

**INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
AND ORGANIZATIONAL CHANGE IN A SOCIO-POLITICAL
INSTITUTIONAL ENVIRONMENT: CASE OF THE INDEPENDENT
ELECTORAL AND BOUNDARIES COMMISSION (IEBC)**

BY

NDUNGU MARTIN WACHIRA

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DECLARATION

This research project is my original work and has not been submitted for a degree course in this or any other university.

Signed _____ Date _____

Martin Wachira Ndungu

D61/73176/2009

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

Signed _____ Date _____

Dr. James M. Njihia

Lecturer and Chairman, Department of Management Science, School of Business,

University of Nairobi

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DEDICATION

To my lovely parents, Mr. and Mrs. Mugo: your love, strong will, support, commitment, and endless sacrifices have always been a pillar and strength of my determination towards achieving greater heights in life.

My siblings Moses, Anne and Jane: without your encouragement, love and support, completion of this work would not have been possible.

ABSTRACT

As the world grows through globalization and technology advancement, a need has arose for organizations and businesses to incorporate change and adopt new technologies which have been incorporated in the running of different organizations' operations i.e. in their management structures, operational levels and information infrastructure. This study sought to understand organizational change and adoption of information and communication technology in a socio-political institutional environment i.e. the Independent Electoral and Boundaries Commission.

The study was carried out using a case study design. The data was collected using interview guides from key informants' i.e. directors, managers and coordinators in the various departments within IEBC with a sample size of 6 informants. Due to the qualitative nature of the study, content analysis with concepts of grounded theory was used for analysis purposes.

The results of this study indicate that IEBC has really tried to implement the reforms set upon by IIEC and IIBRC in overhauling the electoral process and creating a good image of the electoral body both regionally and internationally enabling for an atmosphere of a free and fair general election.

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LIST OF ACRONYMS

CEO	Chief Electoral Officer
DCEO	Deputy Chief Electoral Officer
DOI	Diffusion of Innovation
EDR	Electoral Dispute Resolution
E-GOV	E-government
EMB	Electoral Management Board
ETR	Electronic Transmission of Results
EVR	Electronic Voter Register
EU	European Union
FPTP	First Past The Post
G2C	Government and Citizens
G2B	Government and Businesses/Commerce
G2E	Government and Employees
G2G	Government and Governments /agencies
HR	Human Resource
HQ	Headquarters
IDP	Internally Displaced Persons
IEBC	Independent and Electoral Boundaries Commission
IFES	International Foundation for Electoral systems
IFMIS	Integrated Financial Management Information System
IIBRC	Interim Independent Boundaries Review Commission

IIEC	Interim Independent Electoral Commission
ICT	Information, Communication and Technology
IS	Information Systems
IT	Information Technology
NGO	Non-Governmental Organization
OMR	Optical Mark Recognition
SMDs	Single Member Districts
SMS	Short Message Service
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

A huge shift has been witnessed in the current, fast growing world of technology and automation. With the development of complex and modern IT, both developed and underdeveloped countries are exploring ways to enjoy the many benefits that these technologies enable (Dutta, 2001; Goodman, 1994; Mbarika et al., 2002; Straub et al., 2001). The need to adopt new technologies and automated information systems to replace old technologies and manual systems has been key to the development of organizations with the aim of enhancing service provision, support in decision making and gaining a competitive edge over their competitors in the aggressive work, social and political environment. This shift has been incorporated in the running of different organizations' operations i.e. in their management structures, operational levels and information infrastructure.

Information infrastructure enables for networking and communication over wider geographical regions. According to Davis and Olson (1985), information is a critical resource in the operation and management of organizations. Timely availability of relevant information is vital for effective performance of managerial functions such as planning, organizing, leading, and control. Indeed, today's organizations run on information. An information system in an organization is like the nervous system in the human body. Information system usually refers to a computer-based system, one that is designed to support the operations, management, and decision functions of an

organization. Kroenke (2008) regards the term as not only information and communication technology (ICT), but also the way in which people interact with this technology in support of business processes.

According to Filicetti (2007), change management is a structured approach to shifting/transitioning individuals, teams, and organizations from a current state to a desired future state. It is a process aimed at helping in acceptance and embracing of change in complex business or socio-political environment. One of the goals of change management is with regards to the human aspects of overcoming resistance to change in order for organizational members to buy into change and achieve the organization's goal of an orderly and effective transformation. Change management entails thoughtful planning and sensitive implementation, and above all, consultation with, and involvement of, the people affected by the changes. Change must therefore be perceived to be realistic, achievable and measurable. If you force change on people normally problems arise and the likelihood of resistance becomes high (Anderson & Anderson, 2001).

Taking into consideration governments, their interaction with the citizens in provision of services pose a case of a socio political environment. Many countries, corporations, influential aid institutions, management and IT consultants have adopted policies, strategies and practices based on the assumption of universal imperatives, globally varied objectives and general objectives of professional action regarding the exploitation of new ICTs (Schware and Kimberly; Talero and Gaudette, 1995). Such a contextual attitude is effective in spreading powerful messages about the significance of ICT in contemporary economy but entails high risks of misguiding and frustrating local efforts to make sense

and appreciate new technology. Consequently, ICT has become a strategic resource for large-scale organizations in all sectors, which need to improve efficiency and effectiveness of their business operations (Serain, 2002). Effective usage of ICT requires a new organizational culture in addition to new staff teams focused on performance, customer services and response to citizen input. The solutions to the problem of e-management lie in the implementation of services designed around possible life events or life episode approach and the adaptation and integration of back-office processes (Vintar, Kunstelj, Leben, 2002).

Therefore, although governments are traditionally considered to be conservative entities, slower to change, and slower to adopt new initiatives than players in the business realm, there are many opportunities for developing E-government systems to providing better public services (Marche and McNiven, 2003; Ciborra, 2003). Jeong (2007) defines E-Government (also known as *e-gov*, *digital government*, *online government*, or *connected government*) as digital interactions between a government and citizens (G2C), government and businesses/Commerce (G2B), government and employees (G2E), and also between government and governments/agencies (G2G). E-Gov systems enable the government and local agencies to take advantage of the latest technologies to eliminate inefficiencies, reduce costs, and increase productivity transforming the tedious and time-consuming organization operations and processes into fully automated solutions. In particular, G2C brings out more the issue of complexity in the socio-political environment due to the communication aspect through ICTs which is often not well embraced or faced with resistance.

1.1.1 Kenyan Electoral System

Kenya inherited the first past the post (FPTP) electoral system (Winner takes all) from the British colonies where almost all members of the national legislature are elected from single member districts (SMDs) on the principle of "first past the post"- i.e. candidates win election by obtaining a plurality of the vote. The system is controversial because its electoral districts (i.e. constituencies) vary greatly in population and size. Kenya's present configuration of constituencies systematically over-represents residents of the most sparsely populated areas of the country, and under-represents the residents of the most densely populated areas. This defect was never a source of controversy during the era of the one-party state (1969-1991), because it did not affect the distribution of seats among political parties. However, since the return of multi-party politics in 1992, the pattern of unequal representation has been increasingly regarded as "unfair" by political leaders (Barkan, Joel, Densham and Rushton, 2001).

The electoral structure in Kenya is such that elections are conducted on national level i.e. a head of state (the president) and a legislature. Elections are conducted after a five-year term. The National Assembly or *Bunge* has 224 members, 210 members elected for a five-year term in single-seat constituencies, 12 members appointed and 2 *ex officio* members (Barkan and Joel, 2001). The election process conducted in Kenya has for long been manual, outdated and time consuming. Accountability, transparency, inaccuracies, missing forms, late submissions and announcement of results are just but a few of the issues that have dogged the Electoral Commission of Kenya (ECK), whose mandate was to oversee the election process in the country. ECK's inefficiency and failure to conduct

free and fair elections was considered to be the main cause of the post-election violence early in 2008 leading to its disbandment. A need arose to replace the old systems with automated ones and a change of management to overcome the problems and incidents such as witnessed during the period of the post-election violence.

The Interim Independent Electoral Commission of Kenya (IIEC), created by the Constitution of Kenya (Amendment) Act 2008, was the new body put in place to reverse the negative image created by its predecessor. It was to institute electoral reforms and restore people's confidence in elections. The Interim Independent Boundaries Review Commission of Kenya (IIBRC) was set up by an Act of Parliament on May 12, 2009. They were charged with the mandate to review the existing constituency boundaries to reflect geographical size and population. IIEC's mandate was to come to an end after two years or three months after a new Constitution, whichever comes first. IIBRC did not complete its term as it was not gazetted. During promulgation i.e. passing of the new constitution in the month of August 2010, reforms put in place included partly usage of automated systems to conduct polls which proved that accountability and transparency would be achieved. Coverage of the polls throughout the country by the media houses as well as the Interim Commission's base at Bomas of Kenya was professionally conducted and transmission of results electronically from polling stations without the physical movement of the ballot papers/votes enabled for on-time and accurate delivery of results avoiding any interference from external forces i.e. powerful politicians or use of intermediaries to delay the delivery/announcement process.

Independent Electoral and Boundaries Commission (IEBC) then took over permanently from November 2011 and was mandated to ensure free and fair elections, conduct delimitation of electoral units, spearhead legislation on elections, register voters, conduct voter education and resolve electoral disputes among other issues concerning electoral systems and processes. IEBC is viewed to be different from ECK partly due to adoption of ICTs and through organizational change which has brought about faith and hope for a free and fair election process.

1.2 PROBLEM STATEMENT

Developing countries are usually seen as problematic hosts of ICTs. Not only do most developing regions lack economic resources and indigenous techno-scientific capabilities to develop and deploy modern IS infrastructures, they also tend not to make best use of the opportunities of technology transfer (Avgerou, 2000). Palvia and Palvia (1996) acknowledge that local culture (social) and political regimes are related with country differences in IT adoption and economic performance. The question regarding culture and IT that is usually asked is whether a country's culture (i.e. values, beliefs and behavior patterns) and political regime are favorable to IT adoption for national growth purposes.

An example draws from the experience of IS implementation in the major social security service provider in Greece, IKA, a state institution which provides old age and disability pensions as well as a number of non-means tested benefits to employees in the private sector of the economy. IKA operates in a legalistic, highly bureaucratic manner, which is typical of the public sector of Greece. It is generally seen, by politicians and public alike,

as a dysfunctional organization, but successive reform programmes have not managed to change substantially its fundamental structure and work processes. Avgerou, (2000) indicates that in successive IS development efforts in IKA, the techniques for ‘strategic’ analysis did not enable IS professionals to diagnose the socio-organizational significance of the attempted technical innovation and to explain the covert resistance that nullified their well-designed interventions. If they had, they might have allowed themselves to consider alternatives, such a ‘bureaucratic’ IS infrastructure better fitted to the current logic of the organization, or introduction of flexible technologies in the local offices that could have better chances to be appropriated in the local work environment. More importantly, they could question the feasibility, and perhaps the wisdom of the ends the systems they were developing were expected to achieve. The inability of successive information systems projects to fulfill their declared objectives is symptomatic of the existence in the organization and its institutional environment of a rationality which is fundamentally at odds to these objectives. This rationality is rooted in the historical context of public administration in Greece. Sociological studies have elaborated on the complex role the state and its institutions have historically required fulfilling in that country (Tsoukalas 1987; Tsoukalas 1989; Mouzelis 1995).

The Kenyan electoral body has minimally used ICTs in conducting elections and voter registration. As witnessed in the run up to the 2007 elections, the electoral process was greatly hampered and the electoral environment compromised by the conduct of many public participants, especially political parties and the media. A report compiled by the Independent Review Commission, famously referred to as the “Kriegler report”, mandated to look into all the aspects of the general elections held on 27th December 2007

with particular emphasis on the presidential election, highlighted numerous technical and electoral problems and how ECK was incapable of handling changes in the political environment. International Foundation for Electoral systems (IFES) also compiled a report of the electoral process in Kenya and made recommendations for reforms. Through findings from these reports, a thorough evaluation of the Kenyan electoral process brought several issues to light. First, the process was heavily dependent on political structures that reflect particular institutional imperfections in the country. Secondly, previous attempts at reform lacked necessary constitutional backing and fell short by targeting specific issues arising from individual elections, rather than addressing problems in the overall system.

The technical and electoral problems highlighted include defective data collection, transmission and tallying systems leading to poor planning, staff selection/training, public relations and dispute resolution, poor communication infrastructure, weak and inconsistent constitutional and legal frameworks, lack of independence, capacity and functionality due to weaknesses in the electoral body's organizational structures, composition and management structures. These problems strongly exposed how vulnerable the electoral process was impairing the credibility of the results due to the weaknesses, manipulations, inaccuracies, mistrust and data insecurity leading to instability in the country and a sham of the election process as a whole.

IEBC seems to be taking a different path to overcome most of the hurdles faced by its predecessor body partly through the use of ICTs and in implementation of organizational

change. This study therefore seeks to answer the question; how has IEBC been able to overcome the challenges faced by its predecessor through organizational change and adoption of ICTs in such a socio-political environment?

1.3 RESEARCH OBJECTIVE

The research objective is to determine the implementation of organizational change and adoption of ICTs in IEBC.

1.4 SIGNIFICANCE OF THE STUDY

This study will be of significance to: -

The Kenyan electoral body and similar ones in learning how to manage efficiently and effectively the electoral process. The electoral process requires thoughtful planning and sensitive implementation for it to run smoothly and for it to be considered fair and just.

The public in understanding the new advancements undertaken by the electoral body and approve them to enhance better interaction, transparency and collaboration. Consultation with, and involvement of, the people affected by the changes reduces resistance which is otherwise experienced when change is introduced.

The Government in better understanding of the benefits of adopting ICT towards promoting citizen services efficiently in a socio-political environment. It helps in better planning and utilization of available resources.

IS Researchers in the understanding of organizational change in a socio-political environment with an aim of formulating theories for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter deals with past research studies to gain a wider understanding of the research area under study and identify the knowledge gaps. The research looks at ICT and organizational change, environmental complexities faced, models/theories of ICT driven change, voting systems and their challenges and theoretical approach towards organizational change in a socio-political environment.

2.2 ICT AND ORGANIZATIONAL CHANGE

The strategic role of ICT and its significance throughout the organization increases complexity, variety, and the need of change. In information systems, research is only just starting to examine whether the implementation of global IT-based practices portend homogeneity for developing countries organizations or whether these organizations actually utilize technology and technology-based solutions according to the socio-cultural requirements of their contexts (Walsham, 2000). These studies show the importance of the local context and the importance of adapting IT-based practices when implementing them in developing countries. However, the way these adaptations occur and the processes that shape them are still poorly understood. The study of the nature of local adaptations to global IT-based techniques in developing countries requires an understanding of the wider and local contextual factors influencing the implementation of such techniques, the process of implementation at the local level, and the ensuing change resulting from the implementation process. Such a focus led to the choice of Pettigrew's

contextualist approach and the adoption of an interpretive stance that seeks to understand phenomena in their natural settings (Walsham, 1993, 1995).

Organizational change aims at helping employees to accept and embrace changes in their current business environment. Kotter (1996) emphasizes the fact that communication throughout the process is essential for its success. As Williams & Williams (2007) describe it, people respond to change more positively when they have an understanding of its purpose and consequences. Change process is a series of overlapping phases that needs careful planning, motivation, and professional execution. It is the highest priority and the first strategy for every organizational change. Clegg & Walsh (2004) suggest that in many cases, too little attention is paid to the social side of change. According to the authors, the social side is actually the most important aspect in a change initiative.

2.2.1 Environmental Complexity and ICT change

In thinking about the relationship between organization change and the introduction of ICTs, it is helpful to understand the environment within which change takes place. More realistically, it is important to understand the multi-dimensional environments that exist and how they influence change. The multi-dimensional environments may be general cyclical changes or changes associated with the particular history of the organization bringing changes over time. The external environment includes the political, economic, socio-cultural and technological influences (often referred to by the mnemonic PEST (Johnson and Scholes, 1999)). The internal environment covers both formal management systems and the more informal aspects such as culture and leadership styles. In instituting

technologically driven change, all the other factors in the different environments must be taken into account in determining the influence of change on the organization.

Muid (1994) affirms that use of ICTs acts as catalysts i.e. in speedy adoption and implementation of change, which can be regarded as a way of assisting in transformation or transition but warns that they can also act as inhibitors to change because of systems rigidity and costly legacies of past investment. Bellamy and Taylor (1994a) ask two key questions in this regard, “Are the shifts associated with change management conducive to the optimal realization of the potential gains which formalization might bring, or do they inhibit change, and can organization units (departments, agencies, divisions etc) be (re)organized both internally and in their relationships in order to create the conditions needed for the full exploitation of new information systems?”

Information systems implementation is critical in the adoption and management of ICT driven organizational change. Cooper and Zmud (1990), define information systems implementation “as an organizational effort towards diffusing appropriate information technology within a user community.” They consider that the implementation of an IS is complete when the organization obtains the benefits of the system operating at its full potential. Some of the technology adopted by “less developed” countries (LDCs) has failed to achieve its intended economic benefits, and underutilization or even nonuse of the technology has been reported.

2.2.2 E-Government systems

E-Government systems have become an essential implementation tool towards organizational change in government agencies with the aim of adopting ICTs in the provision of services and management. However, these systems have faced various challenges during their adoption and implementation. ICTs in Africa have traditionally been used within government for automation with a rationale of cutting costs, faster, efficient and effective delivery of services and acceptance of technology advancement (Oyomno, 1996). However, their achievement of financial cost-cutting goals is questionable. In industrialized countries, replacing costly civil servants with cheap ICTs may cut costs, though even here evidence of efficiency gains is limited (Henman, 1996). Heeks and Kenny, (2002) note that in Africa, average public sector wage costs can be one-tenth or less than those in the West, average ICT costs can be two to three times higher. E-Government automation therefore means replacing cheap civil servants with costly ICTs, something that is most unlikely to be justified on financial cost grounds. As time replaces money as a more critical global resource, ICTs' ability to increase process speed may provide some justification for automation. More generally, though, ICTs need to be justified and understood in the context of a broader vision and necessity for e-government in Africa.

E-Government applications can be seen as isolated technical artifacts i.e. a collection of hardware and software, which can form the centerpiece of any e-government analysis. The shortcomings of such a techno-centric view, though, are readily apparent as E-Gov is connected to the social context in which it is deployed. According to Heeks, (2002),

automation has enabled in addressing such shortcomings and reduced the costs of involvement in government thus expanding small businesses participation. It has therefore affected the business context surrounding the e-government application.

The relationship between technology and social context is bi-directional i.e. the social context of deployment also impacts the technology during deployment. A common pattern is that E-Gov system designers are, in some way, external to the context of e-government use. As the outsourcing of e-government design grows, there is growth in the use of private sector designers to create systems for public sector users. As with the gap of discipline, this particularly relates to the different values and knowledge a designer would have by being rooted in the private sector; lacking the understanding of the unique processes, systems, structures, and culture in the public sector. E-Government projects in developing/transitional economies are dominated by the process of global transfers,(Common,1998). The carriers for these transfers are four main groups:

- International donor agencies
- Consultants
- Information technology (IT) vendors
- Western-trained civil servants

According to Heeks and Bhatnagar (2001), the dominant industrialized country stakeholders just – the consultants and IT vendors and aid donors – bring their context with them and, even if located in a developing country, they will inscribe that context into their designs; inscriptions that will mismatch the actual developing country context. It is therefore not uncommon that e-government systems have elements of context

inscribed into them – elements direct from the designer's context or elements misperceived from the users' context – that are mismatched to the actual elements found in the users' context. There are different contexts of relevance to E-Government; in particular, the context of design and the context of deployment/use. These two are drawn into relation with one another because the context of design is, in some ways, inscribed into the e-government system in both explicit and implicit ways. Because designers are typically external to the context of e-government use, their contextual inscriptions often mismatch the context of use, leading to some form of collision between different contexts during the process of e-government implementation. In many cases, this is seen to lead to some kind of e-government failure: either partial or total. We can look at a G2C environment through one of the E-Gov systems i.e. the voting/electoral system.

2.3 VOTING (ELECTORAL) SYSTEMS

E-Government aims at providing better services within the different government agencies. The electoral body is one such agency and has the mandate of conducting polls/elections. Voting/electing is a method by which groups of people make decisions. These decisions could be political, social or public. Voting can also be used to choose between difficult plans of actions or to decide who is best eligible to be awarded a prize. Voting can thus be defined as a process that allows a group of individuals to choose between a number of options, often in an election or on a policy referendum. Common voting systems are majority rule, proportional representation or plurality voting with a number of variations and methods such as first-past-the-post (FPTP) or preferential voting. Most voting systems are based on the concept of majority rule or plurality. For

example, in an election, a candidate with a plurality receives more votes than any other candidate, but does not necessarily receive the majority of the total votes cast (Salomonsen, 2005).

Voting systems must be transparent and comprehensible enough that voters and candidates can readily accept the results (Kohno *et al.*, 2004). This means that the veracity of a voting system is necessary for the acceptance of the results of that election. For a voting system to be considered transparent and comprehensible some important criteria must be met. First of all, the anonymity of a voter's ballot must be preserved, in order to ensure that the voter is safe when voting against a candidate, and also to guarantee that voters have no evidence that proves which particular candidates received their votes. It is believed that the existence of such evidence could allow votes to be bought (Kohno *et al.*, 2004). Secondly, the voting system must be tamper-proof in order to prevent a wide range of attacks, including ballot stuffing by voters and incorrect tallying by insiders (poll officials). Thirdly, it should be user-friendly i.e. it should be easily comprehensible and usable by the entire voting population.

2.3.1 Challenges of voting (electoral) systems

Various challenges face both manual and electronic voting systems. Sources from various research materials and authors outline a number of challenges.

Cost of organizing elections is high. The procurement of materials that ensure the validity of the voter's registration, as well as the complete success of the electoral process makes

election costs very high. Indelible ink, ballot boxes and papers as well as other logistics, despite being expensive, are indispensable in a manual voting system. Initial cost of implementing an electronic voting system is also considered to be high, as is typical of all computerized systems. This is often prohibitive to developing countries like Ghana, Kenya, and India etc. (Ofori-Dwumfuo and Paatey, 2011).

Voting process is quite long. The manual voting exercise involves a number of steps that result in long queues. This is because each voter takes a considerable amount of time to vote. This also leads to delays in result publication; it has been gathered that it takes the three days to eventually publish a presidential election result mostly in developing countries.

Civic and voter education and awareness on the use of voting systems is a challenge. Voter awareness and participation on the use of electronic systems is limited in developing countries where most of the population is computer illiterate. Due to inaccessibility of interior regions and lack of information infrastructure, information flow to the grass roots is difficult.

Introduction of electronic voting systems leads to confusion, delays due to misunderstanding, interruption due to communication breakdown and resistance due to misinformation or difficulties experienced. Challenges of variability in wait times, sporadic instances of machine malfunctions and possible voting tabulation errors,

undercounts, and over counts are mainly experienced in developed countries who have adopted the electoral systems like America (Alvarez& Brady, 2005).

Security of the voting system at national level i.e. how the system could be attacked by hackers and fraudsters, including system administrators who may be in favor of some particular candidates (Smith and Rupp, 2002).

Difficulties in choosing a voting system that ensures gender parity in representation in political institutions. This has led to limited chances of female voters due to lack of proper implementation mechanisms to ensure women's equal access to justice and the law. This is being experienced mainly in Muslim-based countries e.g. Egypt, Tunisia, Iraq etc.(IFES Briefing Paper | November 2011)

In summary, countries face high implementation costs of electronic voting systems, long procurement processes of voting materials, high illiteracy levels, gender biasness and lack of infrastructure. They also face problems of systems security, system complexities, communication breakdown and resistance due to misinformation or difficulties experienced.

2.4 MODELS/THEORIES OF ICT DRIVEN CHANGE

Different models and theories have been developed with the purpose of trying to understand change and incorporate it into the organizations' processes and operations. These models and theories enable for the successful enrolment and adoption of change

minimizing any resistance as not everyone accepts or welcomes change easily depending on their strengths and weaknesses.

2.4.1 Diffusion of Innovation

Rogers, (1995) refers DOI theory as ‘a popular model used in information systems research to explain user adoption of new technologies’. Rogers defines diffusion as ‘the process by which an innovation is communicated through certain channels over time among the members of a social society’. An innovation is an idea or object that is perceived to be new. According to DOI, the rate of diffusion is affected by an innovation’s relative advantage, complexity, compatibility, trialability and observability. After extensive literature reviews, conclusions reveal that relative advantage, compatibility and complexity are the most relevant constructs to adoption research. Rogers,(1995) defines relative advantage as ‘the degree to which an innovation is seen as being superior to its predecessor’.

2.4.2 Technology Acceptance Model

Technology Acceptance Model (TAM) is an adaptation of the Theory of Reasoned Action (TRA) to the field of IS. TAM is ‘the degree to which an innovation is seen by the potential adopter as being relatively difficult to use and understand’. TAM posits that perceived usefulness and perceived ease of use determine an individual's intention to use a system with intention to use serving as a mediator of actual system use. Perceived usefulness is also seen as being directly impacted by perceived ease of use. Researchers have simplified TAM by removing the attitude construct found in TRA from the current specification (Venkatesh et. al., 2003).

2.4.3 Punctuated Equilibrium

The theory of punctuated equilibrium explains variations in organizations as occurring mainly in periods of gradual evolution that are “punctuated” by sudden, revolutionary periods of rapid change (Elderidge and Gould, 1972). Although punctuated equilibrium was initially developed in the field of biology, it has since been applied to study organizational change; specifically, to study how firms respond to sudden changes in their internal composition as well as in their environment. Punctuated equilibrium appears favorable over other theories of organizational change because of its emphasis on radical change occurring in extended periods of time. Punctuated equilibrium has also been applied to study organizational change and its relation to information systems. Sabherwal et al. (2001) theorized about the dynamics of organizational change and IT strategic alignment by drawing on the concepts of punctuated equilibrium theory. Similarly, other researchers in IS have adopted a theoretical approach that can be characterized as punctuated equilibrium.

2.4.4 Interpretivism

Interpretivism is a qualitative approach which aims at gaining a wider understanding of a research area under study through exploring the richness and complexity of phenomena and discovering in-depth meanings, concepts and relationships. Qualitative research, broadly defined, means "any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification" (Strauss and Corbin, 1990). Although acceptance of interpretivism is increasing within human movement sciences, positivism remains the dominant paradigm, as it does in other social science

fields. Concepts, interpretations or meanings that human beings attribute to what they perceive are inseparable from what is considered as real life i.e. reality. Depending on who is posing questions and who is answering, different meanings bring out important aspects of ICTs but due to many potential perspectives are at times difficult to reduce to doable projects (Njihia, 2010). Unlike quantitative research, there is no overarching framework for how qualitative research should be conducted; rather each type of qualitative research is guided by particular philosophical stances that are taken in relation by the research to each phenomenon.

2.5 SUMMARY

It is helpful to understand the environment within which change takes place while thinking about the relationship between organization change and the introduction of ICTs. More realistically, it is important to understand the multi-dimensional environments that exist and how they influence change. The socio political environment incorporates local culture and political regimes which are related with country differences in IT adoption and economic performance which increases complexity, variety, and the need for change. Different models and theories have enabled for the successful adoption and implementation of change minimizing resistance at the user level.

ICTs in developing countries have been used within governments in ‘automation’ mode of their operations and processes. Electoral systems are part of E-Gov initiatives but have faced numerous challenges as highlighted earlier. The need to study and adopt ICTs to achieve organizational change would greatly enable in overcoming most of the challenges. The new electoral body in Kenya, IEBC, seems to be overcoming most of the

hurdles faced by its predecessor body through the use of ICTs and in implementation of organizational change.

2.6 THEORETICAL APPROACH

An interpretivism approach is chosen due to the qualitative nature of this study and is conducted with an aim of understanding how change occurs in a socio-political environment. Interpretivism approach fits well with this study as it helps in bringing out deeper understanding and multiple meanings where there are no definite quantitative or statistical data which can give richness, depth, and complexity of a phenomenon. Concepts of grounded theory methodology, which is an approach for looking systematically at (mostly) qualitative data (like transcripts of interviews or protocols of observations) aiming at the generation of theory (Corbin's & Strauss, 2008), shall be used in gaining a better understanding of the change process from the data collected.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

The research is a case study based on understanding organizational change and adoption of ICTs in a socio-political institutional environment. The research has been conducted as a qualitative study as the concept of organizational change is greatly based on individual perceptions of a particular situation and therefore in a socio-political environment, it is difficult to provide any specific data that could be generalized to every situation.

3.2. CHOICE OF CASE STUDY

IEBC is the new electoral body set up to replace the disbanded ECK which was widely blamed for the election violence witnessed after the general elections in 2007. A case of the Kenyan electoral body is unique and better represents the complexity within the social political environment due to the challenges it has faced over the years and how it has tried to address them through the use of ICTs gaining acceptance and success.

3.3. DATA COLLECTION

The data for the study was collected from key informants' in the various divisions/ sections within IEBC – IT department, HR and Administration department, Finance department and Legal and Public Affairs department etc. The primary data was gathered from unstructured (in-depth) interviews. It comprised of open ended questions to give deep understanding of change in a complex context.

The data collected was through the use of interview guides as the main research instrument and was administered by the researcher for respondents to give information in line with the research objective. Data analysis was done according to the research questions and the findings then considered and discussed.

3.4. DATA ANALYSIS

The study is qualitative in nature therefore the open-ended questions were analyzed using content analysis so as to establish the fundamental similarities among the set of observations. Concepts of grounded theory were used to analyze the data in order to understand organizational change and how IEBC has been able to overcome the challenges faced by its predecessor in such a socio-political environment.

Grounded theory method is a research method which operates almost in a reverse fashion from traditional social science research. Rather than beginning with a hypothesis, the first step is data collection, through a variety of methods. This contradicts the traditional model of research, where the researcher chooses a theoretical framework, and only then applies this model to the phenomenon to be studied (Allan, 2003).

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 INTRODUCTION

This chapter deals with the analysis of data collected, coming up with findings or results from the analyzed data and formation of discussions from the findings addressing the research objective of the area under study.

4.2 CASE DESCRIPTION

IEBC is the electoral body that permanently took over the electoral process once IIEC's and IIBRCs terms came to an end. Its major stakeholders include the Ministry of Justice and Constitutional Affairs and Ministry of Finance. It also works closely with political parties, media, development partners (Sweden, Netherlands, Norway, and EU etc.), observers (local and international) and security organs.

IEBCs organizational structure comprises of a chairman, vice-chairperson and 8 commissioners. It has a secretariat composed of the Chief Electoral Officer (CEO), 2 Deputy Chief Electoral Officers (DCEOs), 9 Directors and 17 Managers, 17 Regional Election Coordinators and 210 Constituency Election Coordinators. The directorates are ICT, Voter Education and Partnership, Finance, HR and Administration, Legal and Public affairs, Research and Development, Voter registration and Electoral Operations.

This study was carried out in order to understand how IEBC implemented organizational change and adopted ICTSs towards addressing issues that arose from the disbanded electoral body. An interview guide was used as the key data collection instrument and addressed different areas that affect the institution. Unfortunately, due to the busy schedules of the top management, information was gathered from 6 representatives of senior management, i.e. 2 representatives of the directorate of ICT, 2 representatives of the directorate of Voter Registration and Election Operations and 2 regional and constituency coordinators. Documents in form of booklets, field notes and reports gathered from the interviewees also assisted in analysis as they enabled in the acquisition of useful information to assist in the analysis purposes and better understanding of the area under study.

4.3 ORGANIZATIONAL AND ICT CHANGE PROCESS AT IEBC

In line with recommendations made by the Independent Review Commission (IREC), popularly known as the “Kriegler Commission” and Kenya’s Vision 2030 which envisions a political system which is people-centered and accountable, IEBC has had to adopt and implement reforms to its organization’s structures and information systems both internally and externally in order to be in tandem with international standards of electoral processes and in accordance with the Kenya constitution.

According to the representatives, various issues faced the previous electoral body varying from legal weaknesses, inadequate funding, inefficient procurement procedures, political interference, lack of stakeholder involvement etc. These issues affected both the internal

and external environment of IEBC through organizational structures and electoral systems. They included:

Conducting of the presidential, parliamentary and civic education on the same day presented a great challenge to election officials. This was due to the sheer volume of workload involved in conducting of the whole electoral process.

A weak legal framework led to a lack of constitutional backing for the electoral body. This is because laws that would govern the electoral body in the election process and management were scattered in different statutes of the constitution that were in force. Offences were not comprehensive enough to cover new and ingenious ways of defeating their purpose and lack of prosecutorial powers by the commission in election related offences significantly contributed to weak enforcement of these laws.

Integrity, competence and knowledge levels of the electoral officials seemed to be compromised by the pressure from the politicians and public as a result of delays in vote tallying and announcing of results. Their knowledge and skills in the administration of the electoral process in accordance with existing electoral laws and regulations seemed to be lacking in the way they handled the electoral process sparking dissatisfaction resulting in the chaos witnessed.

Voter registers were created through the use of black books and Optical Mark Recognition (OMR) forms. The black books were invalidated by parliament as they were

found to contain names of dead persons, double or multiple registrations, missing names, misspelled names, wrong information entered etc. This systems lacked clear verification mechanisms of quality and quantity of workload done at any one given time.

Inadequate facilities due to constraints of funding and lack of proper planning hindered the smooth running of the electoral process. In arid areas, lack of registration centers and ideal election structures proved difficult as some were under trees and no alternative provisions made for accommodation.

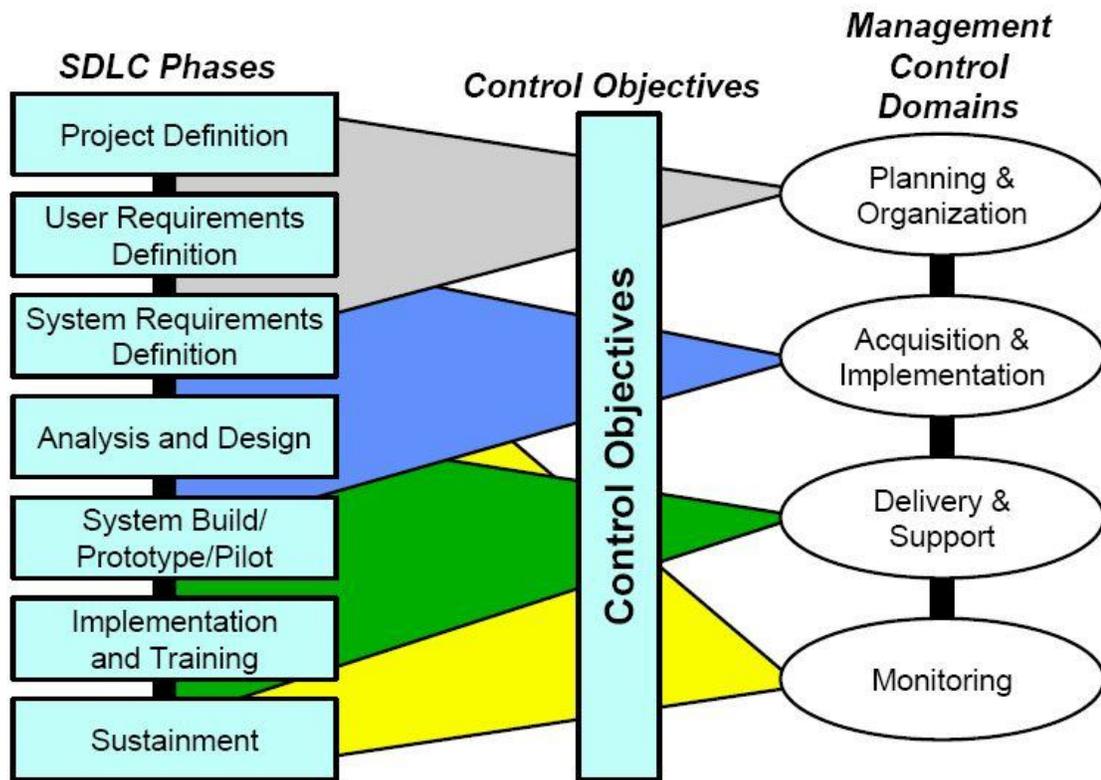
Voter education and awareness proved difficult due to inaccessibility of interior regions and lack of information infrastructure hindered information flow to the grass roots. The electoral body lacked enough voter education programs, had uncoordinated voter education providers and used inappropriate information platforms/channels to reach the public in numbers.

Finance and procurement functions of the electoral body have experienced problems with the government Integrated Financial Management Information System (IFMIS) which often breaks down slowing down processes thereby frustrating both users of the system and the external and internal customers. The functions are also understaffed and delays in payment of staff experienced negatively impacting on the operations of the commission.

4.4 SDLC PHASES RELATED TO MANAGEMENT CONTROLS

From the above issues, the secretariat had to come up with counter measures or solutions to address each and every one of them. A simple model of SDLC phases that is related to

management controls is used to explain how the change management process was carried out. The model takes up the phases of a systems development life cycle, introduces control objectives and gives it an institutional form which fits well with the change process of IEBC. The model takes the SDLC phases and simplifies it to four phases as shown below:



U.S. House of Representatives (1999) *Systems Development Life-Cycle Policy*

4.4.1 Planning and Organization

IEBC had to plan and organize how to address the issues by identifying the underlying problems. The plans addressed different issues and included:

Conducting in-depth analysis of the legal framework for purposes of identifying gaps and loopholes they might have been used to weaken efforts of free and fair elections. The commission employed a multi prolonged strategy to achieve the required legal reforms, including research and study tours on best practices and collaborations and regular consultations with key stakeholders in the electoral process.

Part of the commissions mandate was to “settle minor disputes during an election as may be approved by law”. The commission was therefore entitled to put in place certain principles and procedures to enable it deal with conflicts and disputes as they occur.

The commission was required to identify sources of funds to facilitate operations of the electoral body. The funds would be used to cover both the electoral process and facilitate the staffs’ remuneration.

The commission was required to decentralize the procurement process as per the Public Procurement and Disposal Act, 2005 and the Public Procurement and Regulations, 2006. It was also required to set up regulations and committees to oversee the procurement function to ensure transparency and accountability of the process.

Civic education seemed to be a major challenge as it seemed to be solely the responsibility of IEBC therefore there was a great need to develop voter education programmes and use different platforms in order to create voter awareness and educate the electorate on the electoral process.

To ensure cooperation and awareness when introducing or implementing various plans, the commission planned to create links and strengthen collaboration efforts with their key stakeholders.

According to the IT personnel, automation and adoption of information systems i.e. voter registration systems, transmission systems and information security, was key towards making the electoral process more efficient and transparent. This required the commission to strategize, carry out reforms, source and implement information systems that would enable for an efficient, fast, reliable and transparent electoral process.

4.4.2 Acquisition and Implementation

This stage involves how the commission was to carry out or implementing the plans in addressing the issues. The commission reviewed, collated and harmonized the laws into an acceptable legal framework to align them with the provisions of the constitution of Kenya 2010. While the legal framework provided for a general guide in the conduct of the elections, reform efforts were geared towards having specific laws to guide the electoral process in line with universal democratic principles.

A prerequisite to a properly functioning electoral system was an effective Electoral Dispute Resolution (EDR) mechanism which would operate before, during and after and also between elections. The mechanisms may consist of various models such as; Constitutional courts/councils, specialized electoral courts, judiciary EDR systems, administrative EDR systems and ad hoc provincial bodies.

For funding purposes and government support, the commission was provided with finances to establish its own secretariat and allocated its vote in accordance with the government financial regulations and procedures.

The procurement function of the commission was to be regulated by the public procurement and disposal Act, 2005 and the public procurement and disposal regulations, 2006. The main objective was to ensure that the procurement function is not done by one person, but rather corporately, and that transparency, competition and value for money are taken into account. The commission was also to establish a no. of committees at the HQ and the regions.

According to the commission, it was felt that voter education should not only be left for the electoral body to conduct but should involve other stakeholders in the society e.g. NGOs, public bodies, political parties etc. However, to establish the voter education needs, the commission undertook a survey and results were used to prepare appropriate voter education materials.

To create collaboration with key stakeholders, the commission realized and identified the need to incorporate all their stakeholders for a smooth running of their functions. The commission would therefore gain the support and goodwill of key players in the electoral process through structured engagements.

In line with automation of information systems, the commission employed technology reforms in the management of elections which entailed the continual introduction of ICT approaches in voter registration and transmission of election results to enhance efficiency and effectiveness in its operations and in the electoral process. In the reforms carried out, various areas were covered to ensure they took full advantage of the technology advancements.

4.4.3 Delivery and support

From the various decisions recommended and implemented, the commission was able to come out with favorable deliverables from which would be used in the change process. According to the legal framework reforms, the resultant laws included; IEBC Act, 2011, Elections Act, 2011, Political parties Act, 2011 and Campaign financing bill, 2011.

In relation to electoral dispute resolution, Kenya chose a hybrid of the judicial and administrative EDR model. The board was therefore empowered by elections act 2011 to make regulations to “provide for complaints resolution mechanisms and for the manner of settlement of electoral disputes” It was also to deal with all electoral disputes upto and until a result is declared (administrative) and the ordinary courts of justice (judicial) empowered to handle disputes once a declaration has been made. Special initiatives have since been put in place by the commission e.g. conflict management panels to provide mitigating mechanisms both at the national and regional levels to preempt incidences of violence and promote tolerance and co-existence, launching of regional conflict management panels and training of panelists.

Salaries and allowances of commissioners are directly charged on the consolidated fund under the constitutional offices remunerations act. The other costs regarding staff remuneration and operational expenses are funded by treasury and development partners.

According to the procurement function, the committees formed were: tender committee, receiving and inspection committee, disposal committee, and the procurement committee. Ad hoc committees are normally appointed to evaluate tenders and quotations. The committees are to enhance checks and balances over the procurement of goods and services for voter registration, referendum and by elections to ensure all procurement is above board, fair, transparent, competitive and there is value for money.

According to a representative to the voter registration and electoral operations, a voter education handbook was developed and used during countrywide voter education exercise in preparation of the referendum. It also developed a partnership policy to regulate engagement with development partners both locally and internationally and a curriculum on voter education to guide and regulate the information to the electorate. The commission was able to enhance voter registration exercise through application of various platforms such as media campaigns both in print and broadcast, recruitment of voter educators, use of bulk SMS, voter education materials, branding, engagement of provincial administrators and consultative forums (with diplomatic corps, women and youth groups, civil society, media, disabled, IDPs etc.) to target specific groups.

The commission established collaborations and worked alongside other partners in administering its mandate i.e. the political parties, media, development partners (Sweden, Netherlands, Norway, and EU etc.), observers (local and international) and security organs.

According to the ICT personnel, Information systems adopted for the electoral process included Electronic Voter Register (EVR) and the Electronic Transmission of Results (ETR) technology successfully piloted in 18 constituencies during the fresh voter registration exercise.

The adoption of biometric technology to capture voters' details and uniquely identify them during the electoral process and to solve the issues arising from electronic voter registers as they are end to end solutions that provide audited and documented secure processes of validating and updating of the registers.

Ensuring that data and physical equipment security both at the headquarters and in remote locations is only accessible via access control systems which provide access to authorized users. The use of servers and related support infrastructure to support the commissions' core functions of voter registration management system, collection, collation and transmission of results.

Source for electronic systems through the public procurement and donor aided processes to ensure fairness, transparency and accountability. Through the various committees

formed, the purchase of the systems would be procedural and enable for easy application of checks and balances should problems arise.

To ensure efficient internal communication, mobile technology was implemented. Use of GSM-enabled mobile phones intended to ease email and phone communication amongst the staff.

Trainings were to be planned and conducted through the HR and administration department for consistency of information for end users through the use of policies and procedures manual. This would help in having a competent workforce well equipped with ethical skills to handle pressure and difficult situations.

As a result of the reforms carried out in making the electoral process more transparent and reliable, IEBC was able to understand the multi-dimensional environments that exist and how they influence change. The commission was able to effectively implement organizational change through restructuring various departments' operations i.e. internal environment while adoption of ICTs was to cater for the electoral systems i.e. the external environment.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter provides a summary of findings from chapter four, draws conclusions and recommendations from the information analyzed based on the objective of the study.

5.2 SUMMARY

The study was carried out with the purpose of understanding the implementation of organizational change and adoption of ICTs in IEBC. From the findings of the study, IEBC has really tried to implement most of the reforms set upon by IIEC and IIBRC in overhauling the electoral process and creating a good image of the electoral body both regionally and internationally. Improvement is a continuous process and the commission strives to improve further its operations and processes towards fully automating the electoral process mainly with assistance and corporation with its stakeholders.

Implementation of organizational change into operations of the various units of the institution and adoption of ICTs has improved greatly the operations and processes of IEBC creating an atmosphere of a free and fair general election despite fears of violence erupting once more due to political tension. Streamlining of operations both internally and externally has seen the electoral body look more stable and able to carry out a proper and transparent electoral process. Systems implemented seem to be working well even though tested through pilot projects and a lot of information is now being conveyed to the

general public through the use of various platforms and in their website. Voter awareness and civic education has been enhanced more to be able to reach even areas where access was initially difficult to access due to lack of infrastructure.

However, the findings of the study also have brought out some issues about the implementation of organizational change and adoption of ICTs in IEBC. The various technological, political and social changes gave rise to a number of structural and strategic changes that also affected the institutions stakeholders. It is however worth noting that no such kind of changes can be fully implemented without challenges. IEBC should move a step further to involve its stakeholders more so as to roll out acceptable and user friendly systems both internally and externally.

5.3 CONCLUSION

The study concludes that organizational change enables in transitioning individuals, teams, and organizations and entails thoughtful planning, sensitive implementation, and above all, consultation with, and involvement of the people affected by the changes. It is aimed at helping in acceptance and embracing of change in a complex business or socio-political environment towards achieving the overall goal of the organization.

In thinking about the relationship between organization change and the introduction of ICTs, it is helpful to understand the environment within which change takes place. The study of the nature of local adaptations to global IT-based techniques in developing countries requires an understanding of the wider and local contextual factors influencing the implementation of such techniques, the process of implementation at the local level,

and the ensuing change resulting from the implementation process. Theories such as DOI and punctuated equilibrium can greatly help in the understanding and local acceptance of such innovations and global IT-based systems.

5.4 RECOMMENDATIONS

The study recommends that there be continuous dialogue between the electoral body and its stakeholders in regard to constitutional reforms so as to create an understanding of the needs, concerns stakes at hand during implementation stage.

There is a lot more to be done on civic education especially to those persons with special needs e.g. blind, deaf, physically challenged etc. That the commission should enforce more voter education programmes to target such groups.

The pilot projects being conducted to target many areas so that many people can get to know how the electronic systems work and get to understand their purpose and benefits enabling for acceptance once they are rolled out for use.

5.5 LIMITATIONS OF THE STUDY

Interviews are considered time consuming or mind bogging by respondents who seemed to prefer questionnaires with structured questions i.e. mainly with multiple-choice answers. Finding the directors and managers was not easy mostly due to their busy schedules and those below them were hesitant to divulge information citing sensitivity of organization's data.

5.6 SUGGESTIONS FOR FURTHER STUDY

The study is qualitative in nature and targets the management. A further study to target even other members of staff would expand further and give a clearer picture of how the organizational change has been incorporated to the lower levels and how the adoption of ICTs has affected the operations of the institution as a whole.

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APPENDIX 1

INTERVIEW GUIDE I

These interview guide aims at providing insights into how IEBC has been able to implement organizational change and adopt ICTs in a socio-political environment to overcome the challenges faced by the defunct electoral body.

The interview guide is meant for the senior management who are more of the decision makers, i.e. the directors and managers.

SECTION A

1. What are the challenges faced by IEBC inherent from the ECK perceived to have led to the failure of the electoral process as a whole and mainly in the December 2007 elections?
2. IEBC's organizational structure is different from what was previously there. What management structures/systems have been introduced and how effective are they in handling and managing the electoral process?
3. What legal framework (i.e. electoral laws, policies and procedures) has been implemented by IEBC to strengthen enforcement of law and give it more powers? Has the constitution contributed in any way in the strengthening of the electoral body?

4. What conflict resolution measures have been put in place to quell political disputes and social injustices that might be witnessed during the election period?
5. How has the Government supported the change financially from ECK to IEBC? Have any donors come in aid of the electoral body and what are their influences towards the electoral process?
6. How has the procurement process been and what changes have been introduced to ensure better and timely delivery of resources for use before, during and after the election process?
7. What are the electoral body's plans in regard to civic education and voter awareness of the electoral process across the country? What mode of communication is to be used to reach the grass root areas considered difficult to access due to lack of infrastructure?
8. What has IEBC done to cater for people living with disabilities in order to incorporate some of them as employees and facilitate an easy voting process?

SECTION B

9. What type of information systems and infrastructure has IEBC installed/adopted in automating and taking advantage of technology advancement in handling the electoral process?

10. What form of support, security and safety measures have been adopted and implemented towards securing data and physical equipment during the electioneering period?
11. Has the electoral body sought for IT support through experts and consultants to fully explore automation of the electoral process?
12. How has IEBC sourced for electronic systems and in automating their processes? Are there any success stories from other countries that have implemented such systems?
13. How has the electoral body trained its staff in the use and handling of automated electronic systems?
14. What internal and external communication mechanisms have been put in place to enable flow of information to the public, media, staff and stakeholders?
15. What have you done about the electronic voter registers in ensuring clean voter rolls, easy updating and auditing of the system?
16. How has IEBC addressed the issue of resistance to change due to introduction of electronic systems as witnessed recently during the mock election process in Mombasa?

INTERVIEW GUIDE II

These interview guide aims at providing insights into how IEBC has been able to implement organizational change and adopt ICTs in a socio-political environment to overcome the challenges faced by the defunct electoral body.

The interview guide is meant for the coordinators at the poll/work stations involved both as returning and registration officers, i.e. the regional and constituency election coordinators.

1. What are the main challenges faced by IEBC and its staff at the regional and constituency level?
2. How efficient and effective is the secretariat in handling issues raised at the regional and constituency level?
3. How has introduction of management and automated systems been relayed to the users in their various work stations and what is their reception? Have you encountered resistance and how have you handled such cases?
4. How do you handle feedback, suggestions and ideas from constituents and other stakeholders at the regional and constituency level?
5. Has culture and/ religion influenced how the electoral process is conducted and the electorates' preferences?
6. How do you conduct voter education and civic education at the grass roots taking into consideration people living with disabilities?