The Change in IT Systems in Commercial banks forms the Dependant variable with central bank of Kenya (CBK) being the regulatory body.

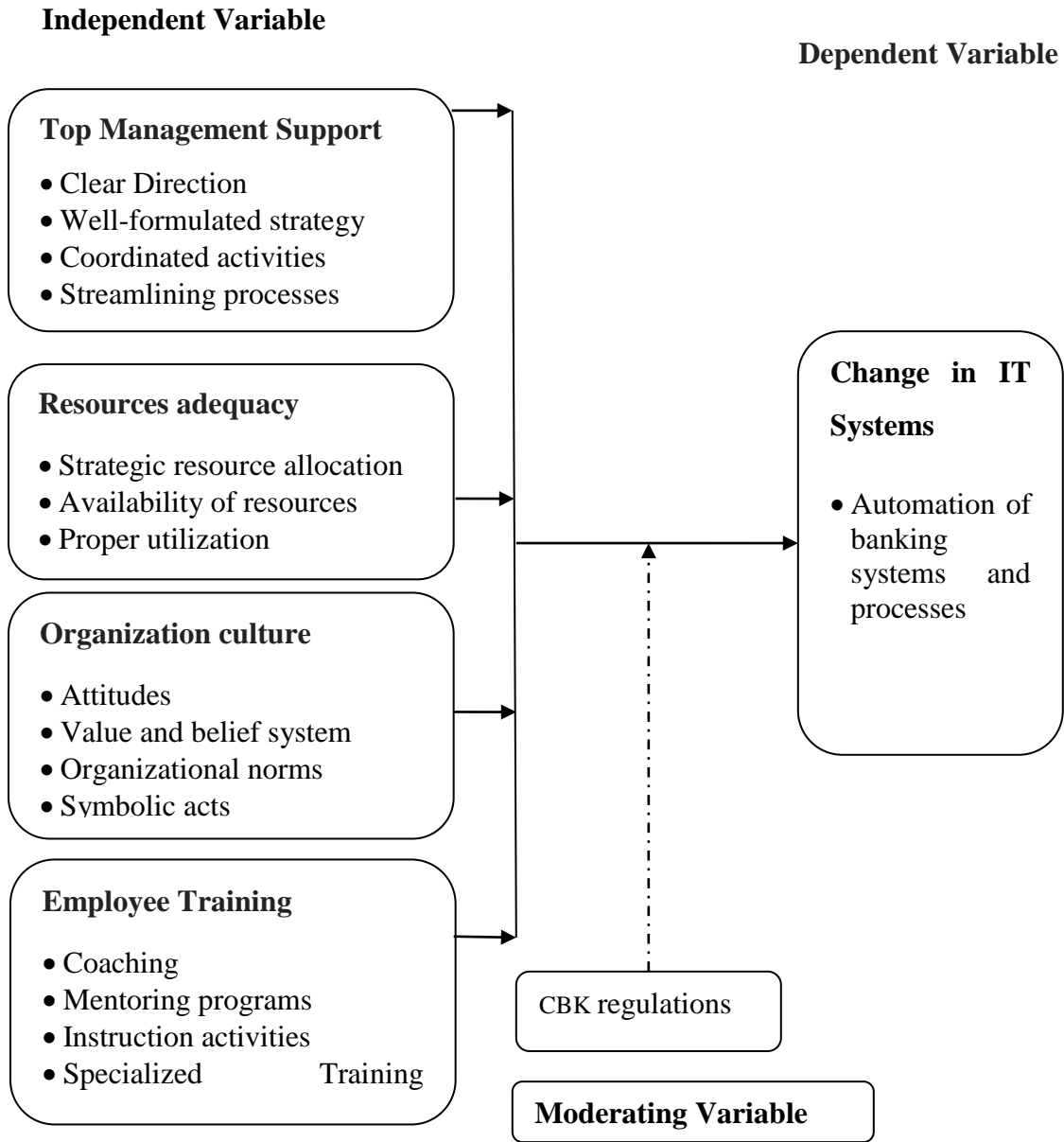


Figure 1: Conceptual Framework

2.9 Summary of Literature

Al Shaar, Khattab, Alkaied and Manna (2015) sought to determine how top management support affected innovation. Obonyo and Kerongo (2015) sought to determine the factors affecting strategic change management and the performance of commercial banks in Kenya. Titus, Mburu, Korir, Muathe and Obere (2013) focused on the organizational

factors that influence the adoption of inter-organizational information systems by universities in Kenya. Saeed and Bampton (2013) examined the impact of ICT on the performance of Libyan banks. Kariuki (2014) established ought to identify the factors affecting success of IT projects at the Commercial Bank of Africa by way of investigating the degree to which organizational objectives, top management support, user involvement and project managers' competence each affect the end project outcomes.

Koech, Gichunge and Thuo (2016) investigated how top management support affected implementation of information systems. Mwaura (2013) investigated strategic planning strategies at Chase Bank, Kenya. Thong (2001) analyzed resource constraints and information systems implementation in Singaporean small businesses. Barajas, Cabrera and Cabrera (1999) conducted a study on organizational culture as a determinant of technology assimilation in Europe. Wanjohi (2014) analyzed the effects of organizational culture on change management practice in the Kenyan media industry. Sila, (2014) analyzed the relationship between training and performance a case study of Kenyan women finance trust eastern Nyanza region, Kenya. Eric (2012) examined how training and employee development programmes affected performance of employees. Al Fawzan (2003) assessed the effect of information systems on employee performance.

The above studies have concentrated on other countries, variables and past period which make it difficult to apply their findings on the Kenyan market. They have also not addressed the combination of the identified factors by this study hence the need and outright urgency to undertake this study.

Table 2.1: Summary of findings and Research Gaps

Author	Findings	Research Gaps
Birken et.al (2015)	Top managers can demonstrate their support directly by conveying to middle managers that an initiative is an organizational priority, allocating implementation policies and practices	The study focused on top management only as a determinant of effective ICT change.
Chisenga (2004)	Resources which are mostly inadequate are ICT personnel and lack of funds leading failure in strategy implementation	The study was done in French speaking countries and the findings may not be applicable in Kenyan setting
Eric (2012)	Organizational issues such as lack of management support for training and development programmes, which constrained training and development.	This was done in Accra and in education system thus its findings aren't applicable in Kenya's banking industry
Alvesson and Sveningsson (2015)	Organization culture informs how responsibilities and authority is distributed within an organization in line with informal rules/regulations created and maintained that defining what is right or wrong	Focus was on organizational culture as a determinant leaving out all other determinants
Al Fawzan (2003)	There are administrative and financial constraints, operational and psychological facing the use of modern management information systems of interest	The difference in time gap means the findings may not be applicable in today's IT world.
Sila (2014)	Attitude, service delivery and job satisfaction were important in determining employee performance especially in service firms	The study was a case study of KWFT thus its findings cannot be generalized

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the reach design and methodology that was used to carry out the research. Specifically it includes the research design, the sample size and sample producers, the research instruments that were used, data collection and analysis techniques giving the ethical considerations that must be put in place while carrying out the study.

3.2 Research Design

According to Kothari (2004), research design is the plan according to which research participants are chosen, research data is collected and then analyzed. This study adopted a descriptive study design. A descriptive study is chosen since it is able to give information without changing the environment due to its observable nature. It should answer five basic questions who, what, why, when and where (Grimes & Schulz, 2002).

3.3 Target Population

The total population comprised of 43 commercial banks licensed by the Central bank of Kenya. The study targeted 4 employees from each department from the 43 commercial banks giving a total of 860 employees working in at the banks head offices located in Nairobi. The respondents included departments in Head Office i.e. Human resource, Front Office i.e. Tellers/Customer Service staff, Back Office i.e. Finance

Table 3. 1 Target Population

Target Group	Target Population
Human Resource	76
Tellers	402
Customer Service Staff	284
Finance Staff	98
TOTAL	860

3.4 Sample Size and Sampling Procedure

According to Mugenda and Mugenda (2003) a sample refers to a subset of those entities that decisions relate to. The researcher ought to select samples so that they represent the entire population. Since the target population is 860, the sample size was 172 respondents.

The study adopted stratified random sampling in determination of the sample size. Employees were carefully classified into strata in relation to departments they worked in. The researcher then selected 20% of the respondents from the target population to comprise of the sample size as the population had homogenous attributes.

Mugenda and Mugenda (2008) opined that a 10-30% of the target population is sufficient to generalize the findings of the study. Based on this, the study had 172 employees making the sample size for the study.

3.5 Research Instrument

The study collected data from the respondents using a structured questionnaire. The questionnaire was in the form of a likert scale where the respondents specify their level of agreement or disagreement on a symmetric agree-disagree scale for the given questions which captured the intensity of their feelings. The questionnaire was structured and divided into sections covering each of the objectives of the study (top management, firms' resources, organizational culture and employee training).

Creswell (2013) observed that, a questionnaire is simply a 'tool' for collecting and recording information about a particular issue of interest to an individual or an organization. It mainly comprises of a list of questions, having clear instructions and space for answering the questions.

3.6 Validity of Research Instruments

The aim of conducting a pilot test is to identify flaws in the instrumentation and design relevant for the study (Cooper & Schindler, 2010). Pilot test is an activity that assists the

research in determining if there are flaws, limitations, or other weaknesses within the interview design and allows him or her to make necessary revisions prior to the implementation of the study (Kvale, 2008). A pilot study was undertaken on at least (five) employees in the 43 commercial banks to test the reliability and validity of the data collection instrument.

Validity is defined as the appropriateness, meaningfulness, and usefulness of the specific inferences researchers make based on the data they collect. Validity indicates the strength of the conclusions of research. According to Patton (2002), validity refers to the best available approximation to the truth or falsity of a given inference, proposition or conclusion

3.7 Reliability of Instruments

When a set of measurement items are consistent, this is called reliability. On the other hand, when the research instrument measure and determines what the results ought to be, then this called validity (Cronbach, 2001). Reliability refers to the extent which the research instruments are consistent with the measurements.

Both reliability and validity do not mean one and the same thing. A Cronbach's alpha (α). Test was used to determine the reliability of the research instruments. Usually the Cronbach's alpha (α) shows the extent that a number of test items can be treated as indicating similar variable (Cronbach, 2001). The recommended value of 0.7 was used as a cut-off of reliabilities.

Table 3. 2: Data Validity and Reliability

Variable	Number of Items	Cronbach's alpha (α)
Top Management Support	6	0.713
Firm's Resources	5	0.735
Organizational Culture	6	0.711
Employee Training	5	0.731
IT Change	2	0.727

From the findings in Table 3.2, top management had Cronbach's alpha (α) of 0.713, Firm's Resources had 0.735, Organizational Culture had 0.711, Employee Training had 0.731 and IT Change had 0.727. Since all the Cronbach's alpha (α) was more than 0.7 which is a benchmark, this indicates that the scales were reliable.

3.8 Data collection Procedure

This study used primary data collected using questionnaires. The questionnaires included closed ended in line with the objectives of the study. A five point Likert scale was used for closed ended questions. The questionnaires contained two sections. The first section sought to establish the respondent demographic data while the second section seeks to establish the respondents' opinions on the four research questions of the study.

3.9 Data Analysis Techniques

The techniques for data analysis are discussed in this section. Data analysis is a process that involves data explanation and data clean up. According to (Kothari 2004), data ought to be checked for omissions and errors before analysis. Collected research data was processed by the use of a computer Statistical Package for Social Science (SPSS) version 20.0 programme to analyze the data. Descriptive findings were used to present the findings of the study. The descriptive statistics used included means and standard deviations. Descriptive statistics enabled the researcher to effectively describe how measurements have been distributed while at the same time organizing and summarizing data (Sekaran, 2008).

Besides the descriptive statistics, the researcher also used multiple regression analysis in determining the relationship between the variables of the study. The regression model adopted is presented below:

$$(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon):$$

Whereby

Y = change in IT systems

X₁ = Top Management support

X₂ = Firms Resources

X₃ = Organizational culture

X₄ = Employee training

ε = Error Term

3.10 Research Ethics

The researcher sought to adhere to the high ethical standards of research work. The researcher sought permission from the management team at the Commercial banks in Kenya through writing a formal letter drawn explaining the purpose and objectives of the study. The respondents' consent was sought before start of the research work, confirming to them that the information is for academic purpose only. The researcher assured respondents of confidentiality of the information they provided. And lastly the research findings were presented in an honest and unbiased manner.

3.11 Operationalization of Variables

Table 3. 3: Operationalization of Variables

Objective	Variable Type	Indicators	Type of data analysis	Scale of Measurement
Assess the influence of top management support on change in information technology systems at Commercial Banks in Kenya	Independent innovation	Clear Direction Well-formulated strategy Coordinated activities Streamlining processes Motivating staffs	Descriptive Regression	ordinal
Establish the influence of firms' resources on change in information technology systems at Commercial Banks in Kenya.	Independent	Strategic resource allocation Availability of resources Proper utilization Monitoring resource usage	Descriptive Regression	Ordinal
Establish the influence of organizational culture on change in information technology systems at Commercial Banks in Kenya.	Independent	Attitudes Value and belief system Organizational norms Symbolic acts	Descriptive Regression	Ordinal
Assess the influence of employee training and development on change in information technology	Independent	Coaching Mentoring programs Instruction activities Specialized Training programs	Descriptive Regression	Ordinal

systems at Commercial Banks in Kenya.				
Change in IT systems	Dependent	Automation of banking systems and processes	Descriptive Regression	Ordinal

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

In this chapter, the researcher presents the findings of the analyzed data. The study relied on primary data that was collected using a structured questionnaire. The collected data was cleaned and coded into SPSS for analysis. The findings are presented using Tables and Figures.

4.2 Response Rate

The researcher targeted 172 employees from head offices of 43 commercial banks located in Nairobi. Out of the 172 questionnaires that were issued out to these respondents, 130 of them were dully filled and returned to the researcher. This gave a response rate of 75.6%. The response was concurred with the stipulation of Babbie (2004) who asserted that return rates of above 50% are acceptable to analyse and publish, 60% is good and 70% is very good and above 80% is excellent. (Table 4.1)

Table 4.1: Response Rate

Response Rate	Frequency	Percentage
Response	130	75.6
Non Response	42	24.4
Total	172	100

4.3 Back Ground Information

The general information of the respondents is presented in this section.

4.3.1 Highest Level of Education

The study sought to determine the highest levels of the respondents as indicated in Table 4.3.

Table 4.2: Highest Level of Education

	Frequency	Percentage
Certificate	27	20.8
Diploma	39	30.0
Bachelor's Degree	53	40.8
Masters	8	6.2
PhD	3	2.3
Total	130	100.0

From the findings, 20.8% of the respondents had certificates, 30% had diplomas, 40.8% had bachelor's degree, 6.2% had masters and 2.3% had PhDs. This indicates that the respondents of the study were literate enough and therefore they knew how to read and interpret questionnaires.

4.3.2 Years of Service in Industry

The study sought to find out the number of years that respondents had worked in the banking industry. The findings are indicated in Table 4.4.

Table 4.3: Years of Service in Industry

	Frequency	Percentage
3-6 Years	19	14.6
6-9 Years	50	38.5
Above 10 years	61	46.9
Total	130	100.0

From the findings in Table 4.4, 14.6% of the respondents had worked in the banking industry for 3-6 years, 38.5% for 6-9 years and 46.9% for more than 10 years. This is a clear indicator that majority of the respondents had actually been in the banking industry for longer period and therefore they were familiar with the operations of IT.

4.3.3 Department Worked In

The findings of the departments that respondents worked in are indicated in Table 4.5.

Table 4.4: Department Worked In

	Frequency	Percentage
Head Office	29	22
Back Office	30	23
ICT	30	23
Front Office	41	32
Total	130	100

From the findings in Table 4.5, 22% of the respondents worked in the head office department, 23% in Back office and ICT while 32% in front office. This implies that all the departments within the studied organizations were represented in the study.

4.3.4 Years of Service at the Bank

The study sought to determine the period of time that respondents had worked in their respective bank. See Table 4.6.

Table 4.5: Years of Service at the Bank

	Frequency	Percentage
Below 3 Years	80	61.5
6-9 Years	22	16.9
Above 9 Years	28	21.5
Total	130	100

Table 4.6 indicates that 61.5% of the respondents had worked at the bank for less than 3 years, 16.9% for 6-9 years and 21.5% for above 10 years. This suggests that respondents of the study did not stay in a specific bank for a longer period.

4.4 Top Management Support on Change of IT Systems

Several statements on top management support and how it determines the change in IT systems in organizations were carefully identified by the researcher. Respondents were then requested to indicate the extent of their agreement with each of these statements

using a Likert Scale of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Table 4.6: Top Management Support

Statement	Mean	Std. Dev
Top management clearly communicating is a show of support in banks	2.90	.741
Clear direction is crucial during ICT implementation from top management	3.23	.775
A well-formulated strategy leads to change in IT systems in banking	3.77	1.03
Top management streamline process to effect IT systems change	4.13	1.65
Coordination of activities by top management results in change in IT systems	3.93	.912
Motivating employees aides in IT systems change	2.96	1.12

From the findings in Table 4.7; on whether the top management clearly communicating is a show of support in banks, the mean was 2.90 with standard deviation of 0.741. On whether clear direction is crucial during ICT implementation from top management, the mean was 3.23 with standard deviation of 0.775. As to whether a well-formulated strategy leads to change in IT systems in banking, the mean indicated was 3.77 with standard deviation of 1.03. With regard to whether top management streamline process to effect IT systems change, the mean was 4.13 with standard deviation of 1.65. As to whether coordination of activities by top management results in change in IT systems, the mean was 3.93 with standard deviation of 0.912. On whether motivating employees' aides in IT systems change, the mean was 2.96 with standard deviation of 1.12.

Respondents of the study were requested to indicate the extent of which top management support has acted as a determinant of change in IT systems at Commercial banks in Kenya. The findings are indicated in Table 4.8.

Table 4.7: Extent Top Management Support has acted as a Determinant of Change in IT Systems

	Frequency	Percentage
No Extent	3	2.3
Little Extent	30	23.1
Moderate Extent	19	14.6
Great Extent	55	42.3
Very Great Extent	23	17.7

Total	130	100.0
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From the findings in Table 4.8, 2.3% of the respondents indicated that to no extent has top management support acted as a determinant of change in IT systems at Commercial banks in Kenya, 23.1% said little extent, 14.6% indicated moderate extent, and 42.3% said great extent and 17.7% said very great extent.

Respondents of the study were further requested to indicate the degree which the top management avail information updates on IT trends or systems in the bank. See Table 4.9.

Table 4.8: Degree which the Top Management Avail Information Updates

	Frequency	Percentage
Annually	3	2.3
Quarterly	30	23.1
Monthly	27	20.8
2-3 times a month	70	53.8
Total	130	100.0

From the findings in Table 4.9, 2.3% of the respondents indicated that the top management avail information updates on IT trends or systems in the bank once in a year, 23.1% said quarterly, 20.8% said monthly and 53.8% said 2-3 times a month.

The researcher sought to determine the attributes that best characterizes IT Systems upgrades and replacement at the bank of the respondents. The findings are indicated in Table 4.10.

Table 4.9: Attributes Characterizing IT Systems Upgrades and Replacement

	Frequency	Percentage
Non Existent	28	21.5
Initial	19	14.6
Managed	30	23.1
Optimized	53	40.8
Total	130	100.0

From the findings in Table 4.10, 21.5% of the respondents indicated that IT Systems upgrades and replacement at the bank was nonexistent suggesting that the banks have not recognized the need, 14.6% said it was initial and this means that the systems are informal and uncoordinated, 23.1% said managed which means that systems are

monitored and measured and 40.8% said optimized implying that best systems are in place and there are provisions for amending.

The researcher asked respondents to indicate whether staffs are consulted to give their ideas and opinions before a new system is rolled out. See Figure 4.3.

Table 4. 10: Consultation of Staff to Give their Ideas and Opinions

	Frequency	Percentage
Yes	100	77
No	30	23
Total	130	100

From the findings in Table 4.11, majority of the respondents 77% indicated that staffs in their banks are consulted to give their ideas and opinions before a new system is rolled out.

4.5 Firms’ Resources on Change of IT Systems

A number of statements on firms’ resources and change in IT systems within the organization were carefully identified by the researcher. Respondents were then requested to indicate the extent of their agreement with each of these statement using a Likert scale of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Table 4.11: Firms' Resources

Statement	Mean	Std. Dev
Sufficient resources are crucial in change of IT systems implementation	3.24	.737
Strategic allocation of resources ensures a smooth change of IT systems at the bank	3.81	.755
Effective utilization of resources leads to an increase in change of IT systems	3.69	1.18
Monitoring resources closely to intervene enhances IT systems change in bank	3.12	.964
Inadequacy of banks' ICT personnel negatively impacts on IT systems change	4.03	.658

From the findings in Table 4.12; regarding whether sufficient resources are crucial in change of IT systems implementation, the mean was 3.24 with standard deviation of 0.737. On whether strategic allocation of resources ensures a smooth change of IT systems at the bank, the mean was 3.81 with standard deviation of 0.755. On whether effective utilization of resources lead to an increase in change of IT systems, the mean was 3.69 and standard was 1.18. On whether monitoring resources closely to intervene enhances IT systems change in bank, the mean was 3.12 with standard deviation of 0.964. In respect to whether inadequacy of banks' ICT personnel negatively impacts on IT systems change, the mean was 4.03 with standard deviation of 0.658.

The study sought to assess the extent that firms 'resource has impacted on change in IT systems at commercial banks in Kenya. The findings are indicated in Table 4.13.

Table 4.12: Extent that Firms 'Resource has Impacted on Change in IT Systems

	Frequency	Percentage
Moderate Extent	30	23.1
Great Extent	81	62.3
Very Great Extent	19	14.6
Total	130	100.0

From the findings in Table 4.13, 23.1% said to moderate extent has firms 'resource impacted on change in IT systems at commercial banks in Kenya, 62.3% said great extent and 14.6% indicated very great extent.

Respondents were requested to indicate whether all the employees have computers and have been furnished with all necessary resources to perform duties allocated to them. The findings are indicated in Table 4.14.

Table 4.13: Computers and Necessary Resources to Employees

	Frequency	Percentage
Disagree	30	23.1
Agree	45	34.6
Strongly agree	55	42.3
Total	130	100.0

As indicated in Table 4.11, 23.1% of the respondents disagreed that employees have computers and have been furnished with all necessary resources to perform duties allocated to them; 34.6% agreed and 42.3% strongly agreed.

The study sought to examine whether the bank had adequate software systems that are regularly updated with current technological requirements and are fast enough for a larger and better system. The findings are indicated in Table 4.15.

Table 4. 14: Adequate Software Systems

	Frequency	Percentage
Neither Agree nor Disagree	30	23.1
Agree	58	44.6
Strongly agree	42	32.3
Total	130	100.0

The study revealed that 23.1% of the respondents neither agreed nor disagreed that bank had adequate software systems that are regularly updated with current technological requirements and are fast enough for a larger and better system, 44.6% agreed and 32.3% strongly agreed.

Respondents were requested to indicate whether the organization has done enough to ensure that there is a strong back up in case of systems failure and a faster TAT (Turn around Time) from system downtime to system uptime. The findings are indicated in Table 4.16.

Table 4. 15: Back Up in case of Systems Failure

	Frequency	Percentage
Neither Agree nor Disagree	50	38.5
Agree	57	43.8
Strongly agree	23	17.7
Total	130	100.0

From the findings in Table 4.13, 38.5% of the respondents were neutral on whether the organization has done enough to ensure that there is a strong back up in case of systems failure and a faster TAT (Turn Around Time) from system downtime to system uptime; 43.8% agreed and 17.7% strongly agreed.

4.6 Organizational Culture on Change of IT Systems

The researcher identified several statements on organization culture and how it determines the change in IT systems in organizations. Respondents were then requested to indicate the extent of their agreement using a Likert scale of range of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Table 4. 16: Organizational Culture

Statement	Mean	Std. Dev
Employees positive attitude enhances IT systems change	2.78	.797
The firms' value system influences the adoption of IT systems change	3.54	.826
Organizational norms is the set of foundation for IT systems change	4.11	1.18
The IT systems change strategy must be aligned with organizational acts	3.56	1.39
Positive employees belief systems impact on IT systems change at our bank	3.14	1.19
Our bank has a strong culture leading to a higher chance in IT systems change	3.06	.599

On whether employees' positive attitude enhances IT systems change, the mean was 2.78 with standard deviation of 0.797. On whether the firms' value system influences the adoption of IT systems change; the mean was 3.54 with standard deviation of 0.826. With regard to whether organizational norms are the set of foundation for IT systems change, the mean was 4.11 with standard deviation of 1.18. On whether the IT systems change strategy must be aligned with organizational acts, the mean was 3.56 with standard deviation of 1.39. On whether positive employees belief systems impact on IT systems

change at our bank, the mean was 3.14 with standard deviation of 1.19. On whether the bank has a strong culture leading to a higher chance in IT systems change, the mean was 3.06 with standard deviation of 0.599.

The study sought to determine the extent which organizational culture affects the change in IT systems at Commercial banks in Kenya. See Table 4,18.

Table 4.17: Extent Which Organizational Culture Affects the Change in IT Systems

	Frequency	Percentage
Very Great Extent	27	21
Great Extent	83	64
Moderate Extent	20	15
Total	130	100

From Figure 4.18, 15% of the respondents indicated that to a moderate extent has organizational culture affected the change in IT systems at Commercial banks in Kenya, 64% said great extent and 21% said very great extent.

Respondents were also requested to indicate whether they maintain a positive attitude in changing situations. The findings are illustrated in Table 4.19.

Table 4. 18: Positive Attitude in Changing Situations

	Frequency	Percentage
Little Extent	51	39.2
Moderate Extent	33	25.4
Great Extent	46	35.4
Total	130	100.0

From the findings in Table 4.19, 39.2% of the respondents believed that to a little extent do they maintain a positive attitude in changing situation, 25.4% said moderate extent and 35.4% indicated great extent.

The study sought to investigate whether respondents believed that better ICT will replace some duties currently done by employees and result in job loss. Consider Table 4.20.

Table 4. 19: ICT and Duties Currently Done by Employees

	Frequency	Percentage
Moderate Extent	28	21.5
Great Extent	45	34.6
Very Great Extent	57	43.8
Total	130	100.0

From the findings in Table 4.16, 21.5% of the respondents indicated to a moderate extent will ICT replace some duties currently done by employees and result in job loss; 34.6% said great extent and 43.8% indicated very great extent.

The study sought further to find out whether respondents felt pressure because of the new IT systems change. From the findings, majority of the respondents 82.3% indicated great extent while 17.7% said very great extent.

4.7 Employee Training on Change of IT Systems

Several statements on employee training as a determinant of change in IT systems in organizations were carefully identified by the researcher. Respondents were then requested to indicate the extent of their agreement using a Likert Scale of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Table 4. 20: Employee Training

Statement	Mean	Std. Dev
Employee coaching in our bank increases the implementation of IT systems change	2.96	.926
Instruction activities to market learning aids in adopting of IT systems change	3.00	1.05
Mentoring programs influence to improving IT systems change in our bank	4.39	.772
Our bank uses specialized training programs to influence IT system change	2.56	1.25
Training affects staffs interest positively thus resulting in IT system change	3.79	.804

From the findings in Table 4.21, as to whether employee coaching in our bank increases the implementation of IT systems change; the mean was 2.96 with standard deviation of 0.926. On whether instruction activities to market learning aids in adopting of IT systems change, the mean was 3.00 with standard deviation of 1.05. On whether mentoring programs influence to improving IT systems change in our bank, the mean was 4.39 with

standard deviation of 0.772. On whether the bank uses specialized training programs to influence IT system change, the mean was 2.56 with standard deviation of 1.25. On whether training affects staffs interest positively thus resulting in IT system change, the mean was 3.79 with standard deviation of 0.804.

When asked to indicate the extent of which employee training has affected the change in IT systems at commercial banks in Kenya, 23.1% of the respondents said no extent, 14.6% said little extent, 23.1% said moderate extent, 17.7% said great extent and 21.5% said very great extent.

On the length which respondents were trained to run their business, the study established that 2.3% of the respondents were trained for 2 days, 53.8% for one week, 20.8% for 2-7 weeks and 23.1% for more than 7 months.

When the respondents were requested to rate effectiveness of the training they attended, 37.7% said it was fairly effective, 38.5% indicated that the training was effective and 23.8% said it was very effective.

Respondents were also requested to indicate their IT system knowledge after training. From the responses, 44.6% of the respondents indicated that their IT knowledge was good. As such, they understood some IT concepts but not all of them. 40.8% of the respondents said their IT knowledge was very good and this indicates that they understood more aspects but had a small proportion of aspects not understood. The other 14.6% of the respondents said their IT knowledge was excellent and this implies that they fully understood and comprehended the concepts.

4.8 Changes in IT System

Several statements on change in IT systems in organizations were carefully identified by the researcher. Respondents were then requested to indicate the extent of their agreement on each of the statement using a Likert Scale of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Table 4. 21: Changes in IT System

Statement	Mean	Std. Dev
Change in IT enhances competitive advantage of our firm	4.36	.778
Change in IT streamlines the business processes in our company	2.60	1.25

From the findings in Table 4.22, as to whether change in IT enhances competitive advantage of our firm, the mean was 4.36 with standard deviation of 0.778. On whether change in IT streamlines the business processes in our company, the mean was 2.60 with standard deviation of 1.25.

4.9 Regression Analysis

In order to fully understand that determinants of effective information technology systems at Commercial banks in Kenya, the researcher conducted multiple regression analysis. The findings are indicated in subsequent sections.

Table 4. 22: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.704 ^a	.496	.480	1.28600

From the Model Summary in Table 4.23, the value of R is 0.704 indicating that there is a strong positive correlation between the variables of the study. The value of R square is 0.496 indicating that 49.6% of the variation in changes in IT in commercial banks in Kenya is explained by the four independent variables of the study (top management support, firm's resources, organizational culture and employee training). There is however other factors that determine ICT change and this account to up to 50.4%.

Table 4. 23: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	203.152	4	50.788	30.710	.000b
Residual	206.725	125	1.654		
Total	409.877	129			

The ANOVA findings in Table 4.24 indicate that the value of F calculated is 30.710 while F critical (From F Table) is 2.444. As the value of F calculated is greater than F critical (30.710>2.444), this clearly indicates that the overall regression model was

significant and a reliable predictor of the findings of the study. The p value as also measured by the level of significance as 0.000 is also less than 0.05 which indicates that the model was statistically significant, as shown in below table.

Table 4. 24: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	31.925	5.077		6.288	.000
Top Management Support	.278	.085	.495	3.285	.001
Firms Resources	.959	.372	.499	2.576	.011
Organizational Culture	.555	.087	.775	6.363	.000
Employee Training	1.500	.246	1.934	6.100	.000

From the regression Coefficient Table 4.25, the resultant regression equation therefore becomes:

$$Y = 31.925 + 0.278X_1 + 0.959X_2 + 0.555X_3 + 1.5X_4 + \varepsilon$$

Whereby

Y = change in IT systems; **X₁** = Top Management support; **X₂**= Firms Resources; **X₃**= Organizational culture; **X₄**= Employee training

It can therefore inferred that when all the independent variables are held constant, then change in information technology systems at commercial banks in Nairobi county, Kenya. A unit change in Top management support holding other variables constant would determine change in information technology systems at commercial banks in Nairobi County, Kenya by 0.278; a unit change in firm’s resources with other factors held constant would determine change in information technology systems at commercial banks in Nairobi County, Kenya by 0.959. A unit change in organizational culture with other variables held constant would affect change in information technology systems at commercial banks in Nairobi County by 0.555 and a unit change in employee training holding other factors constant would affect change in information technology systems at commercial banks in Nairobi County by 1.5.

In view of significance at 0.05 level of confidence, the study documents individual significance of the variables of the study. For top management support, the p value was 0.001 which is less than 0.05 and therefore it is a significant determinant of change in information technology systems at commercial banks in Nairobi County.

The p value of firm's resources was 0.011 which is less than 0.05 and therefore firm's resources have significant effect on change in information technology systems at commercial banks in Nairobi County.

Organizational culture indicated a p value of 0.000 which is less than 0.05 and as such, organizational culture is a significant determinant of change in information technology systems at commercial banks in Nairobi County.

In respect to employee training, the p value was 0.000 which is less than 0.05 and this implies that statistically significant association exists between employee training and change in information technology systems at commercial banks in Nairobi County.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the study based on the research questions. The chapter also contains conclusions in relation to the findings of the study. In addition, the chapter presents the recommendations that have relevant implications to theory, policy and practice. There are also the recommendations for further studies relevant to future scholars and academicians.

5.2 Summary of the Findings

The study documents that from the Regression analysis done in for top management support, the p value was 0.001 which is less than 0.05 and therefore it is a significant determinant of change in information technology systems at commercial banks in Nairobi County. With regard to whether top management streamline process to effect IT systems change, the mean was 4.13 with standard deviation of 1.65. As to whether coordination of activities by top management results in change in IT systems, the mean was 3.93 with standard deviation of 0.912. As to whether a well-formulated strategy leads to change in IT systems in banking, the mean indicated was 3.77 with standard deviation of 1.03. Furthermore; majority of the respondents indicated that the top management avail information updates on IT trends or systems in the bank 2-3 times a month.

The regression analysis of the study established that the p value of firm's resources was 0.011 which is less than 0.05 and therefore in agreement with Chisenga (2004), firm's resources have significant effect on change in information technology systems at commercial banks in Nairobi County. In respect to whether inadequacy of banks' ICT personnel negatively impacts on IT systems change, the mean was 4.03 with standard deviation of 0.658. On whether strategic allocation of resources ensures a smooth change of IT systems at the bank, the mean was 3.81 with standard deviation of 0.755. On

whether effective utilization of resources lead to an increase in change of IT systems, the mean was 3.69 and standard was 1.18.

The findings of the Regression analysis indicated that organizational culture had a p value of 0.000 which is less than 0.05 and as such, organizational culture is a significant determinant of change in information technology systems at commercial banks in Nairobi County. With regard to whether organizational norms are the set of foundation for IT systems change, the mean was 4.11 with standard deviation of 1.18. On whether the IT systems change strategy must be aligned with organizational acts, the mean was 3.56 with standard deviation of 1.39. On whether the firms' value system influences the adoption of IT systems change; the mean was 3.54 with standard deviation of 0.826, thus agreeing with Alvesson and Sveningsson (2015).

In respect to employee training, from the Regression analysis, p value was 0.000 which is less than 0.05 and this implies that statistically significant association exists between employee training and change in information technology systems at commercial banks in Nairobi County. On whether mentoring programs influence to improving IT systems change in our bank, the mean was 4.39 with standard deviation of 0.772. On whether training affects staffs interest positively thus resulting in IT system change, the mean was 3.79 with standard deviation of 0.804. On whether instruction activities to market learning aids in adopting of IT systems change, the mean was 3.00 with standard deviation of 1.05. These confirm findings by Eric (2012)

5.3 Discussion of the Findings

The study documents that for top management support, the p value was 0.001 which is less than 0.05 and therefore in agreement with Koech, Gichunge and Thuov (2016) it is a significant determinant of change in information technology systems at commercial banks in Nairobi County. According to Obonyo and Kerongo (2015), top management is probably the most critical element in a major organizational change effort in whichever context. Effective and charismatic leaders are often capable of communicating a vision and mobilizing the energy necessary for improving organizational performance and adopting technological change. The study revealed that top management streamline

process to effect IT systems change. It was revealed that coordination of activities by top management results in change in IT systems. According Cater and Pucko (2010) top management should be actively involved in coordination of activities, streamlining of processes, aligning the organizational structure, and keeping employees motivated and committed to strategy implementation are key responsibilities of the leadership. Furthermore, well-formulated strategy leads to change in IT systems in banking. The findings are consistent with Cater and Pucko (2010) who established that while a well-formulated strategy, a strong and effective pool of skills, and human capital are extremely important resources for strategy success, poor leadership from senior management is one of the main obstacles in successful strategy implementation. Furthermore; majority of the respondents indicated that the top management avail information updates on IT trends or systems in the bank 2-3 times a month.

The study established that the p value of firm's resources was 0.011 which is less than 0.05 and therefore firm's resources have significant effect on change in information technology systems at commercial banks in Nairobi County. The study established that inadequacy of banks' ICT personnel negatively impacts on IT systems change. According to (Schaap, 2012), sufficient resources are a crucial factor in strategy implementation. Lack of or inadequate resources may lead to the failure of strategy implementation which in most cases takes more time than expected or planned. It was revealed that strategic allocation of resources ensures a smooth change of IT systems at the bank. The study revealed that effective utilization of resources lead to an increase in change of IT systems.

Organizational culture indicated a p value of 0.000 which is less than 0.05 and as such, organizational culture is a significant determinant of change in information technology systems at commercial banks in Nairobi County. According to Metric (2014) the link between organizational culture and achieving sustained high performance has been proven. Culture-strategy fit evaluations and culture alignment initiatives are essential works that leaders collectively and individually have an obligation to undertake to lay the tracks for strategic priorities to roll-out on. On the other hand, Wanjohi (2014) established that organizational culture is a major determining factor of how any

organization embraces and implements change. The study established that organizational norms are the set of foundation for IT systems change. The study found out that IT systems change strategy must be aligned with organizational acts. The findings of the study indicated that the firms' value system influences the adoption of IT systems change. The finding is consistent with (Sadri & Lees, 2001) who held that organizational culture includes the shared beliefs, norms and values within an organization and it sets the foundation for strategy formulation. For a strategy within an organization to develop and be implemented successfully, it must fully align with the organizational culture.

On employee training, the p value was 0.000 which is less than 0.05 and this implies that statistically significant association exists between employee training and change in information technology systems at commercial banks in Nairobi County. The finding concurs with Sila (2014) who held that training has a big influence on performance with attitude, job satisfaction and service delivery equally getting the same weight. The study established that mentoring programs influence to improving IT systems change in our bank. The study found out that training affects staffs interest positively thus resulting in IT system change. The study found out that instruction activities to market learning aids in adopting of IT systems change. According to Armstrong (2006), training is the use of systematic and planned instruction activities to market learning. It involves the employment of formal processes to import information and facilitate individuals to acquire the abilities necessary for them to perform their jobs satisfactorily

5.4 Conclusions

The study concludes that top management support is a significant determinant of change in information technology systems at commercial banks in Nairobi County. Top management streamline process to effect IT systems change. Coordination of activities by top management results in change in IT systems. A well-formulated strategy leads to change in IT systems in banking.

The study further concludes that firm's resources have significant effect on change in information technology systems at commercial banks in Nairobi County. Inadequacy of banks' ICT personnel negatively impacts on IT systems change. Strategic allocation of

resources ensures a smooth change of IT systems at the bank. Effective utilization of resources leads to an increase in change of IT systems.

The study concludes that organizational culture is a significant determinant of change in information technology systems at commercial banks in Nairobi County. Organizational norms are the set of foundation for IT systems change. The IT systems change strategy must be aligned with organizational acts. The firms' value system influences the adoption of IT systems change.

The study also concludes that there is statistically significant association exists between employee training and change in information technology systems at commercial banks in Nairobi County. Mentoring programs influence to improving IT systems change in our bank. Training affects staffs interest positively thus resulting in IT system change. Instruction activities to market learning aids in adopting of IT systems change.

5.5 Recommendations of the Study

1. The study recommends that top management of all banking institutions in Kenya should actively support the change in information technology systems by stream lining process to effect IT systems change. There is also need to coordinate activities by top management and this will result in change in IT systems. Top management of banking institutions in Kenya should also clearly formulate their strategies and this will bring about change in IT systems in banking.
2. The study further recommends that banking institutions in Kenya should avail sufficient and required resources to employees. There is need to have in place adequate ICT personnel to drive the IT systems change. Management of commercial banks in Kenya should also strategically allocate resources while at the same time effectively utilize the resources and this will result into increase in change of IT systems.
3. The study recommends that banking institutions in Kenya should strive to create strong organization cultures which bind employees together to the organization. Strengthening of organizational culture can be done through aligning the IT systems change strategy with organizational acts.

4. The study also recommends that all banking institutions in Kenya should improve the training programmes in their organizations by introduction of mentoring programmes, monitoring and evaluation of the training programmes. This will affect staffs interest positively thus resulting in IT system change.

5.6 Suggestion for Further Studies

The current study sought to examine the determinants of effective information technology systems at Commercial banks in Kenya. The study covered all the 42 commercial banks and therefore future scholars should carry out similar studies but with classification of banking institutions as either foreign, multinational or listed banks at NSE. The current study investigated how (top management support, firm's resources, organizational culture and employee training) influences effective information technology systems at Commercial banks in Kenya; from regression analysis R square was 49.6% indicating that there are other variables not covered by the study and therefore future scholars should try to uncover more factors.

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APPENDICES

Appendix 1: Questionnaire

PART A: BACKGROUND INFORMATION

1) Which bank do you work (optional).....

2) What is your highest educational level?

Certificate [] Diploma []

Bachelors Degree [] Masters []

PhD []

3) How many years have you worked in the banking industry?

Below 3 years [] 3-6 years []

6-9 years [] 10 years and above []

4) What Area/Department do your work in the bank?

Back Office []

Front Office []

ICT []

Head Office []

5) How long have you worked in this bank?

Below 3 years [] 3-6 years []

6-9 years [] 10 years and above []

PART B: TOP MANAGEMENT SUPPORT

6) Below are several statements on top management support and how it determines the change in IT systems in organizations. Kindly indicate the extent to which its applicable in your bank using the Likert scale of range of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Statement	1	2	3	4	5
Top management clearly communicating is a show of support in banks					
Clear direction is crucial during ICT implementation from top management					
A well-formulated strategy leads to change in IT systems in banking					
Top management streamline process to effect IT systems change					
Coordination of activities by top management results in change in IT systems					
Motivating employees aides in IT systems change					

7) In general terms, to what extent has top management support acted as a determinant of change in IT systems at Commercial banks in Kenya?

Very great extent []

Great extent []

Moderate extent []

Little extent []

No extent []

8) How often does top management avail information updates on IT trends or systems in the bank?

() 2-3 times a month () Monthly () Quarterly () annually () Never

9) Which of the following best characterizes IT Systems upgrades and replacement at your bank?

() Non-existent: The banks have not recognized the need

() Initial: The systems are informal and uncoordinated.

() Managed: Systems are monitored and measured.

() Optimized: Best systems are in place and there are provisions for amending

10) Staff are consulted to give their ideas and opinions before a new system is rolled out

(Tick as appropriate)

() Yes () No

PART C: FIRMS' RESOURCES

11) Below are several statements on firms' resources and change in IT systems within the organization. Kindly indicate the extent to which it's applicable in your bank using the Likert scale of range of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Statement	1	2	3	4	5
Sufficient resources are crucial in change of IT systems implementation					
Strategic allocation of resources ensures a smooth change of IT systems at the bank					
Effectively utilization of resources leads to an increase in change of IT systems					
Monitoring resources closely to intervene enhances IT systems change in bank					
Inadequacy of banks' ICT personnel negatively impacts on IT systems change					

12) To what extent do firms 'resource impact on change in IT systems at commercial banks in Kenya?

- Very great extent []
 Great extent []
 Moderate extent []
 Little extent []
 No extent []

13) All employees have computers and have been furnished with all necessary resources to perform duties allocated to them.

- Strongly agree []
 Agree []
 Neither agree/disagree []
 Disagree []
 Strongly disagree []

14) The bank has adequate software systems that are regularly updated with current technological requirements and are fast enough for a larger and better system.

- Strongly agree []
 Agree []

- Neither agree/disagree []
- Disagree []
- Strongly disagree []

15) The bank has done enough to ensure that there is a strong back up in case of systems failure and a faster TAT (Turn Around Time) from system downtime to system uptime

- Strongly agree []
- Agree []
- Neither agree/disagree []
- Disagree []
- Strongly disagree []

PART D: ORGANIZATIONAL CULTURE

16) Below are several statements on organization culture and how it determines the change in IT systems in organizations. Kindly indicate the extent to which its applicable in your bank using the Likert scale of range of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Statement	1	2	3	4	5
Employees positive attitude enhances IT systems change					
The firms' value system influences the adoption of IT systems change					
Organizational norms is the set of foundation for IT systems change					
The IT systems change strategy must be aligned with organizational acts					
Positive employees belief systems impact on IT systems change at our bank					
Our bank has a strong culture leading to a higher chance in IT systems change					

17) In general terms, to what extent does organizational culture affect the change in IT systems at Commercial banks in Kenya?

- Very great extent []
- Great extent []
- Moderate extent []

Little extent []

No extent []

18) I maintain a positive attitude in changing situations

Very great extent []

Great extent []

Moderate extent []

Little extent []

No extent []

19) I believe a better ICT will replace some duties currently done by employees and result in job loss

Very great extent []

Great extent []

Moderate extent []

Little extent []

No extent []

20) I feel pressure because of the new IT systems change

Very great extent []

Great extent []

Moderate extent []

Little extent []

No extent []

PART E: EMPLOYEE TRAINING

21) Below are several statements on employee training as a determinant of change in IT systems in organizations. Kindly indicate the extent to which it is applicable in your bank using the Likert scale of range of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Statement	1	2	3	4	5
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Employee coaching in our bank increases the implementation of IT systems change					
Instruction activities to market learning aids in adopting of IT systems change					
Mentoring programs influence to improving IT systems change in our bank					
Our bank uses specialized training programs to influence IT system change					
Training affects staffs interest positively thus resulting in IT system change					

22) In general terms, to what extent does employee training affect the change in IT systems at commercial banks in Kenya?

- Very great extent []
Great extent []
Moderate extent []
Little extent []
No extent []

23) For how long were you trained to run your business?

- Two days []
One week []
Two weeks to seven weeks []
Seven months and above []

24) How can you rate the effectiveness of training?

Very effective () Effective () fairly effective () Not effective ()

25) How would you rate your IT Systems knowledge after training on the following indicators? (Tick appropriate choice for each)

1. Good (understand some but not all)
2. Very good (understand more aspects but have a small proportion of aspects not understood)
3. Excellent (fully understand and comprehend)

PART F: CHANGE IN IT SYSTEM

23) Below are several statements on change in IT systems in organizations. Kindly indicate the extent to which it is applicable in your bank using the Likert scale of range of 1-5 where 1= No extent, 2= little extent, 3=moderate extent, 4=great extent and 5=very great extent.

Statement	1	2	3	4	5
Change in IT enhances competitive advantage of our firm					
Change in IT streamlines the business processes in our company					

THE END

