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The Role of change management on Information Communication Technology projects success in state corporations in Kenya

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THE ROLE OF CHANGE MANAGEMENT ON INFORMATION COMMUNICATION TECHNOLOGY PROJECTS SUCCESS IN STATE CORPORATIONS IN KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the research thesis itself.

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ABSTRACT

Current empirical literature suggests that majority of today's organizations are embracing change to reduce costs, increase competitiveness or growth, and increase efficiency. However, the anticipated change is sometimes not achieved and may also negatively impact the organization's functional units and its employees. Technology has been proven to be not just a major cause of transformative change in many organizations but also an enabler of change. The adoption of technological advances through various ICT implementations is a factor influencing transformative change in Kenyan State Corporations. This study aimed to determine the role of change management on information communication technology (ICT) project success in State Corporations in Kenya. The specific objectives were; to determine the role of change readiness on ICT project success in State Corporations in Kenya; to establish the role of communication on ICT project in State Corporations in Kenya; to find out the role of employee training on ICT project success in State Corporations in Kenya, and to determine the role of employee feedback on ICT project success in State Corporations in Kenya. The study adopted the High-Reliability Organizations theory, Kotter's Eight-Step Change Management Model, and Technology Acceptance Model. The study adopted a positivist philosophy and a quantitative approach to data collection. The study focused on Kenyan State Corporations. Purposive sampling method was used to select 14 State Corporations that have successfully implemented ICT projects in the last 6 years. The study used Slovin's (1960) sampling formulae to determine a sample size of 205 respondents. Thereafter, a stratified random probability sampling was used to determine respondents from two departments; finance and ICT. Structured questionnaires (closed-ended) was used to collect data. The data collected was analysed using the Statistical Package for Social Sciences (SPSS) software. Analysed data was presented using frequency tables. It was established from the study that most changes in the public corporations have been successfully implemented in the last six years and that corporations take care of employees that are adversely impacted by change. Additionally, the managers at the corporations are receptive to feedback and alternative ideas and encourage open communication. Regarding the communication of change management processes, the study established that state corporations have effective mechanisms for informing employees of expected project results and outcomes. It was also established in the study that employees at the state corporation understood the business reasons for the change, the risks of not changing, and the impact of their day-to-day work activities. Concerning ICT project success, the study revealed that the corporations have clear vision and strategies, and the projects they execute are fully supported by the Government. Regression analysis revealed a statistically significant relationship between the variables. It was therefore concluded that the four change management variables examined (i.e. Employee Feedback, Training, Change Readiness, and Communication) significantly influence the success of ICT projects implemented by state corporations. The study established that the execution of these change management practices by the state corporations enabled these organizations to achieve sustainable success in ICT projects implementations

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LIST OF ABBREVIATIONS

CSFs – Critical Success Factors

EMR – Electronic Medical Records

GOK - Government of Kenya

HRO- High-Reliability Organizations

ICT - Information Communication Technology

ISM- Information Security Management system

IT – Information Technology

KENGEN – Kenya Electricity Generating Company

KPA- Kenya Ports Authority

KPC – Kenya Pipeline Company Limited

KPLC- Kenya Power and Lighting Company

MBC – Measurement-Based Care

MFS – Measurement Feedback Systems

NGOs – Non-Governmental Organizations

NSSF- National Social Security Fund

TAM- Technology Acceptance Model

TPB – Theory of Planned Behaviour

TRA – Theory of Reasoned Action

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter of the study presents an overview of the concepts of change, change management, information communication technology (ICT) project success, and state corporations. While many factors drive change in State Corporations, the adoption of technological advances through various ICT implementations is a dominant factor believed to play a key role in transformative change. In summary, the chapter discusses the background of the study, the problem statement, research objectives and research questions, scope, significance, and limitations of the study.

1.2 Background

We are operating in a constantly growing global business environment, where change has become the custom for organizations to achieve success and survival. Governmental and non-governmental organizations (NGOs) are constantly striving to align their activities with a changing environment (Ackoff, 2006; Al-Hadda & Kotnour, 2015). The rapid change in environment is characterized by expanding markets (Kotter, 1996; Kotter & Schlesinger, 2008), advancing technology, social insurgencies, new and evolving products, or services (Ford & Ford, 2010; Rafferty, Jimmieson, & Armenakis, 2013). Change in an organization is, therefore, important to attain and maintain a competitive advantage (Buchanan & Badhan, 2020).

Organizational change refers to any shift in organizational structures, management, employees, and even process (Armstrong, 2009). Besides, change management refers to the "systematic approach and use of knowledge, tools, and resources to deal with change" (Strategic Human Resource Management [SHRM], 2020). The idea of change management is to design and implement organizational strategies, systems, structures (Gartner, 2018), and even technologies that handle internal and external business environment conditions (Tsoukas & Chia, 2002; Benn, Edwards, & Williams, 2014).

The growing technological development has increased the focus on information communication technology (ICT) as one of the major organizational changes (Tarhini, Ammar, Tarhini, & Masa'deh, 2015). ICT refers to the integration of telecommunications, computers as well as other organizational software, storage, and

systems that allow people to access, store, transmit, and manipulate information (Heeks & Bailur, 2007). ICT project success, therefore, refers to the ability of the introduced ICT in meeting its objectives within budget, schedule, and scope (Ashurst & Hodges, 2010). To gain successful project outcomes in an organization, any change should focus on building capacity and achieving its intended objectives (Combe, 2014a; 2014b).

Globally, organizational change and implementation of ICT projects have become important features in the public sector (Chowdhury & Shil, 2017). For instance, out of 192 UN member states, 172 implemented key ICT projects successfully such as electronic government (e-Government) services (United Nations, 2008; Fitsilis, Anthopoulos, & Gerogiannis, 2009). African countries such as Senegal, South Africa, Egypt, Mozambique, and Kenya also appreciate the contribution of ICT projects to the government's agenda and the strategic plans (Bwalya, 2009). In Kenya, a recent survey indicates that most ICT projects by the government have been implemented by ministries as well as corporations that are focused on key sectors such as health, education, energy, and water (Kenya Institute for Public Policy Research and Analysis [KIPPRA], 2013; Communications Authority of Kenya, 2014).

Despite the degree of interest in change management, the study identifies that most studies have focused on organizational change management and performance (Ashurst & Hodges, 2010; Thomas, 2014; Melnyk, Bititci, Platts, Tobias, & Andersen, 2014) with few or no direct link to ICT projects success in State Corporations. In filling the gap, the study was underpinned on high-reliability organization theory, Kotter's change management model, and technology acceptance model (TAM). According to high-reliability organization theory, reliable organizations use diverse procedures, technology, and dynamic management systems in their operations which gives them an advantage over their competitors (Bourier, 2011). Kotter's eight-step model for change management envisions good strategy and vision among others as the change management processes (Kotter, 1996). Besides, TAM models how users come to accept and use technology in their respective organizations (Davis, 1989).

1.2.1 Change Management

To remain relevant in a constantly evolving business world, organizations oftentimes need to execute wide changes affecting not only their operations but also their people

(Kotter, 2014). In every business today, change is a necessity that organizations must deal with however difficult it is to implement and communicate. Scholars view and perceive change differently. According to Armstrong (2009), change refers to changes in organizational structures, management, employees, and even process. Regarding change management, several definitions have been given to elaborate on the context and concept in the organization.

As earlier indicated, change management refers to the "systematic approach and use of knowledge, tools, and resources to deal with change" (Strategic Human Resource Management [SHRM], 2020). Additionally, change management is a coordinated process of transition from one state to another through a series of actions that focus on promoting the acceptance and commitments of people in the organization (Thompson, 2007). Change management can also be described as the process, methodologies, and tools for managing the people-side of change to achieve the desired business results (Melbourne, 2003).

Following the definitions provided by various scholars, this study adopts the definition of change management as an ongoing organizational process for managing people and other related activities. Change management is an important part of an organization's survival and any organization that desires to implement change effectively should consider the transition from the present system to the desired or future system (Hortho, 2008). Managing change provides organizations with benefits such as quick response to consumer demands, flexibility and adaptation to changing environment, technical know-how in assessing the overall impact of change, and accurately designing contingency plans in anticipation of future challenges (Hortho, 2008; Revenio & Jalagat, 2015).

Change management focuses on critical factors such as structures and proactive approaches (Economic Intelligence Unit, 2010). The proactive approach includes communication, plan for the management and employees, and adequate training programs that align the vision of the employees and the change itself with the overall strategic vision of the organization (Strategic Human Resource Management [SHRM], 2020). The constantly changing business environment requires quick responses that only a leader can provide (van, Demerouti, & Bakker, 2013; Al-Hadda & Kotnour, 2015). Whilst failure to implement change in the organization may be attributed to

many factors, few of them are as critical as people's attitudes toward change, which represent employee change readiness (Bouckenooghe, 2010; Shea, Jacobs, Esserman, Bruce, & Weiner, 2014).

Organizational readiness for change describes change commitment and change efficacy to implement organizational change (Weiner, 2009). Readiness for change implies being psychologically and behaviourally prepared, and the willingness to implement change (Weiner, Amick, & Lee, 2008). Besides, in the context of the current study, implementation of ICT project success, change management may depend on other components. For instance, does the organization conduct frequent training programs? Do employees take the training on new practices seriously? And are training programs aligned to change objectives in the organization? For communication, does the management inform employees of the intended changes? Does the organization use a systematic approach in communication? And do they engage employees in decision-making? Lastly on feedback, does the organization use quality feedback to improve employee knowledge, the desire, and awareness for change?

These factors are essential for promoting joint culture, commitment, capacity, awareness (Elving, 2005; Magala, Frahm, & Brown, 2007), and frequent interaction that improves the knowledge of the people regarding change management processes in the organization (Combe, 2014b). However, a major challenge with change management processes is the assumption that everyone is on board with the changes about to be made. In the context of public institutions, when cynicism to change, power dynamics, and contextual considerations are underrated, it can lead to discord in the whole process of change management (Ford, Ford, & D'Amelio, 2008).

Available studies suggest that most of today's organizations seek change management to reduce costs and increase competitiveness or growth, rather than to increase efficiency and sustainability (Monahan, Murphy, & Johnson, 2016). Consequently, there is a need for more research to describe the change management process in the context of cultural and cross-functional teams (Piertse, Caniels, & Homan, 2012). This study sought to bridge the gap and categorically describe the role of change management on ICT project success in State Corporations in Kenya.

1.2.2 Information Communication Technology Project Success

ICT entails the integration of various telecommunication, computers, and other components of enterprise software for individual use such as access, storage, transmission, and manipulation of information (Ma & Liu, 2004). Over the last few years, the government of Kenya has initiated capital investment towards the set-up and implementation of ICT infrastructure. The emergence of ICT and e-Government is possible to improve efficiency and effectiveness of internal administration within the government institutions, and to move government services closer to the people (Gichoya, 2005). Also, ICT is perceived to be adequate in making the government more accountable and transparent about the internal processes and procurement, more open regarding citizen engagement in decision and policy-making, and friendlier in delivering customized services to the people (Heeks & Bailur, 2007; Kim, Pan, & Pan, 2007).

Despite representing major change management initiatives across the world, studies have shown ICT projects have a poor performing record mostly in the developing countries (Moseley 2013). An ICT project is successful when it meets its objectives under given constraints such as budget, schedule, and scope. Implementation of ICT project success requires top-level strategic planning through change management strategy since they differ from other project implementation in the government due to complexity regarding organizational size, corresponding resistance to change, and end-user perception and attitude (Janssen, van der Voort, & van Veenstra, 2015).

However, there are still questions from various scholars on the potential success factors of implementation of ICT projects. Available studies have focused on factors affecting the implementation of ICT or e-Government project success (Gichoya, 2005; Alsabawy, Cater-Steel, & Soar, 2016) and sustainability (Paulin, 2015). Factors such as government support, efficient project coordination, technology adoption and modernization, clear vision and strategy, relevant expertise, and donor support are critical factors that can contribute to the success or failure of project success (Cooke-Davies, 2002). In Bangladesh, findings revealed that state commitment, effective communication, change readiness, as well as support from key stakeholders such as public servants are among the factors affecting the implementation of ICT projects in public institutions (Hossain, Hasan, & Clement, 2012).

While the benefits of ICT project implementation cannot be disputed, there are several concerns about strategies that contribute to its success during the implementation process. Recent studies indicate that the successful implementation of projects requires adequate strategies that are linked to the general organization's vision and objectives (Gichoya, 2005). Despite management frameworks that emphasize the implementation of government projects (Anthopoulos, Reddick, Giannakidou, & Mavridis, 2016), few or no studies have directly addressed the role of change management on ICT project success in State Corporations in Kenya. Public institutions are full of political issues that may affect the implementation of ICT project success. Thus, it is critical to address change management through change readiness among the people, communication, training, feedback as critical components of change management that may play a significant role in ICT project success in State Corporations in Kenya.

1.2.3 State Corporations in Kenya

In Kenya "a State Corporation (SC) is a corporate body established under Section 3 of the State Corporations Act, Cap 446, or by an act of Parliament, or under the Companies Act, Cap 486 where the Government controls majority or all of the Shares" (Inspectorate of State Corporations, n.d). There are one hundred and thirty-six state corporations in Kenya, classified into eight major categories based on their mandate and core functions. All 136 state corporations are instituted by acts of parliament and governed by several acts including the State Corporations Act, Companies Act, the Public Finance Act 2017, and the Public Procurement Act. They are owned by the government and must adhere to all statutory requirements. The statutory governance requirements affect how all projects including ICT ones in these corporations are initiated, financed, managed, and implemented (Government of Kenya [GoK], 2019).

As part of the state efforts to adopt changing technological needs, the government has invested heavily in ICT adoption and usage in state corporations. The goal is to improve efficiency and productivity in all sectors of the economy. Presently, several state corporations have adopted ICT usage including the Kenya Pipeline Company, Kenya Ports Authority, and Kenya Power and Lighting Company (KPLC) among others. The use of ICT systems by KPLC is helping to transact business with customers to boost customer confidence and satisfaction (KPLC, 2006). ICT is being used in

different functions of the corporation including customer care, distribution functions, core operations, procurement, finance, and marketing.

The Huduma Centre Kenya Program is another example of a state corporation that is making use of ICT for efficient service delivery to Kenyans. The program has adopted various channels to meet the varied needs of Kenyan citizens in a one-stop environment. Notable though is the success of ICT usage in state corporations is still low as prominently seen in the Proceedings of the National Investment Conference of 2016. The government had to adopt a new legal framework whose aim was to eliminate the constraints that have hindered the successful implementation and adoption of ICT (Government of Kenya [GoK], 2019). Therefore, the current study addressed the constraints and hindrances of the successful implementation of ICT projects in State Corporations from the context of change management. Specifically, the study aimed to demonstrate the role of change management on ICT project success.

1.3 Problem Statement

Change management remains a powerful tool that organizations use to realign their structural approaches towards achieving transformation (Combe, 2014a). Change management gives organizations the benefits of flexibility and adaptation to the changing environment and technical know-how in assessing the overall impact of change (Hortho, 2008; Revenio & Jalagat, 2015). However, in the processes of change management and implementation, most organizations focus on the tactical and strategic initiatives, giving little or no attention to how the employees would react to such changes. Besides, the inability of most organizations to consider the behaviour of employees towards change may lead to project failure.

Change related to ICT implementations is not tangible therefore is not easy to communicate. Studies have shown that the success rate of ICT change initiatives organizations is less than 30 percent (Jacobs, van Witteloostuijin, & Christe-Zeyse, 2013). Notable, though, the success of ICT usage in state corporations is still low as prominently seen in the Proceedings of the National Investment Conference of 2016 (Government of Kenya [GoK], 2019). Previous studies have addressed factors affecting the successful implementation of ICT projects (Gichoya, 2005; Anthopoulos, Reddick, Giannakidou, & Mavridis, 2016).

There is increasing awareness and need to leverage ICT in all sectors including the public sector. However, the success rate of introduced ICT projects has remained dismally low (Hastie & Wojedoda, 2015). While studies have examined the causes of these failures (Gichoya, 2005; Fitsilis, Anthopoulos, & Gerogiannis, 2009), few have considered that the introduction of these ICT projects was a disruptor of normal business hence a change from the norm that required the application of effective change management principles. Consequently, few or no studies have looked into the relationship between change management and ICT project success in general and in in particular the public sector. This study views State Corporations as an important segment of the public sector, and Kenya as an example of an African country that has tried to leverage on ICT, both for reasons of convenience as well as to address the dearth of literature focused on African entities.

1.4 Research Objectives

The main objective of this study was to determine the role of change management on the implementation of ICT project success in State Corporations in Kenya.

1.4.1 Specific Objectives

i) To establish the role of change readiness on ICT project success in State Corporations in Kenya.
ii) To determine the role of communication on ICT project success in State Corporations in Kenya.
iii) To assess the role of employee training on ICT project success in State Corporations in Kenya.
iv) To establish the role of employee feedback on ICT project success in State Corporations in Kenya.

1.5 Research Questions

i) What is the role of change readiness on ICT project success in State Corporations in Kenya?
ii) What is the role of communication on ICT project success in State Corporations in Kenya?
iii) What is the role of employee training on ICT project success in State Corporations in Kenya?
iv) What is the role of employee feedback on ICT project success in State Corporations in Kenya?

1.6 Scope of the Study

This study sought to determine the role of change management on the success of ICT projects implemented in selected state corporations in Kenya. The units of study were state corporations. The study used a Scorecard to measure the effect of change management on ICT Projects success based on Change readiness, communication, training, and employee feedback.

1.7 Significance of the Study

The final findings of this study may be significant to various stakeholders and policymakers in Kenyan state corporations. The study may establish the obstacles of change management on the success of ICT projects in state corporations. As a result,

the study may be critical in helping stakeholders and policymakers in planning, designing, and implementing sound change management strategies that may help in the success of ICT projects implemented in state corporations.

The study may also be significant to practitioners in State corporations. It may help them adopt effective policy decisions and strategic plans that facilitate, sustain, and manage successful change in ICT leading to more effective and high-performing state corporations. Besides, effective change management may ensure proper utilization of state resources presently and in the future.

Furthermore, researchers, scholars, and students may find the study significant in identifying areas that need further study based on the findings. The study could also be used by researchers in future as reference material on similar or related topics. Besides, the findings may provide additional knowledge to existing state corporations on how they can adopt change and subsequently improve ICT projects implemented in small and large state corporations and attain competitiveness.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter of the study discusses the literature review. The discussion is based on the previous scholarly works related to the current study. A theoretical review is presented first, drawing attention to the theories related to change management and implementation or adoption of ICT. Subsequently, the chapter presents the empirical review of the study based on the results of previous studies related to change management and ICT project success. The chapter further provides a research gap, the conceptual framework upon which the research was based, operationalization of variables, and chapter summary.

2.2 Theoretical Review

In the field of change management, many theories attempt to describe change management practices and the implementation of organizational projects. In particular, this study adopted one theory and two management models to guide the objectives of the study. Specifically, the study reviews high-reliability organization theory, Kotter's change model, and the technology acceptance model.

2.2.1 High-Reliability Organization Theory

High-Reliability Organizations (HROs) are organizations that typically conduct their businesses in a challenging business environment where the consequences of business process failures are most likely (Baker, Day, & Salas, 2006; Hales & Satya, 2016). HROs engages in risky business activities characterized by complexity and uncertainty, but still achieves high levels of performance or safety (Enya, Pillay, & Dempsey, 2018). The concept of HROs theory was developed in the mid-1980s by Todd LaPorte and Berkeley of the University of California. The two researchers came up with the concept of HROs while researching why some organizations operate well in a highly risky environment and technologies with less or free failure than other organizations (Bourier, 2011).

According to the theory, reliability and consistency are key for the successful performance of any organization. The original studies on HROs focused on electricity industries (nuclear power), transportation (air traffic sector), and the healthcare sector

(Christianson, Stclife, Miller, & Iwashyna, 2011). In the change management process, reliability outcomes in the organization through very low failure are important (Issel, Michele, & Narasimha, 2007) just as expressed in HROs theory. Reliability is a key dimension of not only quality but also the successful implementation of the change process in the organization (Pillay, 2014). Since the introduction of HROs theory, other researchers (Wick et al 2008) took a step further in the HROs research and developed a new concept of collective mindfulness which reported five aspects of HROs implementation. Such aspects include a) (preoccupation with failure, b) reluctance to simplify operations, c) sensitivity to operations, d) commitment to resilience and e) deference to expertise (Weick, Sutcliffe, & Obstfeld, 2008; Hales & Satya, 2016).

Moreover, preoccupation focuses on preventing failure by discovering new ideas through training or learning or looking for new alternatives, reluctance to simplify operations promotes thoughtful considerations for unique changes or problems, and sensitivity operations recognize that a solution to one challenge may create another challenge, therefore, calls for communication. Commitment to resilience encourages the use of individual initiative to maintain process improvements through a readiness mindset whereas defence to expertise refers to using the highest level of recognized skills and knowledge in improving reliability through feedback in the organization (Hales & Satya, 2016).

However, in their study, the researchers (Weick, Sutcliffe, & Obstfeld, 2008) failed to illustrate the method of implementing the five aspects of HROs or how they improve reliability. Despite the critics, HROs have remained useful in management studies. For instance, previous findings illustrated that organizations that perform outstandingly well over time act cautiously on different levels (Stadler, 2011). Moreover, introducing the HROs theory into the organization processes advances awareness and knowledge that assist in handling the unexpected effectively, especially, through change. HROs operate at a high level of awareness, acknowledging what they do not know. This motivates them to narrow the gap, either by providing expertise, training, or learning experience that empowers them to perform with high reliability (Sutcliffe, 2011).

Since organizations operate in a dynamic and constantly changing business environment, there is a need for continuous improvement in the evaluation and development of critical skills, expertise, and competencies needed by the company to remain competitive, to sustain itself, if not to succeed in its business environment (Werner, 2012). Most state corporations provide critical services like electricity, air traffic control, and water, and they, therefore, must be consistent, reliable, and efficient as indicated in HROs. The theory illustrates how critical service providing state corporations have managed to cautiously but outstandingly perform their tasks in delivering their mandate to their citizenry.

This theory informs this study by highlighting preoccupation with failure, reluctance to simplify operations, sensitivity to operations, commitment to resilience, and difference to expertise. Therefore, during transitions such as implementation of ICT projects, the commitment to resilience, and difference to expertise lead to better awareness as they act as a buffer for minimizing resistance while enhancing effectiveness of the change process. Also, the theory explains how organizations that advance awareness and knowledge through training and skills acquisition are more likely to be efficient, reliable, and consistent in achieving change processes.

2.2.2 Kotter's Eight-Step Model

Kotter's Eight-Step Model is one of the eminent change management models first published in a 1995 article in the Harvard Business Review, and then later in a book titled "Leading Change" in 1996 (Kotter, 1995; 1996). Since then, the eight-step model has remained instantaneous success in the field of change management. The model is the mainstream strategy for leading change in the organizations as well as the most effective approach to achieving success while managing change (Burke, 2008). The model is considered a vision for the change process which describes a series of steps that are undertaken for the achievement of the desired changes in the organization (Mento, Jones, & Dirndorfer, 2002). Effective leadership is essential for successful change in organizations; be it government or NGOs. Therefore, leaders and managers have to learn how to involve their employees together to plan and execute change (Hussain, et al., 2015; Tang, 2019).

The first step of Kotter's Eight-Step Model is to establish a sense of urgency about the need to conduct and achieve change (Kotter, 1996). In the organization, employees

have different cultures, visions, and individual behaviour, thus, may form resistance to change. Individuals will not change if they cannot see the need to do so (Appelbaum, Hebashy, Malo, & Shafiq, 2012). A sense of urgency assists the organization leaders and managers to emphasize the need for change to prepare individuals psychologically. Studies have shown that a sense of urgency is essential to encourage change readiness, adoption, and institutionalization (Armenakis, Harris, & Feild, 1999). Moreover, other aspects supporting the need for urgency to changes were provided. For instance, the management must show the attractiveness of the change, confront employees with clear expectations, create a positive attitude, and show employees that change can be (Kotter & Cohen, 2002).

Step two of the model is to build a guiding team (Kotter, 1996) which is carried out through the engagement of employee representatives and their respective leaders to communicate the vision and serve as role models to educate, encourage, and provide feedback to other employees during the change process (Auguste, 2013). The objective of creating a guiding team is to position power with enough players on board, bring expertise, credibility, and leadership to drive the change process (Lines, 2007). Besides, previous findings established a positive relationship between position power and organizational change in the telecommunication firms (Lines, 2007).

Step three and four which are to create vision and strategy and communicate the change process to the organization respectively are achieved through the use of multiple communication channels such as reminders, face to face meetings, individual interviews, and electronic feedback in an attempt to demonstrate functionality and familiarity with the change process (Auguste, 2013). A well-defined vision for the change process is essential in breaking the status quo in the organization (Kotter, 1996; Whelan-Berry & Somerville, 2010). Step five is the removal of obstacles to enable actions since communication alone is never sufficient for change implementation. This stage is crucial as it emphasizes the importance of empowering or training employees to address four major obstacles which are structures, skills, systems, and supervisors (Kotter, 1996).

An analysis of employee empowerment reported that structure, supervisor attitudes, and training all play a significant role in getting employees ready for change (Klidas, van den Berg, & Wilderom, 2007). The pivotal role of training is, thus, important in

employee empowerment. The sixth step of Kotter's model is creating short-term wins. Short-term wins demonstrate that the effort towards change is paying-off and such wins help in bringing employees together towards attaining the change process in the organization (Kotter, 1995). Evidence suggests that leaders seeking to implement change should find evidence to show to their people and reinforce their desire and vision of the change process (Ford, Ford, & D'Amelio, 2008).

Step seven, maintaining the momentum (consolidate gains and produce more change) require leaders and managers to develop systems and structures that absorb emerging issues (Kotter, 1996). While leaders may be tempted to declare achievement to motivate employees, the organization must maintain the credibility of vision and strategy through measurable results (Appelbaum, Hebashy, Malo, & Shafiq, 2012). Continuous transformation of the organization requires sufficient based-momentum or initial plans and strategies that people find working to accumulate support for the change process (Jansen, 2004). Kotter's eighth step is incorporating change into the culture. Kotter argues that new behaviours are subject to degradation if not rooted in shared social norms and values once the change is achieved. Leaders, therefore, have the responsibility to show employees how the changes, behaviours, and attitudes have helped improve performance, and align the new management personalities with the new approach (Kotter, 1996).

Studies on Kotter's model found out organizations fail because they are unsuccessful in establishing a sense of urgency. It, therefore, becomes difficult to push people out of their comfort zone and come up with new practices and systems. The model is critical for explaining the concept of the current study. Leaders and managers need to have the right skills to implement change and see employees or people as also important stakeholders in the change management process. When employees feel involved in the decision making and change management process, their feedback brings the expertise necessary to drive change. Thus, the model resonates with the study as it emphasizes the effectiveness of communication strategy, sound vision, employee feedback, empowerment, or training in the implementation of changes such as ICT projects in the organization.

2.2.3 Technology Acceptance Model (TAM)

The technology acceptance model (TAM) is an information systems theory that models how users come to accept and use technology. The TAM was first theorized in 1989 describing the behaviour of an individual towards technology or a system (Davis, 1989). According to Davis, the TAM model tries to show the process in which an individual accepts to use a given technology. The model posits that when an individual is presented with new technology, various elements will influence their decision and how they will use it. In this model Davis, pivots on perceived usefulness and perceived ease of use as the cornerstone of determining attitude towards usage, intention to use, and actual usage. Using these elements, "perceived usefulness" describes how individuals are disposed to using the consumerization of IT to improve job performance while "perceived ease of use" describes whether the consumerization of IT is useful for the tasks being carried out (Davis, 1989; Adams, 1992).

Therefore, perceived usefulness is defined as *"*the degree to which a person believes that using a particular system would enhance his or her job performance" and perceived ease of use "as the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989). According to TAM, ease of use and perceived usefulness are the most important determinants of actual system use. These factors are influenced by external variables which may consist of social, cultural, and political factors. The TAM model has its roots in the Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB) (Fishbein & Ajzen, 1975; Ajzen, 1991). These theories show causal relationships from attitude to behaviour (Karahanna & Straub, 1999). In the same manner, perceived usefulness can be linked to both theories stated above with the subjective norms construct found in these theories.

However, when it comes to perceived ease of use, the TPB embodies perceived behavioural control (Taylor & Todd, 1995) whereas the TRA lacks a construct to illustrate the ease or difficulty of using new technology. The TAM model has been used widely by researchers worldwide with thousands of citations to date. Researchers who use this model credit its usefulness to the following characteristics. For instance, in an investigation on the applicability of Davis' TAM in the user acceptance of electronic collaboration technology, findings established that perceived usefulness of

the technology emerges as a positive impact on perceived usefulness in the organization (Dasgupta, Granger, & McGarry, 2002).

When organizations perceive technology as easy to use, the implementation process becomes faster in the organization. However, before the work of Davis, several studies indicated the significance of perceived ease of use and perceived usefulness in predicting a person's behaviour. In an exploratory study, results established that perceived usefulness provided reliable predictions for self-use of a decision model (Schultz & Slevin, 1975). Another in perceived ease of use and perceived usefulness in predicting behaviour suggested that in any given instance, the behaviour is best predicted by both perceived ease of use (self-efficacy) and perceived usefulness (outcome judgments) (Bandura, 1982).

Other studies have been carried out post-TAM to extend the model's concept (Venkatesh, 2000; Venkatesh & Davis, 2000; Lee, Kozar, & Larsen, 2003; Legris, Ingham, & Collerette, 2003; Ma & Liu, 2004; Burton-Jones & Hubona, 2006; Sharp, 2007). The objective of the TAM model is to illustrate how Information technology, or in this case, change management is adopted in businesses and organizations, cultural settings, and various professional degrees. Relating to the current study, this model provides the basis and drivers of new technology adoption by employees of an organization. The model informs this study by providing an assessment tool for the successful introduction of technology. For instance, research indicates that from the change models it can be argued that organizational change will be futile without the appropriate leadership, employee engagement and attitude, communication to, and commitment of individuals (Makumbe, 2016). The management of these four variables in the change management process plays a role in the implementation of new ideas in organizations.

In summary, HROs theory emphasizes awareness, communication, and knowledge which contributes to the organization's ability to cope with change, thus, contributes to the communication variable of the study. Kotter's model is very significant in describing the change process. Specifically, step one of the model – a sense of urgency – encourages change readiness another change management factor in the study. Step four – communication – emphasizes the need to articulate a well-defined strategy and vision to the people. The study also drew on step five – empowerment – to illustrate

how the variable training is significant in improving skills towards the change management process. Regarding the employee feedback variable, the study drew the concept of Kotter's sixth and seventh steps of creating short-term wins and communicating results (feedback) respectively. Lastly, the TAM model was significant in developing the user acceptance construct of ICT project success in the organization.

2.3 Empirical Review

This section of the study discusses available academic journals, articles, or books related to the change management and implementation of ICT project success. The section starts by discussing ICT project success factors followed by a literature discussion on the relationship between independent variables and dependent variables independently.

2.3.1 Information Communication Technology (ICT) Project Success

Advances in ICT as change management practices enhance the feasibility of information sharing across the organization. Several studies have been conducted on ICT success, utilization, performance, user satisfaction, and social influence among others. For instance, Yang and Maxwell (2011) did a synthesis review on factors influencing ICT at interpersonal, intra-organizational, and inter-organizational levels in the public sector. The authors argue that dividing factors into categories or levels helps to differentiate between the different stages in the process of ICT implementation in the organization. First, individual factors are critical to understanding the attitude of employees towards ICT adoption. Besides, departmental factors are significant in aligning different departmental objectives with the ICT strategic vision to the firm.

Kim, Jahng, and Lee (2007) conducted an empirical investigation into the utilization –based information technology success model integrating task performance and social influence perspective. The study employed the use of a synthesis review field study to evaluate and test the relationships using the structural equation model. From the critical empirical analysis, the study reported that there exist relations among information technology (IT) utilization, performance expectancy, social influence, and user satisfaction. Additionally, findings from the field study revealed that performance expectancy and user satisfaction are positively and significantly related to IT

utilization in the organization. The implication of this study, however, called for future research to consider other aspects in explaining the success of IT utilization in the organization.

In Brazil, another study focusing on the secondary section of an international school was conducted to identify factors that contribute to the successful integration of ICT across the curriculum (Mello, 2006). The study adopted a case study design focusing on one department to establish characteristics that contribute to uptake and development of the use of ICT in the school. Questionnaires and interviews were used to collect data for the study. The author found out that features most strongly associated with the success of ICT use in the department were positive attitude towards ICT from the teachers or staff and their willingness to learn and venture into new practices. However, the barriers were associated with hardware challenges. Therefore, there is a need for a similar study to understand ICT project success in Kenyan State corporations.

Subsequently, in another study on the implementation of the project of the Enterprise Resource Planning (ERP), Tarhini, Ammar, Tarhini, and Masa'deh (2015) analysed the critical success factors for ERP implementation from stakeholders' perspectives. The study focused on a systematic review of the literature on ERP before and after the implementation of the ERP project. 35 research articles published on critical success factors (CSFs) published between 2000 and 2013 were reviewed. Of the top CSFs identified, findings presented top management support and commitment, training and education, clear vision and objectives of the ERP project, careful change management, and communication as the most CSF factors to the successful implementation of ERP projects in the organization. However, the study was not undertaken from the context of public institutions.

A review of the available literature provides different success factors of ICT projects in the organization. However, there is a limitation in terms of the approach of the studies. For instance, the studies did not approach the implementation of ICT project success from the change management approach. A gap that the current study sought to fill and provide additional literature on the role of change management on ICT project success in State Corporations. The remaining areas of the section of the chapter

provide an empirical review of the relationship between change management constructs and ICT project success.

2.3.2 Change Readiness and ICT Project Success

Available studies refer to organizational readiness as people's change efficacy and commitment to implement organizational changes (Weiner, Lewis, & Linnan, 2009). Previous studies suggested that change readiness requires the commitment of employees as a shared vision and resolve to develop effective actions for change implementation (Bandura, 1997). In the organization, people can commit to achieving change because they want or value the change, or because they have to implement the change as a result of market demand. Thus, management must promote a collective change efficacy which is peoples' shared beliefs and norms in building collective capabilities to implement changes (Herscovitch & Meyer, 2002). Werner (2009) concluded that commitment, self-belief, organizational capacity in terms of resources, and reward systems are important determinants of organizational readiness to change implementation.

Keramati, Afshari-Mofrad, and Kamrani (2011) assessed the role of readiness factors in e-learning outcomes using high school teachers in Tehran. Readiness factors adopted in the study were technical, organizational, and social. The study used questionnaire tools to collect data from 96 respondents using technology-based educating. Findings from the hierarchical regression analysis showed that organizational readiness factors significantly affect e-learning outcomes. Specifically, the study established that teacher's motivation and training are an important factor in employee readiness for change in e-learning in the school. While the findings of this study are significant, there is a need for a similar study in Kenya to demonstrate the role of change readiness on ICT project success in State Corporations.

Additionally, Abdel-Ghany (2014) researched readiness for change, change beliefs, and resistance to change on personnel mobile extension in the New Valley Governorate. The study developed questionnaires and data was collected from 103 sampled personnel. From the three scales developed in the study, findings revealed that respondents are ready for implementing the mobile extension project, they have the adherent beliefs for the initiatives, and they support the change process. Moreover, the study established that for organizations to achieve their change process and to

improve employee readiness for change, they must understand that respondents (employees) change their beliefs around what they perceive about the change. The change in belief causes changes in behaviour to either support or resist the change process. Therefore, a similar study is needed to explore change readiness in the Kenyan State Corporations.

A descriptive survey conducted by Khan, Ossain, Hassan, and Clement (2012) to examine barriers to the implementation of projects by state corporations involved in the education in developing countries with a focus on Bangladesh, established that change-readiness to the implementation of ICT projects by state corporations is important in the creation and implementation of ICT projects. Particularly, the study reported that effective implementation of ICT in education needs commitment from the government and all other stakeholders. Also, resources are very important as they indicate the organizations' capability in terms of readiness for change implementation. The belief of teachers in terms of using computers in the classroom should be high, as this indicates their willingness to learn, use, and implement ICT projects.

In Tanzania, Madinda (2014) evaluated challenges facing change management in the Public Sector and found out factors such as e-readiness, globalization, new policies, legislations, and economic problems, and political changes. The author stresses that the implementation of changes in the government have failed over the years due to lack of enough information and structure, and any government employees were ignorant of their roles in supporting change. Besides, Brown 2003 found that recently the public sector has employed various corporate change strategies, however, there is little change since the management failed to emphasize organizational readiness when implementing change.

A study by Zablon (2014) examined strategic change management practices by the Kenya Prisons Service (KPS), the findings of the study revealed that the Kenya Prisons Service did not have challenges in the implementation of (ICT) projects which could be attributed to change readiness at the institution. The study also indicated the existence of leadership commitment to change or stakeholders not being adequately involved and informed in the change process. Additionally, there was minimal resistance to change among the staff. The study further established that a major success of the strategic change management particularly in the implementation of ICT

projects by the Kenya Prisons Service was the increased efficiency in management, improved prisons staff and prisoners' welfare, the introduction of recreation activities for prisoners, and a shift from punitive to rehabilitative prison management.

2.3.3 Communication and ICT Project Success

Deetz and Eger (2014) define communication as a way of developing relationships and interacting with internal organizational members as well as the general public. In a study conducted by Monga (2008) in India to examine how communication influences the success of e-government projects, it was established that communication is a critical determinant of the success of any ICT project in public institutions. The study revealed that the major obstacle to effective communication during the implementation of ICT projects in the public sector includes lack of a clear communication plan for ICT projects, communication interruptions, and any leadership or management changes in the public sector organization.

According to Khanyile, Musonda, and Agumba (2019), communication management is an imperative factor associated with efficiency in construction projects. After determining the projects in Eswatini in Swaziland experiences poor project delivery associated with poor communication management practices, the authors conducted a study to elucidate communication management practices informed by local culture and connecting it to project outcome. Using a questionnaire survey, data were collected from 66 respondents and analyzed using principal factoring analysis. The analysis established nine practices namely; ICT, communications skills and competence, communication management plan, teamwork, and clear channels within the organization's structure.

Rajhans (2018) argue that efficient relationship management is an essential requirement for any successful project based-organization. In a study to establish how effective communication management can serve as a tool to systematically manage stakeholder relationship management in project-based organizations, Rajhans found out that effective communication management is significant for the management of stakeholder relationships as well as successful project implementation. The study was conducted using a questionnaire survey and structured interviews with 25 industry professionals who had more than 10 years' experience in project-based roles such as

ICT, construction, and power among others. However, the limitation of the study was that it was carried with a small sample size hence the need for a larger sample size.

In South Africa, Zulch (2014) studied the impact of the construction manager's communication skills on the success of areas in construction project management. Questionnaires were developed and circulated focusing on the importance of communication skills of project managers. Findings reported that communication skills is an important area of project success and is a mean to attain the deliverable objectives even with the limited resources for the implementation process. The study concluded that a good project manager should develop communication skills such as the ability to ask questions, listen to the people, provide positive reinforcement or feedback, explain change processes effectively, be able to negotiate, and can manage conflict during the change process to achieve project success.

Aljohani (2016) confirms that communication can be the key to the development and implementation of change initiatives especially the implementation of ICT projects. The sharing of information is an important function of communication of change. Any transition can only be effective if workers are inspired to change and willing to accept the vision offered by the leadership of the company. If the management has effective communication put in place, then the implementation of ICT projects will be highly successful. Makumbe (2016) found out communication is important during the change management process. Leadership must clarify why changes are necessary before the change is introduced and must deal with the benefits and costs of change.

2.3.4 Training and ICT Project Success

Organizational training entails the process of developing capacity within an organization to support the strategic organizational objectives and meet the common tactical capacity building needs across support groups and projects (Chadwick, 2006). A qualitative study conducted by Meijer (2007) examining the role of ICT in public administration in Senegal established a strong correlation between the success of ICT projects implemented by government institutions and the training of personnel. It was established that in government organizations where the staff has a low level of technical skills, the implementation of the ICT projects is usually challenged. This usually forces some government agencies to exclusively outsource technical services that the employees cannot undertake.

Incorporating Bowen and Lawler's conceptualization of employee empowerment as a multifaceted management approach, Fernandez and Moldogaziev (2013) explored how different empowerment practices can be applied to encourage employees to seek out new and better ways of doing activities in the US federal government. According to the authors, employee empowerment programs have been widely implemented in the public sector as a way to enhance performance. Empowerment as a form of training improves employee skills largely by establishing innovative ways of correcting errors in service delivery and redesigning the work process as change management practices.

In a hospital setting study, Pantaleoni, Stevens, Mailes, Goad, and Longhurst (2015) discussed a successful training program for large scale electronic medical record (EMR) implementation in Stanford Children's Hospital. The authors argue that end-user training is an essential element of EMR that can determine the success or failure of EMR implementation. Evaluations of classroom training of physicians showed that respondents are highly satisfied with the program as it assists them to obtain skills necessary for the implementation as well as the objective of successful implementation of EMR in the hospital. Training improves feedback, encourages engagement, design processes, proficiency, and recognition for EMR training programs. This study, therefore, sought to further elaborate on how training can be essential in ICT project success in State Corporations.

The findings of a descriptive study conducted by Akinyi and Moturi (2015) to examine the application of IS-Balanced Scorecard in Performance Measurement of e-Government Services in Kenya also established that most elements of IT projects in state corporations are reliant on the training of key employees involved in the implementation of such projects. The study further revealed that the success of ICT projects in public sector organizations can only be achieved if ICT project managers are effectively trained to lead the project and provide strategic planning. As noted by Chadwick (2006), ICT projects implemented by government agencies need both administrative and technical efforts to be successful

2.3.5 Employee Feedback and ICT Project Success

Feedback is a widely recognized method of providing performance data responses to help individuals translate knowledge into practice (Ivers, et al., 2012). Results have shown that feedback is effective in helping employees change their behavior than

traditional models of professional development (Mansouri & Lockyer, 2007). However, the effectiveness of employee feedback is variable. Cooke, et al., (2018) extended their previous work on audit and feedback and investigated a qualitative analysis on feedback interventions through social interactions on implementation of the Physician Learning Program in Alberta. The study included a comparative analysis of the six audit and group feedback projects. Findings revealed that feedback sessions in an organization are dynamic when there exist actionable questions, facilitation, easy interpretation data visualization reports, and team programs. Moreover, feedback encourages sharing and comparing practices and raising change cures like the declaration of commitments towards planning and project implementation.

In a multistage qualitative study in the United Kingdom, Joan, et al., (2015) sought to develop and conduct feasibility testing of an evidence-based informed model for facilitating performance feedback for physicians to improve their acceptance and use of the feedback in the organization. The primary data for the study were analyzed using content and thematic analysis. Findings showed that a good feedback model in an organization builds relationship, explore reactions, explore contents, and coaching for performance change. Thus, the study findings enhance employee's engagement with, acceptance of, and productive use of feedback in facilitating change in the organization. As a result, the current study sought to extend the research in determining the role of employee feedback on ICT project success in State Corporations.

According to Noble, et al., (2020), constant feedback is vital to building and sustaining success systems, especially in the health sector. Positive feedback encourages communication, collaboration, and personal employee/employer growth, which enhances organizational commitment towards change processes. Moreover, continuous feedback provides opportunities for personal and professional development by uncovering knowledge gaps, customer care, and technological understanding. The study focused on the impact of data feedback on continuous quality improvement projects in Rwanda using mixed methods analysis with a 40-question survey from healthcare workers. The qualitative study was based on motivation theory and grounded theory (Noble, et al., 2020).

Lyon, Pullmann, Whitaker, Wasse, and McCauley (2019) conducted a pilot study to evaluate the impact of digital measurement feedback systems (MFS) and brief consultation supports on the facilitation of measurement-based care (MBC) uptake and sustainability among mental health clinicians in the education sector. MBC is regarded as the most common mental health service delivery setting for the youth. Once the initial training on MBC was completed, 14 clinicians were selected to participate in the study either as supports or control. For individuals who participated in the training of MBC (baseline), they demonstrated a rapid increase in both MBC practices such as attitudes, skills, and ease of use, whereas the control group (those who did not participate in the training) did not significantly change. For the participants trained on MBC practices, they reported the effectiveness of MFS in administration roles.

Table 2.1 Research Gaps Summary Table

Variables	Author(s)	Topic	Findings	Gaps	How the study filled the gap
ICT project success	(Yang & Maxwell, 2011)	Synthesis review on factors influencing ICT in the public sector	Dividing factors into interpersonal, intra-organization and inter-organizational stages are critical to understanding employee behavior	Was not examined in the public sector in Kenya	Aimed to describe how these factors influence ICT project success in the Kenyan public sector context.
	(Kim, Jahng, & Lee, 2007)	An empirical investigation into the utilization-based IT success model integrating task performance and social influence perspective	There exist relations among IT utilization, performance expectancy, social influence, and user satisfaction	The study called for future research to consider other aspects in explaining IT success	The study proposes other aspects explaining the success of IT utilization in the organization
	(Mello, 2006)	Factors contributing to the successful integration of ICT	Features associated with ICT success are positive attitude towards ICT and willingness to learn	The study was conducted in Brazil among teachers	The further aimed to explore these factors in the context of Kenyan state Corporations
	(Tarhini, Ammar, Tarhini, & Masa'deh, 2015)	Critical success factors for ERP implementation from stakeholders' perspectives	The study found out top management support and commitment, training and education, clear vision, communication, and careful change management as the most CSFs	The study focused on private sector organizations	This study proposed to explore these factors in the context of public sector organizations
Change readiness	(Keramati, Afshari-Mofrad, & Kamrani, 2011)	Role of change readiness factors in e-learning outcomes using high school teachers in Tehran	Teacher's motivation and training are important factors	The study focused on high school teachers in Tehran	This study conducted a similar study focusing on State Corporations
	(Abdel-Ghany, 2014)	Readiness for change, change beliefs, and resistance to change on personnel mobile extension in the New Valley Governorate	For organizations to achieve their change process and improve employee readiness for change, they must understand that employees change their beliefs around what they perceive about the change	The study did not directly address change readiness on ICT project success	The study sought to demonstrate the role of change readiness on ICT project in the public sector
	(Khan, Ossain, Hassan, & Clement, 2012)	Barriers to the implementation of projects by State	Change readiness (commitment) and resources are important	Was examined in Bangladesh with only	The current study focuses on illustrating how change

Variables	Author(s)	Topic	Findings	Gaps	How the study filled the gap
		Corporations in the education sector in Bangladesh	factors for project implementation	focus on the education sector	readiness enhance ICT project success in Kenyan State Corporations
	(Zablon, 2014)	Strategic change management practices by the Kenya prisons service	There exist leadership and commitment towards change implementation	The study, however, did not directly focus on ICT project success	The study focuses on the role of change readiness on ICT projects success
Communication	(Monga, 2008)	Examined how communication influences the success of e-government projects	Communication is a critical determinant of the success of any ICT project in public institutions	Was not carried out in Kenya	Focuses on demonstrating the role of communication on ICT project success in Kenya
	(Khanyile, Musinda, & Agumba, 2019)	Communication management practices informed by local culture and connecting it to project outcome	Communication skills, plans, and teamwork as well as clear channels are important for project success	The study focused on construction projects	The study aimed to provide additional literature on the role of communication on ICT project success
	(Rajhans, 2018)	How effective communication management can serve as a tool for managing stakeholder relationship in project-based organizations	Communication improves relationship	The study focused on relationship management and not project success	Filled the gap by focusing on communication and ICT project success
	(Zulch, 2014)	Impact of construction manager's communication skills on the success of project management	Communication is an important area of project success and a mean to attaining deliverable objectives	The study focused on construction projects in South Africa	Focuses on ICT project success in State Corporations in Kenya
Employee training	(Meijer, 2007)	Role of ICT in public administration in Senegal	There is a strong correlation between ICT project implementation and personnel training	Focused on ICT projects in Senegal	Sought to understand how employee training enhances ICT projects in State Corporations in Kenya
	(Fernandez & Moldogaziev, 2013)	How different empowerment practices can be applied to encourage employees to seek out new and better ways of doing activities in the US government	Empowerment as a form of employee training improves skills through establishing innovative ways of redesigning work processes	The study, however, did not solely focus on ICT project success	The current study, therefore, focused on employee training and ICT project success in Kenya
	(Pantaleoni, Mailes, Goad, & Longhurst, 2015)	Successful training program for large scale EMR	End-user training is an essential element of EMR that can determine its success	The study solely focused on hospital settings	The study focused on other State Corporations

Variables	Author(s)	Topic	Findings	Gaps	How the study filled the gap
		implementation in Stanford Children's hospital			
	(Akinyi & Moturi, 2015)	Examined application of IS-Balanced Scorecard in performance measurement of e-government services in Kenya	Most ICT projects success in government are reliant on employee training	The study, however, did not directly link training to the success of ICT projects.	This study emphasized the role of employee training on ICT project success in State Corporations
Employee feedback	(Cooke, et al., 2018)	Qualitative analysis of feedback interventions through social interactions on the implementation of the Physician Learning Program in Alberta	Feedback sessions are dynamic as they encourage sharing and raising change cures like a declaration of commitment	The study adopted a qualitative method only	This study, however, focused on the quantitative aspect of feedback and ICT project success in State Corporations in Kenya
	(Joan, et al., 2015)	Feasibility testing of an evidence-based informed model for facilitating performance feedback for physicians in the organization	Good feedback builds relationships which enhances engagement among employees	The study was carried out in the context of a health setting using qualitative analysis.	The study extended the research in determining the role of employee feedback on ICT project success in Kenyan State Corporations
	(Noble, et al., 2020)	Impact of data feedback on continuous quality improvement projects in Rwanda	Positive feedback encourages communication and collaboration which enhances commitment towards change processes	The study was conducted in the health sector	This study focused on extending the research on the role of employee feedback on ICT project on other sectors of the State Corporations in Kenya
	(Lyon, Pullmann, Whitaker, Wasse, & McCauley, 2019)	Evaluated the impact of digital MFS and brief consultation supports on the facilitation of MBC uptake among clinicians	Participation and engagement through feedback in the organization increases attitudes, skills, and ease of use of new systems	The study, however, did not focus on other State Corporations	This study, therefore, focused on employee feedback and ICT project success in Kenya State Corporations.

Source: (*Researcher, 2020*)

2.5 Conceptual Framework

The literature reviewed formed a background for the creation of a conceptual framework that guided the research as highlighted in Figure 2.1. The independent variables are the change management processes which include the Change readiness, communication, employee training, and employee feedback while the dependant variable was the ICT project success.

Independent Variables (IV) **Dependent Variable (DV)**

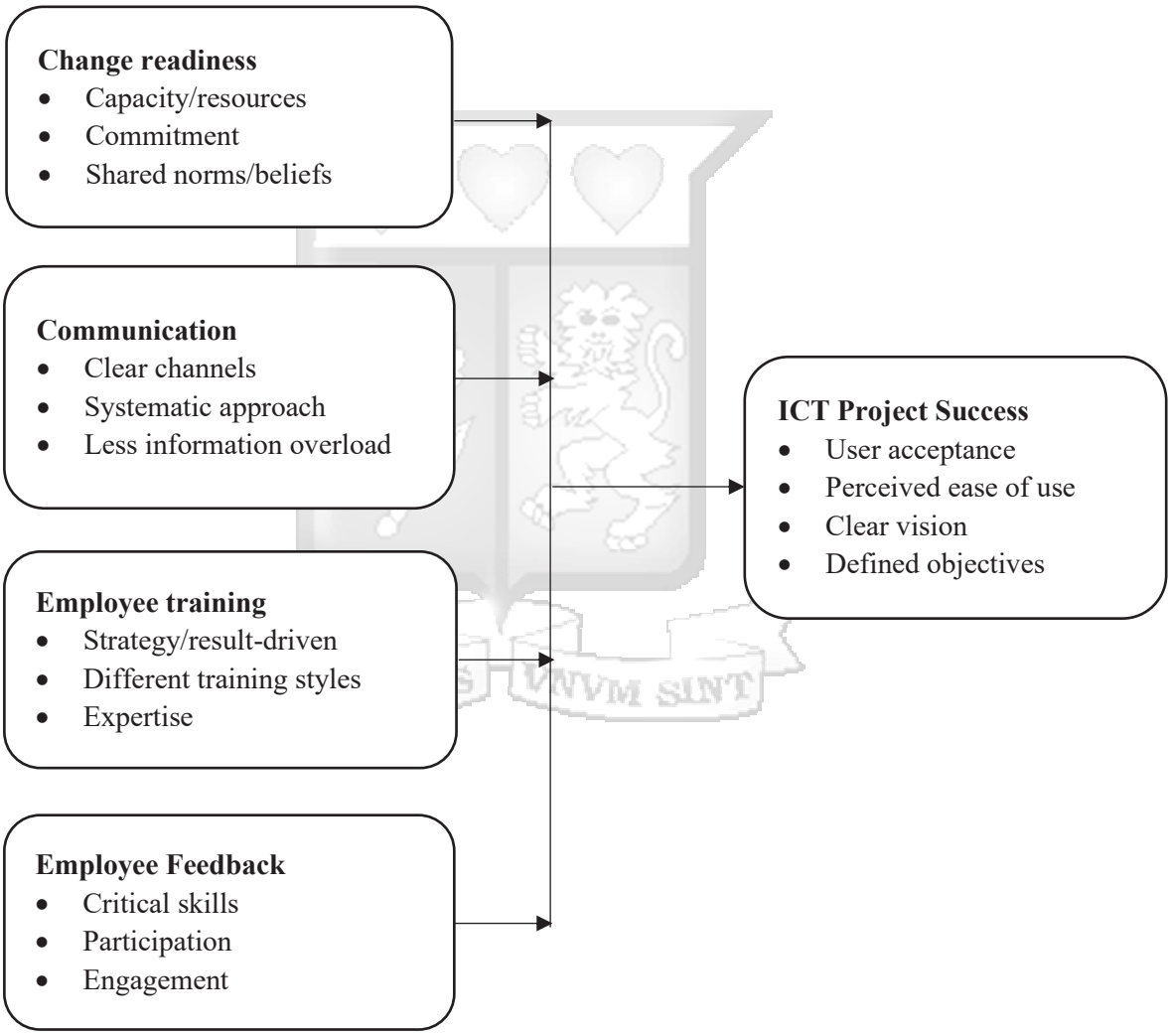

Figure 2.1 Conceptual Framework (*Researcher, 2020*)

2.6 Operationalization of Variables

After critical theoretical and empirical review of the literature, the study identified concepts related to change management and ICT project success. Specifically, the study hypothesizes that change management through change readiness,

communication, employee training, and employee feedback have a role on ICT project success in State Corporations. The study developed measurements by changing indicators in the conceptual framework into research questions/statements. The study developed a measurement scale – Likert-scale of 1 – 5 where (1-Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree, and 5-Strongly Disagree). The operationalization of the study was listed in table 2.2.

Table 2.2 Operationalization of Variables

Variables	Theory	Measurement	Rating Scale	Analysis	Author(s)
Change readiness	HROs	We have resource capacity. We are committed to change. We have shared norms/beliefs.	Likert	Descriptive & Inferential	Baker, et al., (2006) Keramati, et al., (2011) Sutcliffe (2011)
Communication	Kotter's Eight-Step	We have clear channels of communication. There are systematic approaches to communication. There is less information overload.	Likert	Descriptive & Inferential	Whelan-Berry & Somervill (2010) Auguste (2013) Zulch (2014)
Employee Training	Kotter's Eight-Step	Training is change-driven. We have different training styles. Training is linked to developing expertise.	Likert	Descriptive & Inferential	Klidas, et al., (2007) Meijer (2007) Akinyi & Moturi (2015)
Employee Feedback	Kotter's Eight-Step	We have participation sessions. There is frequent engagement. Quality feedback increases critical skills.	Likert	Descriptive & Inferential	Ford, et al., (2010) Joan, et al., (2015) Cooke, et al., (2018)
ICT Project Success	TAM	ICT is user acceptance. There is perceived ease of use. The project has a clear vision. The project has defined objectives.	Likert	Descriptive & Inferential	Davis (1989) Venkatesh (2000) Yang & Maxwell (2011)

Source: (*Researcher, 2020*)

2.7 Chapter Summary

This chapter reviewed the literature related to the study. Specifically, the chapter focused on available academic journals, articles, and books discussing change management practices and ICT project success. The chapter started by describing theories and models explaining the concept of the study. HROs theory formed the basis for developing the constructs of change readiness as the first study variable. Kotter's Eight-Step Model formed the basis for developing measurements or indicators for communication, employee training, and employee feedback variables. The chapter also discusses TAM and related it to the ICT project success variable of the study. Thereafter, the chapter discussed the empirical literature of the study based on each independent variable. The goal was to demonstrate the existing relationship between the proposed conceptual frameworks of the study to identify the research knowledge gap. In summary, the chapter discussed the theoretical review, empirical review, research gaps, conceptual framework, and operationalization of study variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used to conduct the study to achieve the research objectives. Specifically, the chapter details the research design adopted in the study, the target population, the sample and sampling procedures, data collection methods and procedures, the research quality both reliability and validity of the study, data analysis technique, and ethical considerations.

3.2 Research Design

Research design acts as the plan for the collection, measurement, and analysis of data. Research designs provide a template that a study uses to outline the objectives, the type of data needed, the tools and procedure of collecting data, and the data analysis techniques and processes. The advantage of a good research design is that it directs how the study was undertaken, who were the participants involved, what were the tools of data collection, and how was the data collected. This study first adopted a positivist philosophy. This is where the researcher remains neutral and detached from research data to avoid influencing the research findings by collecting measurable and quantifiable data (Saunders, Lewis, & Thornhill, 2007).

Moreover, from the descriptions given, the study adopted a descriptive research design as the most effective quantitative research approach for the study. Descriptive research has been used in various academic studies and as the most appropriate quantitative research approach (Saunders, Lewis, & Thornhill, 2007), it provides detailed information in natural settings without external influence. Besides, descriptive design is also appropriate in describing causal relationships. Therefore, the advantage of adopting a descriptive design for the study was its ability to minimize errors and enhance the reliability of the research findings.

3.3 Population and Sampling

3.3.1 Target Population

In a research study, a population refers to the entire observation, objects, or persons that the researcher targets to help in giving accurate information for answering the research questions. A good research population has similar traits for easy accessibility

and reliability of data for the study (Sekaran & Bougie, 2016). This study focused on State Corporations in Kenya. Therefore, the target population (respondents) for the study were employees of Kenyan State Corporations. From the available data, there are 136 State Corporations in Kenya (Appendix 4). This formed the unit of analysis.

To effectively ensure that the population was appropriate for the study, the study developed inclusion and exclusion criteria for the unit of analysis. To be included in the research, the target population had to meet three critical conditions: one, only State Corporations that have implemented ICT projects in the last 3 – 6 years were included in the study. Therefore, all other State Corporations that have implemented ICT projects in the last 1 year or have not implemented ICT projects at all were excluded from the study.

Two, only employees from finance and ICT departments were included in the study. Finance people were allowed as they directly participate in the procurement of ICT services and payment processes whereas ICT department people were included because they drive technology adoption. The third and final criteria saw only employees who have been in the organization for more than 2 years and witnessed the implementation of ICT projects allowed to participate in the study. As such, the study respondents were drawn from the finance and ICT departments.

3.3.2 Sampling Technique and Sampling Size

Sampling design is a process by which a researcher selects elements from a given population and uses the selected elements to conclude the research phenomenon. Samples should be representative of the target population. A good sample of the study should have similar characteristics as the target population to enable easy research findings generalization and eliminate unbiased sample statistics (Kothari, 2012). This study focuses on Kenyan State Corporations and their employees as the participants.

The study uses both non-probability sampling and scientific sampling, and probability sampling techniques. In non-probability sampling techniques, a purposive sampling method was used to select State Corporations that met the criteria for inclusion in the study: organizations that have implemented ICT projects in the last 3 – 6 years. The advantage of a purposive sampling method is that it provides the ability to choose a sample of a study that meets the criteria set by the researcher (Cooper & Schindler,

2011). Therefore, from the available 136 State Corporations, 14 State Corporations were purposively chosen to participate in the study, having met the inclusion criteria (Table 3.1).

The study also used a purposive non-probability sampling method to draw the respondents of the study from the two departments based on the third criteria: having been in the organizations for more than 2 years and witnessed the implementation of the ICT projects. Based on these criteria and the purposive sampling method, the study established a total of 371 target participants (Table 3.1).

Table 3.1 Sample Size

	State Corporation	Finance and ICT Departments total population(N)	Sample Size %	Sample Size
1	Kenya Pipeline Company (KPC),	38	0.55	21
2	Kenya Power	44	0.55	24
3	Kenya Electricity Generation Company (KenGen)	38	0.55	21
4	Kenya Revenue Authority (KRA)	49	0.55	27
5	Kenya Ports Authority (KPA)	33	0.55	18
6	National Social Security Fund (NSSF)	35	0.55	20
7	KEMRI	16	0.55	9
8	NACOSTI	14	0.55	8
9	KERRA	13	0.55	7
10	National Cereals and Produce Board	19	0.55	10
11	HCDA	17	0.55	9
12	Kenya Bureau of Standards (KEBS)	22	0.55	12
13	National Oil Corporation of Kenya (NOCK)	21	0.55	12
14	ICT Authority	12	0.55	7
Target Population		371		
Sample Size				**205**

Source: State Corporation Data Records; (*Researcher, 2020*)

Thereafter, the study adopted Slovin's (1960) scientific sampling formulae, $\boldsymbol{n = N/(1 + Ne^2)}$ to determine the sample size of the study, where; n is the sample size, N is the target population, and e is the error margin (5%). The study adopted this sampling as it has been widely used in other management academic studies (Putra & Welly, 2015).

$$n = 371(1 + 371 \times 0.05^2) = 205$$

Therefore, the sample size of the study was 205 respondents (Table 3.1). Finally, the study adopted a stratified probability sampling method that gives each State Corporations included in the study an equal chance of representation.

3.4 Data Collection Techniques and Procedures

Data collection techniques are tools designed to aid in gathering data from the research field. This study uses primary quantitative data which were collected from State Corporations in Kenya. The sampled employees from the organizations formed the unit of analysis. There are so many modes of data collection such as interviews, desk reviews, and questionnaires. However, for this study, the most appropriate tool for data collection was a questionnaire. The benefit of using a questionnaire as a data collection tool is the ability to obtain first-hand information about the problem under examination. As a result, this study used structured questionnaires. Structured questionnaires are designed data collection tools with predetermined research questions that only require the response of the participants. The structured questionnaires were designed using the Likert-scale technique on a scale of 1-5 where 1 – Strongly agree, 2 – Agree, 3 – Neutral, 4 – Disagree, and 5 – Strongly Disagree. This enabled participants to easily respond to structured questionnaire questions easily.

In designing the questionnaire questions, the researcher first read the literature of the study and grasps the key best management practices regarding each study variable. The researcher then applied personal knowledge guided by the literature concept to derive research questions under each study variable as shown in sections B and C of the questionnaire tool. Also, structured questionnaires not only reduce the amount of time taken to fill one questionnaire but also encourages a high level of reliability of the data collection tool.

Besides, the data collection procedure is the process that the study used to collect data from the research respondents. The study adopted a self-administered questionnaire for the data collection procedure. To gather truthful and consistent information and due to the size of the State Corporations, the study sought help from two research assistants. The first strategy involved training the assistants on effective communication skills. The researcher then took them through the questionnaire tool

contents clearly describing research questions under each study variable. This strategy aimed to make research assistants aware of the goal of the study and to develop general skills of responding to basic questions from the respondents. Once the strategies were met, the researcher together with the research assistants proceeded to the field of the study where they dropped the questionnaires to the purposively sampled respondents across the organizations. Respondents were given ample time of 10 days to read, internalize, and respondents to the research questions. Thereafter, the researcher and the research assistants picked the filled questionnaires for analysis.

3.5 Data Analysis and Presentations

Data analysis consisted of coding, extraction, analysis, and presentation of the research findings. The study first obtained data through questionnaires, verified them to establish the extent of accuracy, and transferred them into excel, then statistical software for analysis and presentations. Two techniques were used for analysis; descriptive and inferential analysis. The descriptive analysis involved statistical processes used to describe the population of the study. It entailed measures of central tendency like mean, frequency, and frequency percentages. The objective of the descriptive analysis was to establish the general feelings of the participants on their degree of agreement with several construct measurements in the study.

The study then moved to inferential analysis to establish the relationship between proposed variables in the conceptual framework of the study. That is the independent variables and the dependent variable. The study adopted correlation and regression analysis, intended to establish a causal relationship. Each independent study variable controlled for each other with an error term where the dependent variable was presented as an arrangement of predictor variables and the unknown parameters projected using observed coefficient values of the predictor variables of the study. The study utilized simple linear regression to model the relationship between predictor variables and dependent variables by fitting a linear equation of the observed coefficient values.

The study adopted the linear regression model due to its ability to make the estimation procedure simple and easy to interpret and to estimate the combined weighted average of the independent variables. Moreover, the linear regression model has been widely used in different academic field research (Putra & Welly, 2015).

Statistical Package for Social Sciences (SPSS) version 25.0 was used to carry out the analysis. The study further relied on this statistical software for analysis due to its ability to provide accurate results and being the most recommended software analysis in academic research. ICT project success in Kenyan State Corporations (Y) was regressed against four (4) variables; change readiness (X_1), communication (X_2), employee training (X_3), and employee feedback ($_4$). The four variables represented change management practices as the independent variables of the study. In the proposed equation, β_0 was the coefficient of intercept, $\beta_1 - \beta_n$ represented the regression coefficients for the predictor variables, while ε was the error term.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

The model was estimated at a 95% confidence interval and a 5% level of significance. The coefficient of determination (R^2) measured the overall correlation of the study variables. F-test estimated from the Analysis of Variance (ANOVA) indicated the goodness of fit of the model. The significance value or p-value from the regression coefficients output was used to accept or reject the hypotheses of the study (Neuman, 2013).

3.6 Research Quality

The study conducted a research quality to address the validity and reliability of the study. A pilot study was first undertaken before the questionnaires were administered to the respondents in their various State Corporations. The strategy was to minimize errors and to detect weaknesses in the questionnaire tool. Scholars argue that a good pilot study should include at most 10% of the unit of analysis. Thus, 10 participants representing 5% of the sample size participated in the study. The population included in the pilot study did not form the actual research participants. The study used a purposive method to include participants in the pilot study from other departments and not finance or ICT. The outcome from the pilot study was used to enhance the contents of the research questions, and make the questionnaire valid and reliable.

3.6.1 Reliability of Research Instrument

Reliability refers to the degree to which a designed tool of data collection is consistent in providing similar results when used repeatedly. It refers to the consistency of the research instrument. There various types of reliability in a study; test-retest reliability,

internal consistency, and inter-rater reliability (Crowther & Lancaster, 2012). Test-rest reliability is a measure of consistency where the design data collection tool is used on a group of individuals at one time, using it again on the same group of people after some time, and then comparing the test-test correlation between the sets of results obtained. Inter-rater reliability is the extent to which different experts or observers are consistent in their expert judgments.

Additionally, internal consistency is the consistency of individuals' responses across the times on multiple-item measures. That is all the items designed to measure a certain variable or construct are supposed to reflect the same underlying construct, so an individual's scores on the items should be correlated with each other. This study, therefore, adopted internal consistency in measuring the reliability of the research findings. Internal consistency uses Cronbach's alpha coefficients for all items computed in the questionnaire. The Cronbach's alpha ranges between 0 and 1 with higher alpha coefficient values of above +0.7 indicating the reliability of the study. Values below 0.7 were discarded, suggesting a weak on low reliability. Internal consistency has been used across quantitative studies in determining the degree to which a research tool can yield similar results when used repeatedly on the same population or different population measuring the same research objectives.

The study findings established that all the items included under each variable had a Cronbach alpha coefficient value of +0.7 and above. This implied that the questionnaire tool was reliable in providing consistent results in answering the research objectives. There findings are presented in table 3.2.

Table 3.2 Reliability Results

Study Variables	Cronbach's Alpha	Number of Items
Change Readiness	0.819	8
Communication	0.761	7
Employee Training	0.805	6
Employee Feedback	0.793	15
ICT Project Success	0.704	15

3.6.2 Validity of Research Instrument

The validity of a research instrument refers to the degree to which the questionnaire tool constructs measures the right elements that need to be measured. Validity describes the accuracy of the research instruments. The objective of conducting the validity of a study is to ensure that the developed constructs under each variable of the study are aligned to the general objective of the study. There are various types of validity as a measure of simplicity and accuracy. Such include face validity, content validity, and criterion validity (Cooper & Schindler, 2011).

Face validity is the degree to which contents of the instruments appear to measure the construct of interest from the general observation or face value. However, the disadvantage of this validity type is that it is based on a person's feelings which may create biases. Besides, content validity is the degree to which a research instrument includes the questions or constructs of interest. For example, the researcher includes all important items describing a specific variable. The advantage of content validity is that it is usually assessed by carefully checking the questionnaire contents against the conceptual definition of the variable. Subsequently, criterion validity is the extent to which an individual's score is correlated with other variables (criteria set) that a researcher would expect them to be associated with.

Therefore, this study adopted content validity as a measure of the accuracy of the research instrument towards the research objectives. To ensure content validity was achieved, the researcher first designed the questionnaire tool adding all the items of each research variable. Once the questionnaire design was completed, the researcher sought the opinion of experts; supervisors, and panellists whose recommendations were considered. Other experts in the field of change management and ICT project implementation were also consulted to ensure adequate coverage of the topic. The researcher used the recommendations given to adjust the contents of the items in the questionnaire before proceeding to the pilot study and field of the study.

3.7 Ethical Considerations

To adhere to ethics in research during the study period, the researcher sought approvals, clearance, and research permits required both by the University and the National Commission for Science, Technology, and Innovation (NACOSTI). The researcher first applied for an ethical approval letter from the Ethics Committee of

Strathmore University then applied for the NACOSTI research permit from the Ministry of Education. However, before proceeding to the field of the study, the researcher designed a consent letter describing in detail the purpose of the study, the benefits involved if any, the risk of participation, and the consent to participate without any influence. The researcher then attached the ethical approval letters obtained to the consent letter and questionnaires for data collection processes. Also, the consent letter was to assure respondents that the information given was for educational purposes only and shall be kept safely with a high level of confidentiality for the participants.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter provides a detailed analysis of the data collected from the field of the study following the general objective: to determine the role of change management on the ICT project success in Kenyan State Corporations. Descriptive and inferential analyses were used. In summary, the chapter discusses the response rate, demographic information, change management descriptive findings, and inferential analysis.

4.2 Response Rate

From the sample population of the study, a total of 205 questionnaires were self-administered to the respondents of selected 14 State Corporations. A total of 131 questionnaires were filled and picked by the researcher and the two research assistants for analysis. This represented a response rate of 63.9%. A response rate of 50% is considered adequate, 60% considered good, and a response rate of 70% and above is considered very good (Mugenda & Mugenda, 2010).

The response rate of 63.9% of the study is, therefore, good for making study inferences or conclusions and recommendations. It was, therefore, observed that the study had achieved an acceptable response rate to answer the research questions. To note, however, is that of the 14 State Corporations, only respondents from 13 State Corporations participated in the study. Therefore, the one (1) State Corporation whose respondents did not fill and returned the questionnaires were treated as unreturned questionnaires, just like the other questionnaires that were not returned for analysis. Besides, all returned questionnaires were filled.

Table 4.1 Response Rate

Questionnaire Category	Target Sample Size	Response Rate %
Returned	131	63.9%
Un-Returned	74	36.1%
Total	205	100%

4.3 Descriptive Analysis

4.3.1 Demographic Information

The study sought to establish the demographic profile of the respondents with regards to their gender, age, level of education, position, work experience, and project duration in the State Corporation.

4.3.1.1 Gender, Age, and Level of Education

The descriptive results presented in table 4.2 showed that out of the 131 participants, the majority were male 84 (64%), whereas female participants were 47 (36%). More males than females participated in the study. Moreover, the findings demonstrate that there are more males in management functions related to change management practices compared to female participants in State Corporations targeted for the study. While several concepts could be derived to explain the high number of male employees in the organization, one critical factor is that more men have high employment opportunities compared to men, especially in State Corporations.

Table 4.2 Gender, Age, and Level of Education Results

Demographics	Category	Frequency	Percentage (%)
Gender	Male	84	64
	Female	47	36
	Total	131	100
Age Distribution	< 25 years	0	0
	25 – 35 years	36	28
	36 – 50 years	62	47
	> 50 years	33	25
	Total	131	100
Education	Bachelor's degree	56	43
	Post-Graduate degree	75	57
	Total	131	100

Besides, the study also established that participants of the study were distributed in various age category as shown in table 4.2. Data reports that the majority of the respondents 62 (47%) were aged between 36 – 50 years, 36 (28%) were aged between 25 – 35 years, while 33 (28%) of the respondents were aged above 50 years. No

respondent was below 25 years of age. The available data, thus, projects the real situation at the State Corporations in terms of employees and their ages. Most State Corporations are occupied by old people who are believed to be capable of developing and implementing strategic management practices compared to young people. However, there is a slight increase of young people involved in the strategic decision-making process.

The study also sought to determine the education level of the research participants. As reported in table 4.2, the outcome reveals that over half of the study participants, 75 (57%), had a post-graduate degree level of education whereas only 56 (43%) had a bachelor's degree in education. The findings project a picture where across government institutions, individuals involved in strategic management functions are required to attain a high level of education which assists the government in developing and implementing long-term strategies for enhanced service delivery to the people. One such strategy has been the implementation of ICT projects. Also, the significance of having highly qualified individuals as participants is helpful in understanding and articulation of research objectives leading to the provision of accurate information for the study.

4.3.1.2 Working Duration, Position, and Project Duration

The study also sought to establish the number of years respondents had worked at the State Corporations, their positions, as well as the number of years it takes to implement a project. The findings are presented in table 4.3. Established results demonstrated that the majority 70 (54%) of the participants who participated in the study had worked in their respective organizations for 8 – 10 years, 25 (19%) had worked for 2 – 4 years, 24 (18%) had worked for more than 10 years whereas only 12 (9%) of the participants had worked in their various organizations for 5 – 7 years. The findings imply that a greater proportion of the respondents had adequate experience with the State Corporations and could be believed to be expertise in the development and implementation of State projects such as ICT projects.

Also, table 4.3 presents data on the position held by the respondents at their respective State Corporations. The outcome of the study reveals that 75 (57%) of the respondents were in the middle management/supervisory positions, 45 (34%) were in the general staff positions while minority 11 (9%) of the respondents were in the top management

position in their respective organizations. Therefore, the findings imply that all the respondents who participated in the study were well-conversant with the change management practices and process at the State Corporations hence provided accurate information for answering the research questions.

Table 4.3 Working Duration, Position, Project Duration, and Involvement Results

Demographics	Category	Frequency	Percentage (%)
Working Duration	2 – 4 years	25	19
	5 – 7 years	12	9
	8 – 10 years	70	54
	> 10 years	24	18
	Total	131	100
Position	Top Management	11	9
	Middle Management /Supervisor	75	57
	General Staff	45	34
	Total	131	100
Project Duration	< 6 months	0	0
	6 – 12 months	48	37
	> 12 months	83	63
	Total	131	100
Duration Involved	< 1 year	13	10
	1 – 5 years	83	63
	6 – 10 years	35	27
	11 – 15 years	0	0
	Total	131	100

Data presented in table 4.3 of the study also show the duration of change management projects in the State Corporations. The objective was to establish how long it takes the organizations to implement changes. The analysis outcome reported that the majority of State Corporation change management projects 83 (63%) takes more than a year to be implemented, 48 (37%) takes between 6 – 12 months to be implemented. No project implementation has ever been successful within the first 6 months of its design & implementation across the organizations. Therefore, this implies that more than State

Corporation projects such as ICT takes more than a year to implement. The finding is also significant in demonstrating the true position of most government projects such as road constructions among others.

The study also established the number of years an individual has been involved in the change management process in their various State Corporations. Based on the data results provided in table 4.3 of the study, 83 (63%) of the respondents have been involved in change management processes and practices for 1 – 5 years, 35 (27%) have been involved for 6 – 10 years while only 13 (10%) of the individuals have been in the position of active change management processes for less than a year. No respondents have been involved in change management for 11 – 15 years. Thus, the involvement of employees in change processes assists them to develop expertise and critical skills for improving future change processes.

4.3.2 Change Management Process

This section presents the descriptive findings on the five variables of the study; four independent variables and the dependent variable. The section describes the respondents' level of agreement with various measurement constructs. It aimed to describe the behaviour or reactions of the respondents towards the statements designed under each variable in illustrating their level of knowledge and understanding of the research questions. A Likert-scale was used and findings respondents in terms of their level of agreement (frequency percentages).

4.3.2.1 Change Readiness

The first objective of the study was to establish the role of change readiness on ICT project success in State Corporations. The results are presented in table 4.4 of the study.

Change readiness looked into capability, commitment, and culture as significant change management dimensions. Regarding the reactions of the respondents towards measurements developed, table 4.4 presents the general level of agreement of the respondents towards change readiness. A greater proportion of the respondents agreed to the following statements: Most changes in my organization in the past have been implemented successfully (67%); The organization takes care of employees that are adversely impacted by the change (70%); The management team is receptive to feedback and alternative ideas and encourages open communication (43%). A greater

proportion of the respondents were neutral to the following statements: All employees at the state corporation are willing and able to embrace change (37%); Employees are informed and prepared before the change is introduced (41%). However, a greater proportion of the respondents disagreed to the following statements: Middle managers have been advocates for change in the past (30%); Executives in this organization are visible and active change leaders and sponsors (30%); and that the organization encourages and rewards employees that promote change and introduce new ideas (38%).

Table 4.4 Change Readiness Descriptive Results

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Most changes in my organization in the past have been implemented successfully.	33%	67%	0%	0%	0%
The organization takes care of employees that are adversely impacted by change.	30%	70%	0%	0%	0%
Middle managers have been advocates for change in the past.	10%	33%	30%	27%	0%
Executives in this organization are visible and active change leaders and sponsors.	10%	20%	18%	30%	22%
The organization encourages and rewards employees that promote change and introduce new ideas.	7%	3%	22%	38%	30%
All employees at the state corporation are willing and able to embrace change.	2%	1%	37%	32%	18%
The management team is receptive to feedback and alternative ideas and encourages open communication.	12%	43%	7%	3%	35%
Employees are informed and prepared before change is introduced	4%	5%	41%	23%	27%

The implication of the change descriptive results as presented in table 4.4 is that it demonstrate the concept of change readiness and its level of understanding among the respondents. The majority of the respondents across the State Corporations agreed that there exists some form of change readiness within the organization in form of

commitment from the top management and their leaders, supportive beliefs and norms, and adequate organizational to support the implementation of ICT projects. This is in line with previous findings (Abdel-Ghany, 2014) that beliefs and norms and extension of organization leadership reduces resistance to change processes in the organization.

4.3.2.2 Communication

The second objective of the study sought to determine the role of communication on ICT project success. This section, however, presents the descriptive results to demonstrate the respondents' level of agreement with the statements under communication. Findings are presented in table 4.5.

Table 4.5 presents the descriptive results on communication as a change management role. A greater proportion of the respondents agreed to the following statements: The state corporation informs employees of expected project results and outcomes (41%); the state corporation has selected and applied a systematic approach (methodology) for communicating change (39%):

Table 4.5 Communication Descriptive Results

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The state corporation informs employees of expected project results and outcomes.	28%	41%	18%	10%	3%
The state corporation has used a systematic approach for communicating change	27%	39%	17%	7%	10%
The state corporation has allocated sufficient and dedicated resources for change management	15%	23%	43%	12%	7%
The state corporation engages project teams to explain why and how change should be effectively managed	5%	7%	18%	46%	24%
The state corporation develops the necessary change management plans	32%	43%	5%	10%	10%
The state corporation integrates employee's change management activities into their project management steps or lifecycle	10%	23%	47%	8%	12%
The state corporation presents individual employees' change management plans to those involved in the execution	12%	48%	8%	11%	21%

The state corporation develops the necessary change management plans (43%); and that the state corporation presents individual employees' change management plans to those involved in the execution (48%) as shown in table 4.5. A greater proportion of the respondents were however neutral to the following statements: The state corporation has allocated enough and dedicated resources for change management (43%); the state corporation integrates employee's change management activities into their project management steps or lifecycle (47%). However, a greater proportion of the respondents disagreed with the statement that the state corporation engages project teams to explain why and how change should be effectively managed (46%).

While the majority of the respondents agreed that communication is significant and should be part of the change processes, their disagreement with the statement that the corporations engage their teams to explain why and how change should be managed is a clear indication that there exists an effective communication approach. This supports Monga's (2008) findings that the major obstacle to successful project completion in government organizations is ineffective frequent communication that engages employees from the start to the project completion date.

4.3.2.3 Employee Training

Here, the study presents the descriptive results on the level of understanding of employees and/or management the availability of training programs aligned to change practices in the organization, the significance of training in developing expertise, and training as empowerment towards the implementation of the ICT project. Results are recorded in table 4.6 based on the level of agreement with each statement.

The descriptive results in table 4.6 of the study indicate respondents' level of agreement with training measurements. From the results recorded, a greater proportion of the respondents agreed to the following statements: The state corporation conducts training needs analysis and preparation of training calendar before a change is introduced (44%): Employees are scheduled and informed to attend training related to change (48%): The state corporation advises and counsel's employees on upcoming changes (39%). A greater proportion of the respondents were neutral to the following statements: The state corporation designs, develops training materials, and implement training programs relevant to change (32%): The state corporation designs and

develops methods, techniques, and criteria for evaluating the effectiveness of training programs (37%).

The descriptive result, therefore, supports the previous views that training is significant in achieving change management results. It provides an opportunity for employees and changes management team to gain expertise and provide critical feedback for designing future training programs aligned to change management needs in the organization. (Pantaleoni, Mailes, Goad, & Longhurst, 2015).

Table 4.6 Employee Training Descriptive Results

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The state corporation conducts training need analysis before change is introduced	22%	44%	14%	16%	4%
The state corporation provides training materials relevant to change	13%	21%	36%	14%	16%
The state corporation methods for evaluating the effectiveness of training programs	20%	13%	32%	12%	23%
Employees are scheduled and informed to attend training related to change	21%	48%	11%	9%	11%
The state corporation counsel's individual employees on upcoming changes.	27%	39%	17%	13%	4%
The state corporation advices employees on upcoming changes.	29%	42%	23%	4%	2%

4.3.2.4 Employee Feedback

The section presents the respondents' level of agreement with the designed statements regarding employee feedback. Quality feedback is critical for the successful engagement of employees in the organization and may determine the success or failure of the change process. Measures adopted included quality of feedback which may result in critical skills, expertise, and collaboration. The descriptive results regarding employee feedback measures are presented in table 4.7.

Based on the data presented on table 4.7 on employee feedback, a greater proportion of the respondents strongly agreed to the following statements: Employees at the state

corporation understand the business reasons for the change (46%): Employees at the state corporation understand the risks of not changing (47%): Employees at the state corporation understand the impact on their day-to-day work activities (39%);

Table 4.7 Employee Feedback Descriptive Results

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Employees at the state corporation understand the business reasons for the change.	46%	24%	15%	10%	15%
Employees at the state corporation understand the risks of not changing.	47%	25%	13%	8%	7%
Employees at the state corporation understand the impact on their day-to-day work activities.	39%	27%	13%	11%	10%
Employees at the state corporation are personally motivated to be part of the change	42%	38%	10%	7%	3%
Employees look forward to the new environment after change	41%	31%	8%	12%	8%
All employees at the state corporation fully support the change.	10%	11%	19%	37%	23%
Supervisors and managers at the state corporation support the change.	7%	21%	12%	33%	27%
Executives and key business leaders support the change.	14%	19%	34%	23%	10%
Employees have the skills and knowledge to be successful during the change.	13%	23%	39%	11%	14%
Feedback assist management to design training needs aligned to change management	9%	10%	20%	41%	20%
Every employee can get support when they have problems and questions	2%	14%	26%	34%	24%
Every employee practice at performing in the new environment.	3%	22%	37%	23%	15%
The organization is committed to keeping the change in place	7%	10%	12%	38%	23%
Employees are aware of the consequences of not performing their new roles.	38%	32%	23%	2%	5%
Every employee is rewarded by the corporation for performing in the new way.	11%	18%	36%	23%	12%

Employees at the state corporation are personally motivated to be part of the change (42%); Employees look forward to the new environment after a change (41%). A greater proportion of the respondents were neutral to the following statements: Executives and key business leaders support the change (34%); Employees have the skills and knowledge to be successful during the change (39%): Every employee practice at performing in the new environment (34%) as recorded in table 4.7. However, a greater proportion of the respondents disagreed to the following statements: All employees at the state corporation fully support the change (37%); Supervisors and managers at the state corporation support the change (33%); feedback has been adequate to prepare all employees at the organization (41%); Every employee can get support when they have problems and questions (34%) and that the organization is committed to keeping the change in place (38%). The mixed findings based on the respondents' perceptions and understanding of feedback practices reaffirms previous results (Noble, et al., 2020) that quality of feedback remains a challenge for most organizations that management needs to address to enhance change management processes.

4.3.2.5 ICT Project Success

This is the dependent variable of the study. The section presents the level of agreement of the respondents on ICT project success constructs. The findings are recorded in table 4.8 of the study.

Table 4.8 presents data on ICT Project Success Factors. The findings established that a greater proportion of the respondents strongly agreed to the following statements: The corporations have a clear vision and strategies (39%); The projects executed by the state corporations are fully supported by Government (45%); Top Management at the state corporations provide full Support during ICT implementations (34%); Users can appropriately utilize the technologies implemented through ICT projects (33%); The technologies implemented through ICT projects are accepted by staff (43%). The opinion of the respondents in terms of their agreement with these construct measures confirms Kim, Jahng, and Lee's (2007) previous findings that the success of ICT projects in the organization depends on various factors such as usability, leadership, and perceived benefits among other.

Also, a greater proportion of the respondents were neutral to the following statements as shown in table 4.8: The technologies implemented through ICT projects are easy to use (38%): Adequate funds and resources have been allocated to ICT projects (42%). A greater proportion of the respondents however disagreed to the following statements: Do the ICT implementations meet intended objectives (38%); There are effective project coordination and change management at our corporation (39%); ICT Projects are completed within the planned timelines (33%); There is effective monitoring performance and providing feedback (37%); ICT Projects are completed within the allocated budget (39%); There is an existence of competent and motivated team (43%).

Table 4.8 ICT Project Success Descriptive Results

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Does your corporation have a clear Vision and strategy?	38%	29%	21%	5%	7%
The projects executed by your corporation are fully supported by Government	45%	34%	12%	5%	4%
Do the ICT implementations meet intended objectives?	16%	11%	13%	38%	21%
There is effective project coordination and change management at our corporation	7%	10%	17%	39%	27%
Top Management at the state corporation provide full Support during ICT implementations	34%	21%	19%	12%	14%
The technologies implemented through ICT projects are easy to use	11%	12%	38%	31%	8%
Users can appropriately utilize the technologies implemented through ICT projects	33%	31%	21%	9%	6%
Adequate funds and resources have been allocated to ICT projects	11%	12%	42%	4%	31%
ICT Projects are completed within the planned timelines	6%	18%	22%	33%	21%
There is effective monitoring performance and providing feedback	14%	16%	11%	37%	22%
ICT Projects are completed within the allocated budget	19%	11%	19%	39%	21%
There is an existence of competent and motivated team	4%	6%	20%	43%	27%
The technologies implemented through ICT projects are accepted by staff	43%	31%	12%	10%	4%

4.4 Inferential Analysis

This section provides critical information in answering the research question: What is the role of change management on ICT project success in Kenyan State Corporations. Correlation and regression analyses were established to demonstrate the relationship

between predictor variables (change readiness, communication, employee training, and employee feedback) and dependent variable (ICT project success) of the study.

4.4.1 Correlation Analysis

Correlation analysis assessed the strength of the relationship between the variables of the study. The objective was to establish the correlation between the independent variables of the study. The correlation coefficient ranges between -1 and +1, where a negative correlation coefficient value signifies a negative correlation and vice versa. A high correlation (+0.5 and above) demonstrates a strong positive correlation between the variables, (+.03 - +0.5) demonstrates a moderate positive relationship, while a weak correlation (below +.03) demonstrates a weak positive relationship. Correlation coefficient values (below 0) signifies a negative correlation between the variables under the study. Correlation analysis results are presented in table 4.9.

As shown in table 4.9, correlation analysis results revealed the strength of the relationship between the independent variables of the study. An overview of the results indicates that all the correlation coefficient values were all positive. First, the study established a significant strong positive correlation between change readiness and communication ($r=0.614$, $p<0.05$) and change readiness and training ($r=0.601$, $p<0.05$), and a significant moderate positive correlation between change readiness and employee feedback ($r=0.412$, $p<0.05$). Secondly, the study established a moderate positive correlation between communication and employee training ($r=0.355$, $p<0.05$) and a strong positive correlation between communication and employee feedback ($r=0.825$, $p<0.05$). Third, the study demonstrated an insignificant strong positive correlation between employee training and employee feedback ($r=0.701$, $p>0.05$). The correlation analysis was computed within a significant level of 0.01 which is the tabulated significance level for a two-tailed test. Moreover, the correlation (strength and direction of the relationship) of the independent variables are statistically significant in explaining the ICT project success in the State Corporations.

Previous results suggested that change readiness improves commitment through an organization's capability to have adequate resources for training employees towards change and enhancing communication channels (Combe, 2014a). Others explained that training assists the change management team to understand the art of communication (Auguste, 2013), thus, leading to high-quality feedback (Klidas, van

den Berg, & Wilderom, 2007) through collaboration and increased level of expertise. The relationship between these variables, therefore, enhances ICT project success in organizations.

Table 4.9 Correlation Analysis Results

		Change Readiness	Communication	Employee Training	Employee Feedback
Change Readiness`	Pearson Correlation	1	.614**	.601**	.412**
	Sig. (2-tailed)		.000	.000	.000
	N	131	131	131	131
Communication	Pearson Correlation	.614**	1	.355**	.825**
	Sig. (2-tailed)	.000		.000	.000
	N	131	131	131	131
Employee Training	Pearson Correlation	.601**	.355**	1	.701
	Sig. (2-tailed)	.000	.000		.223
	N	131	131	131	131
Employee Feedback	Pearson Correlation	.412**	.825**	.701	1
	Sig. (2-tailed)	.000	.000	.223	
	N	131	131	131	131

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

4.4.2 Regression Analysis

The study determined the regression analysis to demonstrate the relationship between the independent variables and the dependent variable. Specifically, the regression analysis provides the impact of the role of change readiness, communication, employee training, and employee feedback on ICT project success in Kenyan State Corporations. It reveals the changes in ICT project success as a result of changes in the independent variables (change readiness, communication, employee training, and employee feedback) at a 5% significance level. This section, therefore, provides the model summary, analysis of variance, and regression coefficients.

4.4.2.1 Model Summary

The model summary in table 4.10 recorded the results on the degree to which variance in the ICT project success is caused by changes in the predictor variables of the study

(change readiness, communication, employee training, and employee feedback). **R** embodies the correlation coefficient which shows the strength of the relationship between the independent and deponent variables of the study. Thus, an R of 0.534 demonstrates a positive relationship between the study variables. The study established an R^2 (R-Square) of 0.285 which indicates that 28.5% of variances in ICT project success in Kenyan State Corporations are caused by variances in change readiness, communication, employee training, and employee feedback in the organization. Therefore, 71.5% of other changes in ICT project success are caused other variables change management practices) not covered in the study objectives.

Table 4.10 Model Summary Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.534[a]	.285	.263	.62512

a. Predictors: (Constant), Employee Feedback, Training, Change Readiness, Communication

4.4.2.2 Analysis of Variance

The analysis of variance (ANOVA) was conducted to demonstrate how well the model fits the study in describing the combined role of change management dimensions on the implementation (changes) of ICT project success in the organizations. Results in table 4.11 show that the model of the study was significant at 0.000% level of significance which suggests that the data was ideal for making study inferences as the significance level was below 0.05. An F statistics of 12.581 which was established as the ratio of Mean Square Regression to the Mean Square Residual, further showed that the model of the study was significant as evident by the significance level of $0.000^b < 0.05$, demonstrating that changes in management dimensions significantly causes changes in ICT project success in Kenyan State Corporations.

Table 4.11 Analysis of Variance Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.665	4	4.916	12.581	.000[b]
	Residual	49.237	126	.391		
	Total	**68.902**	**130**			

a. Dependent Variable: ICT Project Success

b. Predictors: (Constant), Change Readiness, Communication, Employee Training, Employee Feedback

4.4.2.3 Regression Coefficients

A linear regression analysis was conducted to establish the relationship between change management and the success of ICT projects in State Corporations. The coefficient of determination in the study describes the extent to which variations among the independent variables explain changes in the dependent variable (i.e. the success of ICT projects in the state corporations), that is explained by all the four predictor variables (i.e. Employee Feedback, Training, Change Readiness and Communication). The results are presented in table 4.12 of the study.

Table 4.12 Regression Coefficient Results

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	1.259	.490		2.570	.011
	Change Readiness	.588	.157	419	3.751	.000
	Communication	.391	.142	.444	2.747	.007
	Employee Training	.488	.138	.348	3.532	.001
	Employee Feedback	.996	.174	.818	5.736	.000

a. Dependent Variable: Project Success

The results in table 4.12 are based on the regression analysis of the study. Findings reveal that there exists a significant positive relationship between change readiness and ICT project success ($\beta = 0.588, p = 0.000 < 0.05$). This finding supports the previous results that effective change management through commitment, culture, and capacity in the organization enhances project implementation in the organization

(Keramati, Afshari-Mofrad, & Kamrani, 2011; Abdel-Ghany, 2014). Besides, the study further established a significant positive relationship between communication and ICT project success ($\beta = 0.391, p = 0.007 < 0.05$) and a significant positive relationship between employee training and ICT project success ($\beta = 0.488, p = 0.001 < 0.05$). The findings agree with previous studies that both communication and employee training plays a key significant role in enhancing the change process (Auguste, 2013; Pantaleoni, Mailes, Goad, & Longhurst, 2015). Lastly, the found out a significant positive relationship between employee feedback and ICT project success ($\beta = 0.996, p = 0.000 < 0.05$), confirming the previous findings that quality feedback in the organization enhances collaboration, critical skills, and expertise useful in achieving change processes (Cooke, et al., 2018).

Based on the regression coefficients presented in table 4.12, the overall equation model can be presented as follows:

$$Y(ICT\ Project\ Success) = 1.259 + 0.588X_1 + 0.391X_2 + 0.488X_3 + 0.996X_4 + \varepsilon$$

From the above equation X_1 represents change readiness, X_2 represents communication, X_3 represents employee training, and X_4 represents employee feedback. The findings, therefore, implies that when all factors (change readiness, communication, employee training, and employee feedback) are held constant or zero, ICT project success of Kenyan State Corporations would stand at 1.259. A unit increase in change readiness would lead to an increase in the success of ICT projects in State Corporations by .588, a unit increase in communication will lead to an increase in the success of ICT projects in the State Corporations by .391. Similarly, a unit increase in employee training and employee feedback would lead to an overall improvement in the success of ICT projects in State Corporations by .488 and .996 units respectively. Therefore, it is evident that all the predictor variables were significant at a 5% level of significance implying that the predictor variables have significant roles in ICT project success in Kenyan State Corporations.

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This study researched the role of change management on information and communication technology (ICT) project success in Kenyan State Corporations. Specifically, the study aimed to answer four research questions: a) what is the role of change readiness on ICT project success? b) What is the role of communication on ICT project success? c) What is the role of employee training on ICT project success? d) What is the role of employee feedback on ICT project Success in Kenyan State Corporations?

Chapter two of the study brought forward a literature review related to the study whereas chapter four presented findings of the study. This chapter of the study, therefore, aims to demonstrate the connection between these two chapters and positions in the wider theoretical and change management policy debate. In summary, this chapter is divided into five sections. The first section provides the discussion of the study in line with the empirical review based on research objectives. Section two discusses the conclusions of the study. Section three discusses recommendations, section four discusses suggestions for further studies, and section five discusses research limitations.

5.2 Discussion

The section summarizes the results of the study in the previous two chapters (chapter two and chapter four of the study) according to the research objectives. However, first, this study was guided by HROs theory, Kotter's Eight-Step change management model, and TAM. The theory and the models were significant in developing the measurement constructs of the study. Organizations operate in a dynamic environment that requires them to develop high-reliability practices as highlighted in the HROs theory. Moreover, successful change management processes are dependent on several factors among them the communication, empowerment or training, and quality of employee feedback as outlined in Kotter's model of change management. The adoption of changes in the organization has faces resistance from employees. Thus, management must develop change features that management finds friendly. For

instance, the TAM stated that for cases of ICT adoption, perceived usefulness, ease of use, and acceptance and important features that management must consider.

The study used a descriptive design with a sample size of 205 respondents. However, a response rate of 63.9% was established for making study conclusions. The majority of the participants were male with most of the respondents having a post-graduate degree level of education. This implies that male participants are still widely involved in strategic management functions compared to female counterparts. Besides, strategic management roles require experience and education to be able to identify market changes swiftly and design and implemented necessary changes to improve performance as the study established. The findings further established that most State Corporation ICT projects take more than a year to implement. Thus, the discussion of the study follows the objectives of the study as follows;

5.2.1 The Role of Change Readiness on ICT Project Success

The research addressed change readiness in line with employee commitment, organizational culture (beliefs and norms), and organizational capability. From the descriptive findings, respondents were positive on their responses to the change readiness constructs. For instance, a greater portion of the participants agreed that there exists change readiness in their respective organizations despite facing other challenges. That is, State Corporations have resources and internal commitment to implement change. However, external factors such as political commitment may be the biggest distraction towards achieving change implementation. Khan, et al., (2012) found out that change implementation needs commitment from the government and all other stakeholders.

A correlation and regression analysis conducted established that there exists a significant positive relationship between change readiness and ICT project success. The findings concur with the previous studies (Keramati, Afshari-Mofrad, & Kamrani, 2011) that organizational readiness significantly affects the implementation of ICT projects such as e-learning. Specifically, the authors argued that employee motivation as a form of commitment and training as an organization's capacity are significant factors in employee readiness for change in the successful implementation of projects in the organization.

Depending on how State Corporations approach their change readiness practices, the findings of the study demonstrated that change management through self-efficacy and commitment of employees has a significant role in the organization. Slight positive changes regarding the improvement of commitment among employees significantly result in an efficient change implementation process. The finding supports the available evidence (Abdel-Ghany, 2014) that for organizations to achieve their change process and to improve employee readiness for change, they must understand that respondents (employees) change their beliefs around what they perceive about the change. The change in belief causes changes in behaviour to either support or resist the change process.

5.2.2 The Role of Communication on ICT Project Success

The second objective aimed at determining the role of communication on ICT project success in State Corporations in Kenya. Based on the descriptive findings, it was established that state corporations in Kenya inform their employees of the expected project results and outcomes. They also have selected and applied systematic approaches (methodologies) that are aimed at communicating change. Additionally, the State Corporations develop the necessary change management plans and present individual employees' change management plans to those involved in the execution of change management projects. The finding is in agreement with the previous findings (Khanyile, Musinda, & Agumba, 2019) that communication management plan and clear structures that support methodologies or procedures of change process enhance efficient project success in the organization.

A regression analysis was conducted to illustrate the relationship between communication and ICT project success in Kenyan State Corporations. The results obtained demonstrated a significant positive relationship between the two variables, an indication that communication plays a significant role in the implementation of ICT projects in these organizations under the study. The results of this study are in line with the previous research which focuses on how effective communication management can serve as a tool to systematically manage stakeholder relationship management in project-based organizations (Rajhans, 2018), and found out that effective communication management is significant for the management of stakeholder relationships as well as successful project implementation.

Communication is the art of ensuring that all members of the organization have access to relevant information necessary for the successful performance of the organization. As the study found out, communication demonstrates the clear plan and vision of the change processes or objectives, creates awareness, and the need to search for knowledge to enhance change practices. The findings support the previous findings that effective communication in organizations can be the key to the development and implementation of change initiatives especially the implementation of ICT projects (Aljohani, 2016). The author further adds that the sharing of information is an important function of communicating change. Therefore, any transition can only be effective if the employees are inspired to change and willing to accept the vision offered by the leadership of the organization.

5.2.3 The Role of Employee Training on ICT Project Success

The third objective of the study sought to determine the role of employee training on ICT project success in State Corporations in Kenya. The descriptive findings of the study revealed that State Corporations conduct training need analysis and preparation of training calendar before a change is introduced and that employees are scheduled and informed to attend training related to change. This is in line with a recent study (Fernandez & Moldogaziev, 2013) that training has been implemented in public institutions as a way to enhance performance. According to the authors, empowerment as a form of training improves employee skills largely by establishing innovative ways of correcting errors in service delivery and redesigning the work process as change management practices.

Inferential analysis using both correlation and regression established a significant positive relationship between employee training and ICT project success. Many changes are new to the organization due to the dynamic business environment. Thus, implementation of any change process is not possible without the knowledge of the features or characteristics of change, what is necessary to support, and how to link it to the overall organization strategy. This brings the significant role of employee training into practice as the study established. A recent study (Pantaleoni, Mailes, Goad, & Longhurst, 2015) highlighted that end-user training is an essential element that determines the success or failure of project implementation. The authors in their

hospital study concluded that training improves feedback, encourages engagement, design processes, proficiency, and recognition for change training programs.

Training provides organizations to develop the capacity for supporting strategic management changes such as the implementation of ICT projects. As the study established, training improves the skills of employees, allows employees to develop good communication skills, and allow employees to develop the strategy or result-driven mindset. The findings concur with the previous qualitative study findings (Meijer, 2007) that there exists a strong correlation between personnel training and the success of ICT project implementation in the government institutions. Other results (Akinyi & Moturi, 2015) further established that the success of ICT projects in the public sector organizations achieved through training of ICT managers.

5.2.4 The Role of Employee Feedback on ICT Project Success

Finally, the study researched the role of employee feedback on ICT project success in Kenyan State Corporations. Of interest to the study was the quality of feedback in the organization and how it can enhance change management processes. Feedback as a management practice involves providing information response to the employees or employers to translate knowledge into practice. From the descriptive analysis of the study, the study established the organizations frequently include employee responses in making changes. Moreover, there is a desire among the employees in these organizations to provide their opinions regarding day-to-day operations which can be useful in enhancing change management processes. The findings agree that feedback (Cooke, et al., 2018) encourages sharing and comparing practices and raising change cures like the declaration of commitments towards planning and project implementation.

Findings from regression analysis further recorded that there exists a significant positive relationship between employee feedback and ICT project success. According to the study findings, quality feedback increases awareness among employees, causing the cures and desire to develop critical skills and expertise in the organization. The findings concur with a previous study conducted to develop and conduct feasibility testing of an evidence-based informed model for facilitating performance feedback for physicians to improve their acceptance and use of the feedback in the organization (Joan, et al., 2015), and found out that a good feedback model in an organization builds

relationship, explore reactions, explore contents, and coaching for performance change.

Besides, this study findings demonstrate that employee's engagement with, acceptance of, and productive use of feedback is significant in facilitating change in the organization. The study further agrees with Noble, et al., (2020) that constant quality feedback is vital to building and sustaining successful organizational changes. The authors explained that positive feedback encourages communication, collaboration, and personal employee/employer growth, which enhances organizational commitment towards change processes. Also, they state that continuous feedback provides opportunities for personal and professional development by uncovering knowledge gaps, customer care, and technological understanding.

5.3 Conclusions

The general objective of the study was to determine the role of change management on ICT project success in State Corporations in Kenya. Following a critical analysis and extensive discussion, the conclusions of the study are provided in line with the research objectives of the study.

5.3.1 Change Readiness and ICT Project Success

The focus of businesses in the current dynamic environment revolves around several key issues among them; developing dynamic capabilities, commitments, and strong cultures that promote successful strategy implementation. In line with these trends, this study aimed to determine the role of change readiness on ICT project success in State Corporations. Change readiness measurements included organizational capability, commitments, and culture. From the established results, the study concluded that organizations with dynamic capabilities, employees' commitment to the overall vision of the organization, and a strong culture that encourages togetherness to develop readiness for change strategy which is significant in the efficient and effective implementation of ICT projects. Therefore, there is a need for management and leaders to address change readiness from three levels; a) individual level, b) department level, and c) organizational level, and then integrate them into one strong change readiness strategy.

5.3.2 Communication and ICT Project Success

Communication remains essential across all organizations. The current management practices require organizations to continuously redesign their business processes as a way to keep up with the changing business environment. In this line, communications become a key management tool for uniting employees and communicating the specific objectives clearly and simply that causes the desire for change among them. This study assessed the role of communication on ICT project success and included measurements such as results-driven, strategy-driven, awareness, and channels. The study concluded that there is a positive relationship between the communication and implementation of organizational changes. Besides, the study concludes that organizations must design communication strategies in a way that drives results, drives change, causes awareness, and communicate clear visions of the organization.

5.3.3 Employee Training and ICT Project Success

The third objective of the study was to establish the role of employee training on ICT project success in State Corporations. Organizations need to develop training capacities aimed at improving employees' skills and expertise. There is a need for skilled training managers, effective training programs, and the willingness of employees to attend various training programs. This study, therefore, found out that employee training plays a key role in ICT project success in the organization. The study, thus, concludes that end-user training introduces employees to emerging change management issues and enable them to develop effective response necessary for the change implementation process.

5.3.4 Employee Feedback and ICT Project Success

From the findings, it is clear that the State Corporations have established effective employee feedback mechanisms. These mechanisms have enabled employees at the State Corporation to understand the organizational reasons for the change, the risks of not implementing change, and the impact on their day-to-day work activities leading to the success of the ICT projects. The study also concluded that the State Corporations also motivate employees to be part of the change process and they look forward to the new environment after the change. Therefore, employee feedback significantly plays a key role in the success of ICT project success in Kenyan State Corporations.

5.4 Recommendations

The study findings show that it is appropriate for state corporations to adopt effective change management practices to enhance the success of ICT projects that they implement. Both the organizational culture and structure should ensure that feedback is obtained from each employee about the ICT projects being implemented to enhance success. Employees also need to be trained effectively and their capacity developed to ensure that they are effectively prepared for change. Additionally, this study recommends that the leadership of state corporations should develop effective communication strategies that effectively communicate change management to employees. Employee engagement is important in enhancing change management in any organization and therefore with effective strategies, employees should be encouraged to deliver effectively.

This study further recommends the development of effective organizational learning processes by the management of state corporations. Effective learning processes with the state corporations will enhance knowledge sharing among employees as well as value creation in the organizations leading to success in the implementation of ICT projects.

5.5 Suggestions for Further Studies

This study analyzed the effect of change management practices on the success of ICT project implementation in state corporations. The study recommends that research be conducted to examine how other dimensions of change management practice affect organizational performance in State Corporations. This study focused on the public sector corporations, therefore, another area suggested for further research is the influence of change management practices on the implementation of projects in the private sector corporations.

Further, a comparative study should be conducted to examine the challenges that face the implementation of new technological projects in the private and public corporations in Kenya. Additionally, there is a need to analyze strategies for technological changes and organizational culture in public sector organizations. Finally, a study should investigate whether individual change management constructs influence the general organizational performance in both the public and private sectors.

5.6 Limitations

The limitation faced while undertaking the study was the fact that some of the sampled respondents failed to fill in the questionnaires completely. This led to a reduction in the probability of achieving more conclusive findings. However, conclusions were made with the data that was obtained from the field. Additionally, the research was conducted in public corporations based in Nairobi hence the change management factors affecting the corporations might not be the same as those affecting similar public corporations operating in other parts of the country. The study was also limited to public corporations in Kenya, the study would have been more conclusive and comparative if both private and public corporations in Kenya were used in the study.

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Strathmore UNIVERSITY
BUSINESS SCHOOL

16th April 2020

RE: FACILITATION OF RESEARCH – VICTORIA ODHIAMBO

This is to introduce Victoria Odhiambo who is a Master of Business Administration (MBA) Student at Strathmore University Business School, admission number MBA 113498/18. As part of our MBA Program, Victoria is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MBA course. To this effect, she would like to request for appropriate data from your organization.

Victoria is undertaking a research paper on **"The Role of Change Management on Information Communication Technology Projects Success in State Corporations in Kenya**." The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

Veronica Muniu.
Manager – Graduate Programs.

APPENDIX II: RESEARCH QUESTIONNAIRE

Interviewer Signature……

INTRODUCTION

Dear Respondent,

My name is Victoria Odhiambo, a master's student in the school of Business studies at Strathmore University. I am conducting a research project on critical role of change management on the success of information communication technology projects implemented in state corporations. You are requested to participate in this research which is likely to take 20 minutes of your time. Kindly be informed that your participation is voluntary, and you can stop responding to the questionnaire at any time without any prejudice. The information collected will be used strictly for academic purposes and your responses will be kept confidential. In the questionnaire, select the answer that best represents your opinion or your category. Should you have any question regarding this study, contact me on Odhiambo.victoria@strathmore.edu

Your cooperation and honest response is anticipated.

SECTION 1: BACKGROUND INFORMATION

1. What is your age bracket?
   - ☐Below 25 years
   - ☐25 - 35 years
   - ☐36 - 50years
   - ☐ 51 years and above
2. What is your gender?
   - ☐Male
   - ☐Female
3. What is your highest level of education?
   - ☐College Diploma
   - ☐Bachelor's Degree
   - ☐Post Graduate Degree
   - ☐Other (Specify)……

4. Please indicate the name of the state corporation you work for as well as your department.

Name of state corporation	
Department	

5. For how long have you worked at the state corporation/department?

☐Less than 1 year

☐1-2 years

☐3-5 years

☐6-10 years

☐More than 10 years

6. Indicate your position in the organization:

☐Top Management

☐Middle management/ Supervisor

☐ General Staff

7. Name an ICT project that recently happened in your corporation

Project name _____

Project Duration: How long did the project take?

☐ Less than 6 months

☐ Between 6 to 12 months

☐ More than 12 months

8. How long have you been involved in change management?

☐Less than 1 year

☐1-5 Years

☐ 6-10 years

☐11-15 years

SECTION B: Change Management Processes

PART I: CHANGE READINESS

9. The following are statements relating to Change Readiness. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	Most changes in my organization have been implemented successfully.					
b.	The organization takes care of employees that are adversely impacted by change.					
c.	Middle managers have been advocates for change in the past.					
d.	Executives in this organization are visible and active change leaders and sponsors.					
e.	The organization encourages and rewards employees that promote change and introduce new ideas.					
f.	All employees at the state corporation are willing and able to embrace change.					
g.	The management team is receptive to feedback and alternative ideas and encourages open communication.					
h.	Employees are informed and prepared before change is introduced					

PART II: TRAINING

10. The following are statements relating to Training and Development. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	The state corporation conducts training need analysis and preparation of training calendar before change is introduced					

b.	The state corporation designs, develop training materials and implement training programs relevant to change					
c.	The state corporation designs and develops methods, techniques, and criteria for measuring and evaluating the effectiveness of training programs					
d.	Employees are scheduled and informed to attend training related to change					
f.	The state corporation advices and counsel's individual employees on upcoming changes.					

PART III: COMMUNICATION

11. The following are statements relating to Communication Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	The state corporation informs employees of expected project results and outcomes.					
b.	The state corporation has selected and applied a systematic approach (methodology) for communicating change					
c.	The state corporation has allocated sufficient and dedicated resources for change management					
d.	The state corporation engages project teams to explain why and how change should be effectively managed					
e.	The state corporation develops the necessary change management plans					
f.	The state corporation integrates employee's change management activities into their project management steps or life-cycle					
h	The state corporation presents individual employees' change management plans to those involved in the execution					

PART III: EMPLOYEE FEEDBACK

12. The following are statements relating to Employee Feedback. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
	Awareness					
a	Employees at the state corporation understand the business reasons for the change.					
b	Employees at the state corporation understand the risks of not changing.					
c	Employees at the state corporation understand the impact on their day-to-day work activities.					
	Desire					
d	Employees at the state corporation are personally motivated to be part of the change					
e	Employees look forward to the new environment after change					
g.	All employees at the state corporation fully support the change.					
h	Supervisors and managers at the state corporation support the change.					
i	Executives and key business leaders support the change.					
	Knowledge					
j	Employees have the skills and knowledge to be successful during the change.					
k	Employees have the skills and knowledge to be successful after the change.					
l	Training has been adequate to prepare all employees at the organisation					
	Ability					
m	Every employee can perform the new duties required by the change.					

n	Every employee can get support when they have problems and questions					
o	Every employee practice at performing in the new environment.					
	Reinforcement					
p	The organization is committed to keeping the change in place					
q	Employees are aware of the consequences of not performing their new roles.					
r	Every employee is rewarded by the corporation for performing in the new way.					

SECTION C: ICT PROJECT SUCCESS FACTORS

The following are statements relating to ICT project success factors. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

Statements		1	2	3	4	5
a.	Does your corporation have a clear Vision and strategy					
b.	The projects executed by your corporation are fully supported by Government					
c.	Do the ICT implementations meet intended objectives					
d.	There is effective project coordination and change management at our corporation					
e.	Top Management at the state corporation provide full Support during ICT implementations					

f.	The technologies implemented through ICT projects are easy to use					
g.	Users can appropriately utilize the technologies implemented through ICT projects					
h.	Adequate funds and resources have been allocated to ICT projects					
i.	ICT Projects are completed within the planned timelines					
j.	There is effective monitoring performance and providing feedback					
k.	ICT Projects are completed within the allocated budget					
l.	There is an existence of competent and motivated team					
m.	The technologies implemented through ICT projects are accepted by staff					

THANK YOU FOR YOUR PARTICIPATION.

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Strathmore UNIVERSITY
BUSINESS SCHOOL

16th April 2020

Director General,
National Commission for Science Technology and Innovation,
P. O. Box 30623, 00100
Nairobi.

Dear Sir,

RE: FACILITATION OF RESEARCH – VICTORIA ODHIAMBO

This is to introduce Victoria Odhiambo who is a Master of Business Administration (MBA) Student at Strathmore University Business School, admission number MBA 113498/18. As part of our MBA Program, Victoria is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MBA course

Victoria is undertaking a research paper on **"The Role of Change Management on Information Communication Technology Projects Success in State Corporations in Kenya**." The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

Veronica Muniu.
Manager – Graduate Programs.

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **151241**

Date of Issue: **29/April/2020**

RESEARCH LICENSE

This is to Certify that Ms.. VICTORIA ACHIENG ODHIAMBO of Strathmore University, has been licensed to conduct research in Nairobi on the topic: THE ROLE OF CHANGE MANAGEMENT ON ICT PROJECTS SUCCESS IN KENYAN STATE CORPORATIONS for the period ending : 29/April/2021.

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Strathmore UNIVERSITY

16th April 2020

Mrs Odhiambo Otoko, Victoria
Odhiambo.Victoria@Strathmore.Edu

Dear Mrs Odhiambo,

RE: The Role of Change Management on Information Communication Technology Projects Success in State Corporations in Kenya

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0676/20.** The approval period is **16th April 2020 to 15th April 2021.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

for: Dr Virginia Gichuru,
Secretary; SU-IERC

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU IERC)
16 APR 2020
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Cc: Prof Fred Were,
Chairperson; SU-IERC

APPENDIX VI : STUDY POPULATION: LIST OF KENYAN STATE CORPORATIONS

NO	STATE CORPORATION NAME
1.	Kenya Investment Authority
2.	Agricultural Finance Corporation
3.	Consolidated Bank
4.	Deposit Protection Fund Board
5.	Industrial and Commercial Development Corporation
6.	Kenya Re-Insurance Corporation
7.	Kenya Revenue Authority
8.	Kenya Roads Board
9.	Kenya Tourist Development Corporation
10.	National Bank of Kenya
11.	National Hospital Insurance Fund
12.	National Social Security Fund
13.	Kenya Re-Insurance Corporation
14.	East African Portland Cement Company
15.	Gilgil Telecommunications Industries
16.	Jomo Kenyatta Foundation
17.	Kenya Airports Authority
18.	Kenya Broadcasting Corporation
19.	Kenya Electricity Generating Company
20.	Kenya Literature Bureau
21.	Kenya Ordinance Factories Corporation

NO	STATE CORPORATION NAME
22.	Agro-Chemicals and Food Company
23.	Chemelil Sugar Company
24.	East African Portland Cement Company
25.	Gilgil Telecommunications Industries
26.	Kenya Pipeline Company
27.	Kenya Ports Authority
28.	Kenya Power and Lighting Company
29.	Kenya Railways Corporation
30.	Kenya Civil Aviation Authority
31.	Kenya Safari Lodges and Hotels
32.	Kenya Seed Company Limited
33.	Kenya Wine Agencies
34.	Kenyatta International Convention Center
35.	National Cereals and Produce Board
36.	National Oil Corporation of Kenya
37.	National Water Conservation and Pipeline Corporation
38.	Numerical Machining Complex
39.	Nzoia Sugar Company
40.	Postal Corporation of Kenya
41.	Pyrethrum Board of Kenya
42.	South Nyanza Sugar Company
43.	Telkom Kenya Limited
44.	National Housing Corporation
45.	Numerical Machining Complex

NO	STATE CORPORATION NAME
46.	University of Nairobi Enterprises and Services Limited
47.	New Kenya Co-operative Creameries Ltd
48.	Kenya Electricity Transmission Company
49.	Agricultural Development Corporation
50.	Bomas of Kenya
51.	Central Water Services Board
52.	Coast Water Services Board
53.	Higher Education Loans Board
54.	Kenya Accountants and Secretaries National Examination Board
55.	Kenya Ferry Services
56.	Kenya National Library Services
57.	Kenya Tourist Board
58.	Kenya Wildlife Service
59.	Kenyatta National Hospital
60.	Lake Victoria North Water Services Board
61.	Local Authorities Provident Fund
62.	Moi Teaching and Referral Hospital
63.	Nairobi Water Services Board
64.	National Aids Control Council
65.	National Council for Law Reporting
66.	National Sports Stadia Management Board
67.	Northern Water Services Board
68.	Rift Valley Water Services Board
69.	Water Resources Management Authority

NO	STATE CORPORATION NAME
70.	Water Services Trust Fund
71.	Lake Victoria South Water Services Board
72.	National Authority for the Campaign Against Alcohol and Drug Abuse
73.	Athi Water Services Board
74.	Kenya National Examination Council
75.	Kenya Universities and Colleges Central Placement Service
76.	Coffee Research Foundation
77.	Kenya Agricultural Research Institute
78.	Kenya Forestry Research Institute
79.	Kenya Industrial Research and Development Institute
80.	Kenya Institute of Administration
81.	Kenya Institute of Public Policy Research and Analysis
82.	Kenya Marine and Fisheries Research Institute
83.	Kenya Medical Research Institute
84.	Kenya Sugar Research Foundation
85.	National Museums of Kenya
86.	Tea Research Foundation
87.	Kenya Institute of Education
88.	Kenya Education Staff Institute
89.	Coast Development Authority
90.	EwasoNg'iro North Development Authority
91.	EwasoNg'iro South Development Authority
92.	Kerio Valley Development Authority
93.	Lake Basin Development Authority

NO	STATE CORPORATION NAME
94.	Tana and Athi Rivers Development
95.	Cooperative College of Kenya
96.	Kenya College of Communications Technology
97.	Kenya Medical Training College
98.	Kenya Utalii College
99.	Kenya Water Institute
100.	Kenya Veterinary Board
101.	Kenya Leather Development Council
102.	Unclaimed Financial Assets Authority
103.	Capital Markets Authority
104.	Catering and Tourism Development Levy Trustee
105.	Coffee Board of Kenya
106.	Commission for University Education
107.	Communication authority
108.	Council for Legal Education
109.	Energy Regulatory Commission
110.	Export Promotion Council
111.	Horticultural Crops Development Authority
112.	Kenya Bureau of Standards
113.	Kenya Dairy Board
114.	Kenya Industrial Property Institute
115.	Kenya Plant Health Inspectorate Services
116.	Kenya Sisal Board
117.	Kenya Sugar Board

NO	STATE CORPORATION NAME
118.	Maritime Authority
119.	National Environment Management Authority
120.	National Irrigation Board
121.	Public Benfeits Organizations Regulatory Authority
122.	Tea Board of Kenya
123.	Water Services Regulatory Board
124.	Transport Licensing Board
125.	Catering Training & Tourism Development Levy Trustees
126.	Export Promotion Council
127.	Export Processing Zones Authority
128.	Kenya Bureau of Standards
129.	University of Embu
130.	Egerton University
131.	Jomo Kenyatta University of Agriculture and Technology
132.	Kenyatta University
133.	Western University College of Science and Technology
134.	Maseno University
135.	Moi University
136.	University of Nairobi