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A framework for the adoption of Information and Communication Technology in faith-based organizations in Kenya: a case of Comboni Missions

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A Framework for the Adoption of Information and Communication Technology in Faith-Based Organizations in Kenya:

A Case of Comboni Missions

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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 thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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ABSTRACT

This research covers the adoption of ICT in Comboni missions, a faith-based organization with operations in Kenya among other global countries. Comboni missions focus on less developed Kenya counties, and in economically challenged areas such as slums in Mathare, Korogocho, Kariobangi in Nairobi. Regarding ICT adoption in Comboni missions and other faith-based organizations in Kenya, there is little empirical data available. The reasons are neglect by organization and information theorists who have focused on for-profit organizations and the unique nature of most faith-based organizations in general.

Comboni missions are unique in terms of organizational culture and values, in their economies and in focus. They are faith-based and mostly voluntary in nature and seek no profits. Their economies are donor-dependent. They focus on accountability of received funds rather seek to attain competitive advantage. Donor funds allowing, ICT adoption may be adopted in a mission. This adoption is in isolation and without policy guidelines. The problem is haphazard adoption leading to poor adoption and low quality systems. To solve this problem, this study proposes a framework of how Comboni missions should adopt ICT; the unified theory of acceptance and use of technology, (UTAUT).The framework proposes that Comboni missions device a policy to govern ICT adoption; involve stakeholders in the adoption, besides lending support in ICT infrastructure development where needed.

The framework was validated and tested for accuracy through the inferential statistics (regression analysis model) at 5% level of confidence.

The significance of the study is that by adopting ICT, Comboni missions will bridge the organizational divide; or attain the capacity and competence to adapt business and technological capacities of private and public organizations to be digitally competent. The Comboni missions would also bridge the digital divide currently plaguing the underdeveloped areas and the slums where Comboni missions offer services.

The study findings are that policy, user behaviour, ICT infrastructure and community determine ICT adoption in Comboni missions and similar faith-based organizations.

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OPERATIONAL DEFINITION OF TERMS

Employee Competencies identify behaviors and skills all employees are expected to demonstrate to carry out the mission and goals of the organization (UNCTAD, 2011).

Information and Communication Technologies (ICT) is a generic term used to express the convergence of information technology, broadcasting and communications. Prominent examples are the personal computers and the internet. (www.businessdictionary.com)

Economics is used here to refer to the capacity to procure resources for operations or to acquire equipment for modifications or enhance an existing capability of an organization.

Organization structure is the typically hierarchical arrangement of lines of authority, communications, rights and duties in an organization. Organizational structure determines how the roles, power and responsibilities are assigned, controlled, and coordinated, and how information flows between the different levels of management.

Regulations: These are appropriate legal and regulatory framework for efficient administration of IT Units designed to prevent misuse of IT and protect intellectual property rights, patents & trademarks (Wilson, 2007).

Determinant An influencing or determining element or factor (The Free Dictionary)

Cronbach's (**alpha**) is used as (lowerbound) estimate of the reliability of a psychometric test. It is the expected correlation of two tests that measure the same construct.

CHAPTER ONE

1.1 Introduction

This chapter is the beginning of this research; therefore it will offer background statement, proceed by providing the statement to the problem, proceeding thereafter with the coverage of research objectives and research questions that were answered in the study then conclude by presenting the significance, scope and limitations of the study.

1.2 Background to the study

According to Otieno (2015) an organization adopts ICT because of the following factors, namely: perceived usefulness, perceived ease of use, perceived cost of deploying ICT, owner or top management support and employee ICT knowledge and skills. Any organization, even faith-based, would evaluate its capacity to adopt ICT in the light of these factors.

In the same vein, organizations have traditionally adopted ICT for the following benefits: to increase operational efficiency; to improve communication with suppliers; to enhance joint collaboration; to offer better customer service; to compete in the market; to attain staff satisfaction (Harindranath et al, 2008). Thus, information and communication technologies (ICT) play a key role in the operation of an organization. Organizations that have adopted ICT contend that the scale, complexity, strategic focus, connectivity and processing power of ICT helps them to realize superior service delivery, deliver customer satisfaction and attain competitive advantage in competition with its peers. Kohli et al, (2002).

The reasons cited above may not be universally applicable to organizations in peculiar operational circumstances such as the faith-based organizations like Comboni missions. To begin, their economies are dependent on donor funding; and so are affected by donor policies. They are voluntary in nature, and do not seek profits. They are guided by different values and focus: faith, accountability, and community focus rather than seeking competitive advantage like for-profit organizations. Because of these reasons, adoption of ICT in their case follows different factors and motivations. The following sections will introduce the said faith-based organizations

and present their peculiar circumstances that determine how the adopt ICT from a different approach. The case of Comboni missions will be utilized.

1.2.1 Faith-Based organizations

For purposes of this research, faith-based organizations are defined as organizations affiliated with a religious body; or have a mission statement with religious values; or have financial support from religious sources; or whose governance structure is based on religious beliefs. Ferris, (2013).

In Africa in general, and Kenya in particular, faith-based organizations are widely present and acknowledged as important providers of essential spiritual and social services (education, health and conflict resolution). Olarinmoye, (2012). One such faith-based organization is Comboni missionaries whose missions this study studied as a case.

1.2.2 How Faith-based organizations differ from for-profit organizations

Faith-based organizations differ from the public and for-profit organizations in terms of:

Values and culture: They are based on faith; are not operated for profit; but instead volunteer to be credible providers of social services to the marginalized and disadvantaged in the society. Olarinmoye, (2012).Focus: Faith-based organizations focus on accountability rather than attain competitive advantage. Economics: Faith-based organizations are mostly donor-funded; Adoption of ICT in this case is dependent on funding provision. Policy: Faith-based organizations operate along their mission and vision with bias towards the marginalized people in remote areas and the disadvantaged people in slums. Therefore, goals like competitive advantage or staff satisfaction are not prioritized.

1.2.3 Adoption of ICT in faith-based organizations

Comboni missions have adopted ICT in select development projects in Marsabit, mobile clinics in Amakuriat in Pokot Kenya, dispensaries in Kariobangi, Nairobi, women and youth empowerment programs in Kariobangi, Nairobi county, technical education in Marsabit Kenya, education in, education in St. John primary school Marsabit by acquiring Personal computers, to offer training in operating systems, user software for example Microsoft Office, secretarial, communication equipment, the internet, email and the web for office use, and for other

vocational training. In the 17 centres studied, the system are old, have low memory, hard drive spaces, and are underutilized. In some missions the systems are secondhand. In all the missions, the systems are used for simple, elementary office duties: desktop publishing, accounting, database, audit, vocational training and, occasionally, the internet. In none of the 17 missions is research undertaken through the internet or other databases.

According to Kvasny (2008), information systems researchers and organizational theorists have mainly been concerned with the design and implementation of ICT in the private and public sector; consequently, less scholarly attention has been given to faith-based organizations, (Kvasny, et al, 2008). In terms of information, most IS research has been conducted in the domain of private business. Substantially fewer studies have empirically examined the emergent use of ICT in the faith-based organizations, Kvasny(2002; Lee (2003).

1.3 Statement of the problem

From literature cited above, it has been established that information systems researchers and organization theorists have mainly been concerned with the design and implementation of ICT in the private and public sector; with less scholarly attention being given to the sphere of faith-based organizations (Kvasny, et al, 2008;2002;2003). Lee (2003): previous research has largely ignored the use of ICT in faith-based organizations.

Cognizant of the emerging strategic value of ICT for faith-based organizations in America, for which the White House initiative to fund American faith-based organizations was set up, Kvasny (2002:2003:2008); Lee (2003) investigated the reasons determining the adoption of ICT in American faith-based organizations. The findings were that the determinants of ICT adoption in faith-based organizations follow their unique nature: focus (faith-based organizations focus on accountability and improved management of received funds); economics (faith-based projects are donor-funded, rather than having funds of their to invest) and finally, policy (faith-based organizations are governed according to missions and visions in which ICT adoption is not a priority (Ariza-Montes, et al, 2014).

Kvasny's (2014) proposed solution was the adoption of ICT systems and acquisition of competence through the training of faith-based organizations' personnel so that they could attain ICT competence apply for federal funding to drive their missions and visions.
However, this solution is one-dimensional, since it only emphasizes only staff ICT competence. On the other hand, ICT adoption is dependent on several determinants, Otieno (2015).

Building on this research, this study sought to investigate the determining factors of ICT adoption in Comboni missions in Kenya, in a holistic way. It is hoped that this can be applied to other faith-based organizations in the similar missions. A case in point is Evangelizing Sisters of Mary. The thesis of this research is that a framework would better successfully manage the process of ICT adoption in Comboni missions. This is because without a framework adoption of ICT in faith-based organizations will be haphazardly done resulting in single-dimensional, misplaced approaches that would not guarantee successful implementation. Failure to observe this may lead to loss, goal misplacement and delayed project implementation.

1.3 Research significance

This significance of this study is contribution to literature on ICT adoption by faith-based organizations through a framework. This framework is relevant to system and organization theorists in further research in the subject of ICT adoption in faith-based organizations. Further research in this subject would contribute knowledge on ways to bridge the organizational and digital divide that characterize the underdeveloped areas that Comboni missions serve, such as the marginalized areas and the slums. In the absence of such data, the world has continued to assume that all organizations are benefitting from the emergent use of ICT. In the light of the digital divide, and the varying dimensions of social stratification, it becomes quite evident that that there are groups in our society who have not realized the benefits of technological innovations. (Kvasny, 2002).

1.5 Objectives of the study

1.5.1 General objective

The general objective of the study is to establish the determinants influencing the adoption of information and communications technology in a faith-based organization, with the case of Comboni missions in Kenya as a point.

1.5.2 Specific objectives

The specific objectives of the study were to;

1. Identify factors determining adoption of ICT in faith-based organizations.
2. Review existing frameworks of ICT adoption in faith-based organizations.
3. Develop a framework for ICT adoption in Comboni missions.
4. Validate the proposed framework of ICT adoption in Comboni missions.

1.5.3 Research Questions

The study sought answers to the following questions;

1. What are the factors determining the adoption of ICT in a faith-based organization?
2. What are the existing frameworks of ICT adoption in faith-based organizations?
3. Cana framework for ICT in Comboni missions in Kenya be attempted?
4. How can the proposed framework be validated?

1.5.4 Scope of the Study

This research covered ICT adoption in 17 Comboni Mission centres, namely: Kariobangi, Marsabit, Kacheliba, West Pokot, Kapenguria, Lodwar, Ongata Rongai, Karen, Ngong Road, Sololo, Tartar, DolDol, Laisamis, Amakuriat, Westlands. The population studied was 75 persons comprising of staff that directly use ICT in their daily work in the missions. These staff works in hospitals, development centres, resource centres, publications, educational institutions, and youth and women empowerment projects.

1.6 Limitations of the Study

The study suffered effects of cost and travel limitations in the attempt to study all the 17 Comboni missions identified for this research, owing to the geographical spread of the study area (refer to the map of the Comboni missions in Kenya). To overcome this, the representative sampling method of data collection was adopted.

The study also encountered lethargy and collaboration challenges since a part of the targeted respondents were disinterested to participate in the research and refused to provide expected responses. The author managed this by discussing the relevance of the study to the willing respondents and it helped to provide a good measure of the required information. The respondents were assured that the research was only for academic writing purposes and would not jeopardize their positions in any way.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature on the subject of ICT adoption by faith-based organizations in Kenya. The sections covered are the presentation of faith-based organizations, theoretical review of literature, conceptualization of the research problem, empirical review of the literature, critique of existing literature and the discussion of identified research gaps.

2.1.2 Types of organizations

There are different ways of categorizing organizations. This research adopted the method of categorization based on purpose, or the objective of an organization. Accordingly, organizations are commercial or for-profit, and not-for-profit. Commercial organizations are operated to create wealth for the owners. On the other hand, not-for-profit organizations offer services without the objective of creating and maximizing wealth for their owners. Faith-based organizations like Comboni missions and public organizations fall into this category. (http://www.open.edu)

Faith-based organizations differ from the public and for-profit organizations in terms of: Values and culture: they are based on faith; are not operated for profit; but instead volunteer to be credible providers of social services to the marginalized and disadvantaged in the society. Focus: they focus on accountability rather than attain competitive advantage. Economics: most faith-based organizations are donor-funded rather than having vast amounts of money to invest. Policy: faith-based organizations have mission and vision focusing on the marginalized people in remote areas and the disadvantaged people in slums.

2.1.3 Factors determining ICT adoption in organizations

According to Otieno, (2015) organizations adopt ICT for the following reasons: Perceived usefulness; Perceived ease of use, Investment cost; Organizational structure and Employee ICT competence. For-profit organizations seek these benefits from ICT: operational efficiency; improved communication with suppliers; enhanced joint collaboration; superior customer service; competitive advantage; staff satisfaction (Harindranath, et al, 2008).

2.1.4Faith-Based organizations

There is no generally accepted definition of faith-based organizations; therefore an understanding of what they are is characterized by the following factors: affiliation with a religious body; a mission statement with explicit reference to religious values; financial support from religious sources; and or a governance structure where selection of board members or staff is based on religious beliefs or affiliation and or decision-making processes based on religious values, Ferris, (2013).

In this study, faith-based organizations are differentiated from public and private-for-profit organizations with references such as the voluntary sector, non-profit sector, civil society or formal organizations that are not part of government and are not run to make a profit for their owners, (Kvasny, et al, 2008). In terms of governance, faith-based organizations are independently governed, fulfill many unique social functions, and differ from business and government in their values and culture, Drucker, (1990). According to Olarinmoye, (2012), Faith-based organizations are widely present and acknowledged as important actors and providers of essential development services (education, health and conflict resolution) in Africa. Consequently, adopting ICT would validate faith-based organizations as credible providers of education, health, among others as these have benefitted immensely from the incorporation of ICT.

2.1.4 Benefits of ICT adoption in faith-based organizations

ICT is essential to a faith-based organization in order to effectively communicate, collaborate, and administer programs in the information age, Lee (2003). In addition, use of ICT has enabled creation of better products, better communication and better interaction. Thus, ICT helps deliver better organizations and ensures their growth (Kvasny, 2008).

The most fundamental benefit of the adoption of ICT by faith-based organizations according to this research is the capacity it affords them to bridge the organizational divide; that is, attain capacity as Comboni mission organization to access and process information, share and exploit knowledge, and strategically use technology to advance their mission and address pressing social problems just like for-profit organizations.

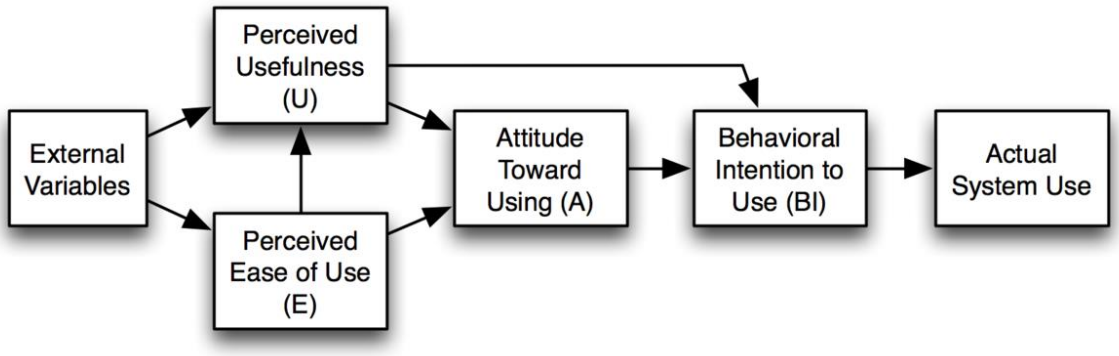
In addition, by adopting ICT, Comboni missions will bridge the digital divide currently prevalent in the underdeveloped world that such as the marginalized areas and the slums.

2.2 ICT adoption framework

According to Aleke (2011), there are several frameworks on the adoption of ICT. Aleke (2011) identified ICT diffusion of innovation framework, technology acceptance framework (TAM), and social network framework. This research utilized the technology acceptance framework.

2.2.1 Technology Acceptance Model

TAM, or technology acceptance framework was developed by Davis (1989). It has two significant determinants; "perceived usefulness" and "perceived ease of use." Theoretically, these two explain the causal link between attitudes and behaviour in the adoption of technology. The technology acceptance model (TAM) relies on the theory of reasoned action, which posits that behaviour is logically processed in the following order: belief-attitude-intention-behaviour. The relationships between perceived usefulness, perceived ease of use, attitude and intentions have been supported in the information technology literature (such as Shen and Chiou, 2010).



2. 1 The Technology Acceptance Model, adapted from Davis, Bagozzi&Warshaw, 1989

2.2.2 Analysis of the TAM framework

The strength of TAM framework in an organizational context is its emphasis of the factors that fundamentally impact the adoption of ICT; perceived usefulness and perceived ease of use.

Ensuring that these factors are successfully evaluated in a faith-based organization ensures that the ICT to be adopted will be acceptable to the users and will yield the expected returns.

TAM however is weak in the context of this paper since it focuses only on the factors of ICT adoption without focusing attention on the factors that make the choice of technology possible; that is, the resources which make the consideration of the adoption factors possible. In addition, policy in an organization is a factor to consider before evaluating the factors that drive the choice of ICT.

2.2.3 The Comboni Missions

The comboni missionaries are a society of priests and brothers, and was founded in 1867 by St. Daniel Comboni, as an international catholic missionary institute for the evangelization of peoples, bearing witness to the Gospel in dialogue and cooperation with other cultures and religions, in deep respect for all human beings with preference to the poor and marginalized, fostering their development in a more just, fair and equitable world. (Carrera, 2012)

Comboni missions incorporate development projects, mobile clinics, dispensaries, women and youth empowerment programs, education, technical training projects in their missions in Turkana, West Pokot, Marsabit and Nairobi.

The comboni sisters are a women religious organization started in 1872 following the prophetic inspiration of Daniel Comboni, (combonisisterskenya, 2015). In Kenya, they run health programs in dispensaries in Kariobangi, Nairobi and Amakuriat, in Pokot, and a host of women empowerment programs.

2.2.4 Comboni Missions Programs and ICT adoption

The Comboni missionaries have adopted ICT systems for health programs, education, youth empowerment, administration, communication, and publications in the 17 mission centres studied in this work. In the 17 centres studied, the systems are old, have low memory, hard drive spaces, and are underutilized. In some missions the systems are secondhand. In all the missions, the systems are used for simple, elementary office duties: desktop publishing, accounting,

database, audit, vocational training and, occasionally, the internet. In none of the 17 missions is research undertaken through the internet or other databases. Donor funds are used in every adoption.

2.3 Theoretical Review

Cooper, (2011) defines theory as a set of interrelated concepts that can be applied to a study, a definition, or a preposition that has been put forward to explain or predict a scenario under study. The theories adopted for this study are Information Systems Success Theory, Agency Cost Theory, Public Interest Theories of Regulation and Weick's Model Theory of Organizing.

2.3.1Information Systems Success Theory

Information systems success theory proposes that system quality and information quality affect users' usage of and satisfaction with information systems,(DeLone& McLean, 2004). Service quality was later incorporated into the model. The new model argues that system quality, information quality and service quality affect usage and user satisfaction, further affecting net benefits such as increased knowledge sharing and lower costs (DeLone and McLean, 2004). Since its inception, information systems success theory has been widely applied and empirically validated in the contexts of traditional information systems and electronic commerce. Wixom and Todd (2005) noted that information quality and system quality affect data warehousing software users' satisfaction, perceived usefulness, and perceived ease of use and usage behavior. Zhang (2010) proposed that both system quality and information quality affect social networking users' satisfaction and sense of community. Song and Zahedi (2007) reported that system quality and information quality affect users' trust in health informatics. Lin (2008) noted that system quality and information quality affect virtual community user satisfaction. Chatterjee,*et al.* (2009) conducted a qualitative study and found that system quality, content quality and service quality affect the usage of mobile technology in healthcare. Lee,et al. (2009) found that better information quality increased the usage of mobile data services, whereas lower system quality decreased usage. The information system success theory is a significant success factor to consider in the adoption of ICT by Comboni missions.

2.3.2 Agency Cost Theory

The growth in end-user computing (EUC) in organizations and its implications for the degree of centralization of the information services function have led to the need for a theory that will assist in the management of this process. The agency cost theory describes the development of ICT investment in organizations. The dramatic decline in the costs of hardware and the trend towards the increased power of microcomputers and minicomputers has enabled significant growth in ICT adoption. This trend has implications not only for the management of EUC but also for the degree of centralization of the Information Systems (IS) function in organizations. Therefore, there has been increased focus on the organizational issues surrounding EUC, as evidenced by senior IS executives' responses in several recent surveys. The key issues that arise in an agent-theoretic analysis of the management of ICT are an identification of the economic actors and their objectives, an analysis of how these objectives result in conflict, and an analysis of the nature of the resulting organizational costs. These issues must be considered in conjunction with the microeconomic and technological characteristics of the ICT environment to determine the optimal strategies for the management of ICT resources.

Eisenhardt (1989) has articulated the usefulness of agency theory in analyzing managerial problems characterized by goal conflicts, outcome uncertainty, and unprogrammed or team-oriented tasks. Many ICT activities fit this description, and it has been suggested that a large number of organizational problems in the management of ICT can be analyzed successfully in an agency context (Gurbaxani and Kemerer 1989; Beath and Straub 1989; Robey and Zmud 1989; Klepper 1990). The design of effective control mechanisms for IS activities is particularly difficult, since the agency relationship occurs in a dynamic, rapidly changing environment and management practices have little time to stabilize (Nolan 1979; Gurbaxani and Mendelson 1990). An alternative approach would be transaction cost economics, an approach with similarities to agency theory in its emphasis on information and uncertainty (Williamson 1985). However, as noted by Eisenhardt (1989), agency theory distinguishes itself from transaction cost theory by its inclusion of the notions of risk aversion and information as a commodity. The agency cost theory was significantly considered in determining that community participation is a significant factor to consider in the adoption of ICT by Comboni missions in Kenya**.**

2.3.3 Public Interest Theories of Regulation

According to the public interest theories, regulation can be explained not only by imperfect competition, unstable market processes and missing markets, but also by the need to prevent or correct undesirable market results. In a competitive market economy, participants in the economic process are rewarded according to their marginal productivity contribution. The first group of regulation theories proceeds from the assumptions of full information, perfect enforcement and benevolent regulators. According to these theories, the regulation of firms or other economic actors contributes to the promotion of the public interest. This public interest can further be described as the best possible allocation of scarce resources for individual and collective goods and services in society. Equalization of prices and marginal costs characterizes equilibrium in a competitive market. If costs are lower than the given market price, a firm will profit from a further expansion of production. If costs are higher than price, a firm will increase its profits by curtailing production until price again equals marginal cost. Market equilibrium, and more generally equilibrium of all markets is thus a situation of an optimal allocation of scarce resources. In this situation supply equals demand and under the given circumstances can market players do no better. A great number of conditions have to be satisfied for an optimal allocation in a competitive market economy to exist (Boadway and Bruce, 1984). One of the methods of achieving efficiency in the allocation of resources when a market failure is identified is government regulation (Arrow, 1970, 1985; Shubik, 1970). In the earlier development of the public interest theories of regulation, it was assumed that a market failure was a sufficient condition to explain government regulation (Baumol, 1952). But soon the theory was criticized for its Nirvana approach, implying that it assumed that theoretically efficient institutions could be seen to efficiently replace or correct inefficient real world institutions (Demsetz, 1968). The public interest theory of regulation instigated the consideration of policy as a factor determining ICT adoption in Comboni missions in Kenya.

2.3.4Weick's Model Theory of Organizing

One of the sophisticated theories of organizational structure is Weick's model theory of organizing. It takes into account the high-stressed, fast-paced nature of today's business and reduces equivocality (Patching, 2000). Equivocality boils down to any lack of productivity due to an employee, on any level, having to check with superiors which is brought about by

bureaucracy and unaligned organizational structure which greatly affect the management style of the organization (Ashcraft, 2005). In the Weick's model, there is an information system, which includes frequently and sometimes previously tackled issues (Harenstam, et al, 2004). Employees have access to this information and use it to combat any ambivalence or inertia that might hinder making business decisions (Borjas, 2012). The decisiveness gained by using the information system leads to higher productivity due to ease with which structures can be modified to suit the prevailing or anticipated needs. The Wieck model theory of organizing instigated the fourth research objective of this study to assess the effect of ICT organization structure on adoption of ICT in faith-based organizations in Kenya.

2.3 Factors determining ICT adoption

Basing ourselves on section 1.1.2, the factors influencing ICT adoption in Comboni missions are:

2.4.1Economics

Faith-based organizations rely on a variety of funding sources to support their activities. However, sources of funding is carefully analyzed so as not to infringe on organization's mission and goals (Ebaugh, et al. 2004). However, little empirical research exists on whether funding issues restrict the organization's capacity for service programs. However, it is known that they typically rely on a broad variety of sources over which they have limited control such as grants and contracts from both government and private agencies, direct individual giving, corporate donations, United Way funds, investments, and special event fundraising. In order to secure these types of funding, nonprofit organizations are required to write grant proposals, negotiate contracts, organize special events, solicit donations, adjust fees for service and continuously focus on assuring the needed funds to keep programs operating. (Ebaugh, et al. 2004).

Ultimately, each type of funding source involves the organization in an exchange relationship that impacts its mission, goals and programs. However, the two major risks involved in such funding are revenue instability and goal displacement.

2.4.2Employee ICT Competence

According to Archibong, et al, (2010) employee competence in ICT is measured in indices such as usage of ICT for purposes of research, e-mail and internet, and document processing.

Organizations should hire ICT trained staff and offer continuous retraining since developments in technology is dynamic and the staff need to keep abreast with current trends. Lastly, ICT facilities should be provided and their functionality ensured so as to improve staff access for improved competences irrespective of their workload.

According to English (2005), every employee in the ICT firm needs to be aware of the ICT-security risks as well as the potential consequences of such security breaches which ensures confidence which in the process contributes towards more business. In the process, this will lead to positive growth and expansion of the firm in the long run (Pohjola, 2002). Often not enough attention is given to this human aspect and as Siponen (2001) states: "Nothing is done as long as nothing goes wrong." and yet the cost of doing nothing can be huge to the firm. Managers could play an essential role in making sure that every employee is aware of the ICT-security risks and thus improving the integrity of the ICT provider. The manager needs to understand the importance of a high quality of information in terms of completeness and collective significance (English, 2005). Bresnahan, et al (2002) argue that the most important cause of computer security violations on the internet is the lack of technical knowledge of the users which partly may be attributed to the ICT provider and observed could affect the potential investment in ICT.

2.4.3 Donor policy

It is the fact that faith-based organizations routinely rely on funding from religious congregations or denominations, direct financial assistance, in-kind donations and volunteer support. Thus, issues arise surrounding not only the availability of various types of funding, but for faith-based organizations, there are issues concerning the donor policies organizations are willing to accept in exchange for funds, rest in turn they jeopardizing their own policies.

The institutionalism theory predicts that religious organizations within the organizational field of public social services will become subject to powerful forces that push them to resemble other, secular service-providers. These forces include professionalization and bureaucratization. This is especially likely to happen as faith-based organizations become dependent on government funds. As they decide to apply for government grants and contracts, they have to balance the benefits of

expanded capacity to provide services with the potential costs of mission drift and goal displacement. (Ebaugh, et al. 2004)

A government is a huge and complex organization, whose operations and strategic focus could be greatly enhanced by the well-focused application of Information and Communication Technologies (ICT) to support improvements in productivity, management effectiveness and ultimately, the quality of services offered to citizens. Government information aims to improve the Government's return on investment in ICT by enhancing strategic planning, agency capability, management and evaluation of ICT-enabled projects. Governments assist agencies to better align their ICT investment with their business and policy objectives and whole-of-government strategies. While the benefits of ICT in government cannot be disputed, there are several concerns about its success as well as the strategies to be adopted in implementation of systems in various countries. Aineruhanga (2004) observes that planning as a tool can help in reducing waste by identifying the pre-requisites conditions for successful ICT implementation rather than "rushing into a complex e-Government strategy without having first finalized a national ICT policy". Different countries have attempted to craft national policies to guide and direct ICT integration into economic and social programs. In Kenya, the first comprehensive and stakeholders-driven ICT policy was approved by the cabinet in January 2006 and an ICT policy document published through the Kenya Government Gazette notice No. 24 in March 2006 (KIC, 2006). The mission of this policy is a "Prosperous ICT-driven Kenyan society", which puts ICT in the centre of national development (Kashorda & Waema, 2007). The policy, among other national policy areas, addresses issues of ICT investment in general. The policy aims at encouraging the use of ICT and promoting the growth and development.

Common ICT policies include creating a regulator and licensing scheme, investment or assistance in the construction of infrastructure, introducing ICT programs into schools and creating initiatives to promote universal access to these new technologies. Through policy, governments have the opportunity and the power to significantly alter how an ICT industry develops, and how successful it is. Good policy can overcome inequalities in development, build better infrastructure, and shape how companies approach their market and build their customer base. While many governments in the developing world struggle with the implementation and

enforcement of policies and do not focus much attention on their ICT industry, there is significant potential in using policy to improve ICT industries (KIC, 2006).

2.4.4 Organizational Structure

Adoption of ICT in an organization widens possibilities of decentralization in its organization structure, ensuring that freedom is granted to the designers and consultants to influence an organization both internally and externally. For instance, introduction of decision making systems in organizations leads to the application of liberal management style, as decentralization factor.

A study by Gerster Consulting (2008) under a mandate from the African Partnership Forum on ICT in Africa found that African governments and their international partners should prioritize ICT access and effective use at all levels, including the provision of public access facilities, relevant content and increased capacities. It also recommended that African Governments and their international partners create and support enabling environments, consisting of both ICT-specific regulatory frameworks and an overall policy framework that promotes sound economic and political governance. In particular, Improve ICT governance and affordability by ensuring freedom of expression, providing a competitive framework for the application of ICT, ensuring compliance through independent regulation and favoring low-cost, technology-neutral and open source solutions and; Link the creation of an enabling ICT environment to national planning and strategic frameworks, including performance monitoring and dialogue processes (Gerster Consulting, 2008).

2.5Empirical literature

2.5.1Economics

ICT has been applied in organizations to achieve operational efficiency in a number of supermarkets. For instance, Uchumi supermarkets installed an Enterprise Resource Planning (ERP) system that took a period of 18 months to install and at a cost of over USD 1.2 million for license and an additional USD 2 million for implementation, and with an annual maintenance cost of USD 150,000. One of the main reasons for using ICT is achieving cost efficiency where businesses cut on costs of doing business (Tsai, 2003). Functions such as supply chain management, inventory management, advertising, point-of-sale management and actual service

to customers need application of ICT to achieve operational efficiency. Indeed, the main goal of adopting ICT is achieving operational efficiency. In this regard, Wal-Mart was one of the first companies to apply ICT in its management practices where it used innovative ICT platforms to link the business to suppliers, thereby helping it to achieve operational efficiency (Breznitz & Zysman, 2013).On the contrary, a faith-based organization may not have the luxury of investing such an amount of money as Uchumi supermarkets mentioned above for an ICT system. Their economic model, of depending on donor funding and operating for no profit, would hinder this.

2.5.2 Employee ICT Competence

The huge ICT investment by Uchumi supermarkets for instance, has resulted in increased demand for various ICT skills. Numerous studies have attempted to address issues related to organization ICT skill needs. Skills as a term is used here to refer to the knowledge and expertise of ICT related employees in an organization (Rogers, 2003). In organizations where management and employees have ICT knowledge and expertise, they is a more likelihood of ICT being adopted and innovation grasped. The skills of both staff and management will therefore have an impact on the level to which an organization can invest in ICT. Hadjimanolis (2000) argues that because small organizations do not have the resources to spend on ICT staff training, therefore such organizations are more likely to employ generalist rather than specialist staff (Thong, 1996) thereby impacting on staff ICT competence and ultimately on ICT adoption. This finding especially relates to faith-based organizations, since economics, policy and organization structure hinders efforts to hire specialists, and instead favours the hiring of many, general-skilled workforce.

2.5.3Donor & organization policy

According to James (2009), donor experiences of working with FBOs are mixed. There are examples of FBOs who have taken a paternalistic and welfare-oriented approach to development. Some have discriminated towards their member. Others have used their control over resources to manipulate people to convert to another faith. Still others have been implicitly and even explicitly supportive of conservative political structures and dictatorial leaders. In a few cases working with FBOs has encouraged conflict with other faiths and also even between denominations of the same faith. Furthermore, FBOs (like many NGOs) have often failed to

deliver on the accountability requirements of donors. Some FBOs lack skilled personnel, particularly in contexts of poverty, low literacy levels and remuneration levels that demand a level of voluntarism. Few local FBOs have strong financial, human resource and monitoring and evaluation systems.

Thus, donor funding come with policies regarding accountability, style of management, governance, among others. Often, faith-based organizations evaluate these policies before applying for funding. One end result may be failure to adopt ICT if donor conditions do not expressly permit or in situations where such adoption does not contribute to the mission and vision of a faith-based organization.

Donors need to continue to develop their understanding of the nature of faith-based organizations. A positive engagement with FBOs is necessary to avoid donors without being afraid or dismissive of the spiritual dimension of faith-based organizations. Donors should take a considered and nuanced approach to FBOs, (James, 2009).

In addition, African government ICT policies and regulations affect donor organizations ICT policies, for instance Communications authority of Kenya publishes general principles by which an organization is guided in its management of ICT affairs, standards and penalties. In this case, donors encounter regulations, modified political climate, and guided investment policies (KAM, 2003).

2.5.4 Organization structure

OECD (2002) opined that ICT improves organizational productivity by enabling "organizational innovation". According to this viewpoint, the greatest benefits from the adoption of ICT appears to be realized when ICT adoption is combined with other organizational assets, such as new strategies, new business processes, new organizational structures and better worker skills. Empirical evidence suggests that organizational changes may improve economic performance of firms through their mutually-reinforcing relationship with ICT. According to OECD (2002) therefore ICT is the key to facilitating new organizational approaches, from lean production to team work to customer relations. ICT enables firms to introduce significant organizational changes in the areas of re-engineering, decentralization, flexible work arrangements and outsourcing. It allows firms to produce with greater flexibility and shortened product cycles to

satisfy shifting consumer preferences. In fact, organizational innovation and ICT may be regarded as complementary factors. To be successful, firms typically need to adopt ICT as part of a "system" or "cluster" of mutually reinforcing organizational approaches (Milgrom& Roberts, 2000). Faith-based organizations generally operate on top-down organizational structures, due to their focus on accountability, efficiency. However, democratic management style is favoured by donors since it ensures staff participation in the organization. This may impact decision-making by junior management officers, project timelines and performance. Adoption of ICT may empower junior employees in the decision-making structure and help improve project performance.

2.5.5Critique of Existing Literature

According to (Kvasny, L. et al, 2010) ICT has been used in the public and private sector to facilitate six business objectives: operational excellence; new products, services, and business models; customer and supplier intimacy; improved decision making; competitive advantage, and; survival. While considerable gains have been achieved in the private sector, studies have consistently shown that the vast majority of faith-based organizations underutilize technology. In fact, these studies have illuminated literature gaps that exist within the faith-based sector related to their strategic use of ICT to support mission critical services. In addition, these studies indicate that nonprofits are "handicapped" by their lack of knowledge, ability and or resources to effectively use technologies to facilitate their mission.

In fact, there is emerging a term, the organizational divide, to refer to policy literature that is used to explain the disparities in organizations' capacity to access and process information, share and exploit knowledge, and strategically use technology to advance their mission and address pressing social problems. While community-based organizations are rich storehouses of local information, they frequently lack the technology capacity to either use this valuable resource themselves or to share it with other community-serving organizations. In conclusion, ICT adoption involves organizations, people, systems and infrastructure.

2.5.6 Research gap

The research cited above has been investigating factors determining the adoption of ICT in faith-based organizations without a framework or policy as a guide. The work by Kvasny, (2002;2008;2014) leaves a gap by proposing a one-dimensional approach to the problem of ICT adoption. Fundamentally, a framework would systematize ICT adoption for success. This study was an attempt at contributing to the research on the state of ICT adoption in faith-based by proposing a framework on how ICT can be adopted in Comboni missions. This framework is based on how characteristics in organizations, people, systems and ICT infrastructure combine to determine how ICT adoption.

2.6 Technology Acceptance Model

Technology acceptance theory postulates how users of ICT adopt or defers based on usability and benefit factors. Thus, when an individual is presented with a given ICT technology system, they evaluate it based on perceived benefits and perceived ease of use. (Davis, 1986).This model is utilized in this study.

2.6.1 Conceptual Framework for the Comboni missions

A conceptual framework is by definition "a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation" (Kombo and Tromp , 2006). A variable is a measurable characteristic that assumes different values among the subject. It is therefore a logical way of expressing a particular attribute in a subject (Mugenda and Mugenda, 2003). A dependent variable is the variable of primary interest to the researcher. An independent variable is the one that influences the dependent variable in either a positive or negative way, Kothari (2003). According to Guba and Lincoln (1989), a conceptual framework is a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate this. To this end, Mathieson et al (2011) defined a conceptual framework as a virtual or written product, one that explains, either graphically or in narrative form, the main elements to be studied in a research; such as the key factors, concepts, or variables and the presumed relationships existing between them. Thus academic researchers make use of conceptual frameworks to assist them make meaning of subsequent findings. The conceptual framework for this research is as shown in figure 2.1. The framework in this research

is modeled on an expanded Technology Acceptance Model. TAM is commonly applied with regard to information systems studies. According to Lee (2003), "The Technology Acceptance Model (TAM) is the most widely used model in MIS research for predicting user adoption of ICT." TAM is based on two theoretical constructs: perceived usefulness and perceived ease of use(Davis, 1989). This study conceptualizes adoption of ICT in faith-based organizations in terms of the organization, people or users, infrastructure and systems. Accordingly organization structure, economics and policy, people in terms of user behavior and employee competence, and system cost and quality determine the adoption of ICT in Comboni missions.

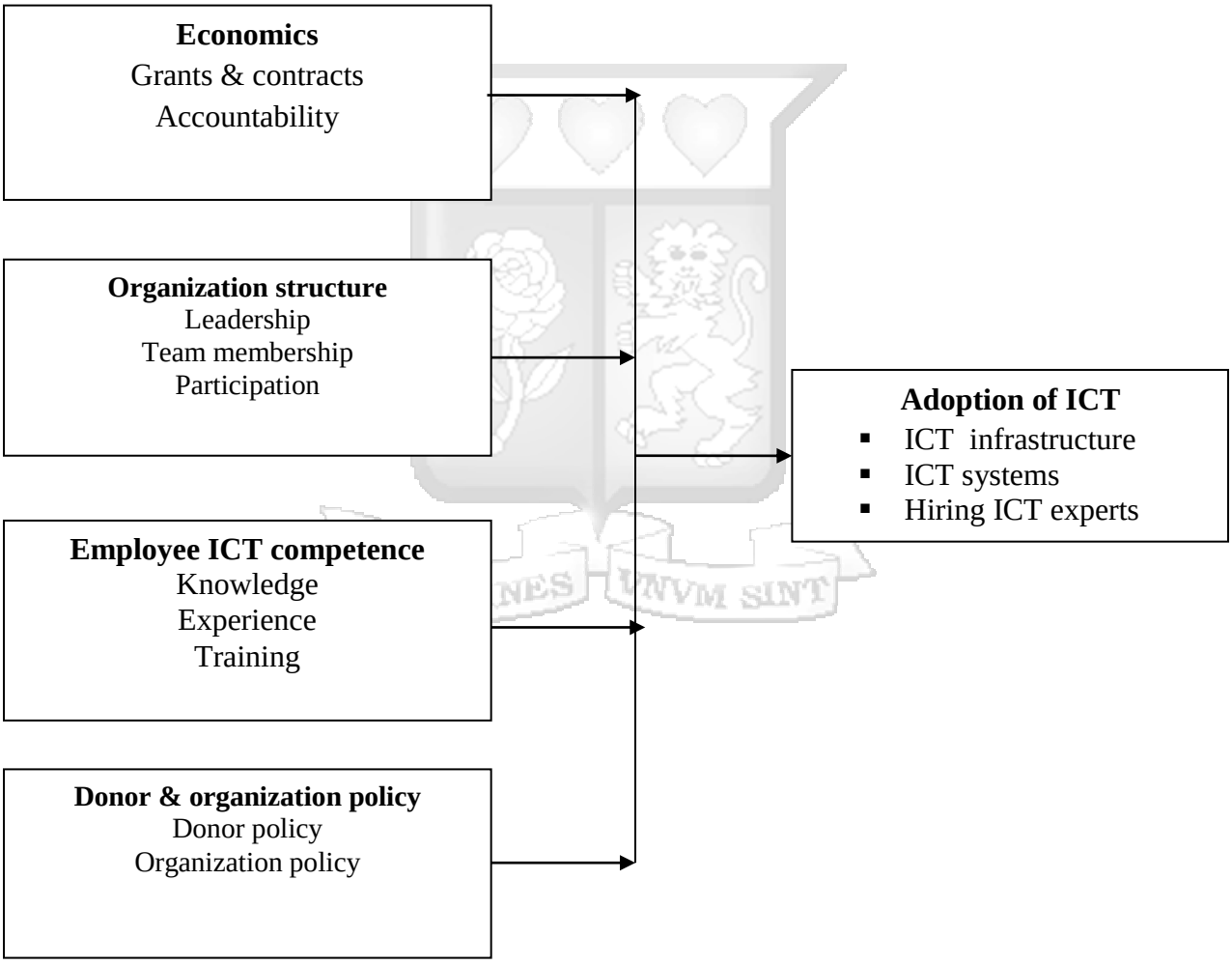


Figure 2.2: Conceptual framework modeled on TAM. Design adapted from Kombo and Tromp (2006)

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology that was used in conducting the research whose objectives were to establish the determinants of the adoption of information and communication technology in faith-based organizations in Kenya. The following subsections are treated here; research design, target population, data collection instruments, data collection procedures and finally data analysis and presentations.

3.2 Research Philosophy

With research philosophy it is meant the approach to understand and write the knowledge that was gained in the process of conducting research. There are three types of research philosophies researchers can use. These are positivism, interpretive and critical; Mackenzie & Knipe, (2006). Each of these philosophies represents a model that is known as paradigm for research. According to Mackenzie &Knipe (2006), positivism is a research paradigm commonly aligned with quantitative methods of data collection and analysis. This study employed a Positivism paradigm research philosophy. According to the principles of positivism, quantifiable observations lead themselves to statistical analysis. It has been noted that "as a philosophy, positivism is in accordance with the empiricist view that knowledge stems from human experience. It has an atomistic, ontological view of the world as comprising discrete, observable elements and events that interact in an observable, determined and regular manner" Collins, (2010).

3.3 Research Design

A research design is the plan, or structure of investigation conceived to obtain answers to research questions that include an outline of the research work from hypothesis, methods and procedures for collecting and analyzing data and presenting the results in a form that can be understood by all (Mugenda & Mugenda, 1999). This study is a descriptive research that will employ a descriptive research design. The study intends to obtain an in-depth understanding of the determinants of the adoption of ICT in faith-based organizations in Kenya. According to Mugenda & Mugenda, (2003), descriptive research is used to obtain information concerning

current status of the phenomena to describe "what exists" with respect to variables in a situation. Further, descriptive research aims to gather data without any manipulation of the research context and deals with naturally occurring phenomena, where the researcher has no control over the variables. The study considers this design appropriate since it will contribute towards minimizing bias hence maximize reliability of the data.

The design enabled the study to combine both quantitative and qualitative research approaches. Qualitative approaches enables collection of data in form of words rather than numbers. It provides verbal descriptions rather than numerical, Kothari (2009). According to Mugenda and Mugenda, (2003), qualitative methods can be used to gain more in-depth information that may be difficult to convey quantitatively. Quantitative approach strives for precision by focusing on items that can be counted into predetermined categories and subjected to statistical analysis, Simiyu (2012). The two approaches reinforce each other (Kombo *et al.,* 2006). This research used this approach because the data collected using the main questionnaire was quantitative, and was analyzed using statistics. Qualitative approach on the other hand involved interpretation of phenomena without depending on numerical measurements or statistical methods.

3.4 Target Population

According to Paton (2002), a population is the aggregate of all cases that conform to some designated set of specifications. Population in this study is the larger group from which the sample is taken. The population of the study comprised staff members of the Comboni mission in Kenya working in ICT environments. For this study, the target population comprised 75 staff members working in ICT in Comboni missions as of January 2015.

3.5 Sampling Frame

There are 17 Comboni mission centres in Kenya and this formed the sampling frame. The sampling frame for the staff was provided by the administration in each of the centres using written permission to carry out research. Such a sampling frame enabled the researcher to draw a reasonably adequate random sample, where all members of the population of interest had an equal chance of being selected for the sample.

3.6 Sample and Sampling Technique

Bryman & Bell (2003) defines a sample size as a representation of a total population enumerated for analysis. On their part, Gall & Borg (2008) defines a sample as a carefully selected subgroup that represents the whole population in terms of characteristics. The sample size depends on what one wants to know, the purpose of the inquiry, what is at stake, what will be useful, what will have credibility and what can be done with available time and resources, Sekaran, (2003). Owing to practical difficulties with responses from large survey groups, a meaningful survey sample size had to be determined. Therefore, a proportionate sample size of 7 respondents was selected using a census sampling technique from the identified study population. Cooper & Schindler (2011), states that census sampling technique is appropriate when obtaining study population from a small and manageable group.

3.6 Research instrument& Data Collection Techniques

The study used questionnaires to collect primary data from the respondents as research tools (Kothari, 2005). Questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes, accomplishments as well as experiences of individuals. Further, questionnaires have the added advantage of being less costly and using less time as instruments of data collection. The questionnaire, which is semi-structured, was administered through drop and pick-later method to the sampled population. The study collected primary data and compared it with the available secondary data. These questionnaires were in effect self-administered. In a self-administered questionnaire, a respondent has the advantage of asking a question when it is not clear to them (Chandran, 2004). Self-administered questionnaires allow the participants to respond to the questions by themselves and at their own pace. They ease the respondents' burden by giving them the time to think through their responses (Monsen & Horn, 2008).

According to Sekaran (2003) data collection is the means by which information is obtained from the selected subject of an investigation. The study used both primary and secondary data during the study. These respondents were specifically targeted for their ability to provide pertinent information to the study. The questionnaire consisted of two sections, with the first part mainly containing demographic information. This enabled the researcher to know the nature of the

respondents, while the second part focused on the factors determining the adoption of ICT in faith-based organizations.

3.7 Pilot Study

According to Bordens & Abbott (2008), pilot study is as a small-scale version of a study used to establish procedures, materials and parameters to be used in the full study. According to (Cooper and Schindler, 2010), pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. Thus, a pilot study is an activity that assists the researcher in determining if there are flaws, limitations, or other weaknesses within the interview design and allows him or her to make the necessary revisions prior to the implementation of the study.

The pilot study involved pre-testing the questionnaires on 7 respondents of the sample population. This procedure is supported by Neumann, (2006) who recommends a pilot test of 10% of the sample size. The respondents were conveniently selected since statistical conditions are not necessary in the pilot study. The Purpose was to refine the questionnaires so that respondents in this study would have no problem in answering the questions. The results of pilot test were not included in the actual study.

3.7.1 Validity of Instruments

This is the degree to which an instrument measures what it is supposed to measure (Kothari, 2004). A content validity test is used to measure instrument validity. This type of validity measured the degree to which data collected using a particular instrument represented a specific domain of indicators or content of a particular concept (Mugenda and Mugenda, 1999). Validity is the degree to which the sample of the test item represent the content that is designed to measure; that is, the instrument measures the characteristics or traits that is intended to measure (Mugenda and Mugenda, 2003). Data need not only to be reliable but also true and accurate. If a measurement is not valid, then its results are not reliable, Joppe, (2000).

To ensure validity of research instruments simple language was employed since a language free from jargon makes it easy respondents to understand. The researcher also sought the opinion of

individuals who could render intelligent judgment about their adequacy. The researcher also engaged his supervisor and other experts to ensure that the questions tested or measured what they are supposed to measure. The research adopted content validity which refers to the extent to which a measuring instrument provides adequate coverage of the topic under study. The content validity formula proposed by Amin (2005) was used, as well as from other studies; for instance Lefort & Urzua, (2008). The formula is; Content Validity Index = (No. of judges declaring item valid) / (Total no. of items). It is recommended that instruments used in research should have CVI of about 0.78 or higher and three or more experts could be considered evidence of good content validity (Amin, 2005). This study therefore adopted a threshold of 0.78 as recommended by Amin (2005).

3.7.2 Reliability of Instruments

According to Mugenda & Mugenda (2003), reliability of a research instrument is the extent to which the instrument yields findings that are consistent each time it is administered to the same subjects. The measurement of reliability provides consistency in the measurement variables, Kumar (2000). Internal consistency reliability is the most commonly used psychometric measure assessing survey instruments and scales Zhang, (2000). Cronbach alpha is the basic formula for determining the reliability based on internal consistency, Kim & Cha, (2002). Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. In order to test the reliability of the instruments, internal consistency techniques were applied following Cronbach's Alpha. The alpha value ranges between 0 and 1 with reliability increasing with the increase in value. Coefficient of 0.6-0.7 is commonly recommended, and it indicates acceptable reliability while 0.8 or higher indicates good reliability, Mugenda (2008). This study adopted a reliability threshold of 0.7 as recommended by Gupta (2010).

3.8 Data Analysis and Presentation

Kothari (2004) defines data analysis as a mechanism for reducing and organizing collected data to produce findings that is then interpreted by the researcher. The data collected in this research was both quantitative and qualitative. Once the questionnaires were received they were coded and edited for completeness and consistency. Data were then analyzed by editing, coding and tabulation into manageable summaries (Kumar, 2000). For purposes of analysis, the questionnaire was coded according to each variable enumerated in the study to ensure accuracy during analysis. Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS) version 21 and Microsoft excel. This technique gives simple summaries about the sample data and present quantitative descriptions in a manageable form, Orodho (2003). Together with simple graphics analysis, descriptive statistics form the basis of virtually every quantitative analysis to data, Kothari (2005). The findings are presented using tables, charts and graphs for further analysis and to facilitate comparison. This was done to generate quantitative reports through tabulations, percentages, and measure of central tendency. Descriptive statistics such as measures of central tendency and dispersion along with percentages were used to organize and summarize numerical data whose results are presented here in tables, pie charts, column and bar graphs for easy interpretation of the findings, Zhang (2000).

The study adopted the inferential statistical analysis. The tests of significance used are multiple regression analysis and yielded the coefficient of determination (R^2), t – tests, z – tests and p – values. The choice of these techniques has been guided by the variables, sample size and the research design and multiple regression models at 5% level of significance to establish the strength and direction of the relationship between the independent variables. Advantages associated with multiple regression analysis are that this process offers a more accurate explanation of the dependent variable in that more variables are included in the analysis, and that the effect of a particular independent variable is made more certain, since the possibility of distorting influences from other independent variables is removed, Kothari (2004).

Adoption of ICT in Comboni Missions will be regressed against four independent variables of namely investment cost, Government ICT policy, organization structure and employee ICT competence. The equation will be expressed as follows:

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

Y= Adoption of ICT

β_0= constant (coefficient of intercept),

X_1= Economics;

X_2= Donor and organizational Policy;

X_3= Organization structure;

X_4= Employee ICT competence;

ε = error term;

β_1.....β_4= regression coefficient of four variables

3.9 Ethical Consideration

The following measures were taken to ensure ethical conduct. The researcher discussed the rationale of the research with the centre management. Participant views were treated in confidence and anonymously. Steps were taken to include having voluntary participation, where participants could opt out of the research at any stage. The researcher was committed to comply with honest and best practices in data collection and analysis.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis and results of the study as set out in the research methodology, that is; the determinants of ICT adoption in faith-based organizations in Kenya. The data was gathered exclusively from the questionnaire as the research instrument.

4.2 Demographic Information

The study went further to establish the gender of the respondents from the identified area of study.The findings were as shown in Figure 4.1;

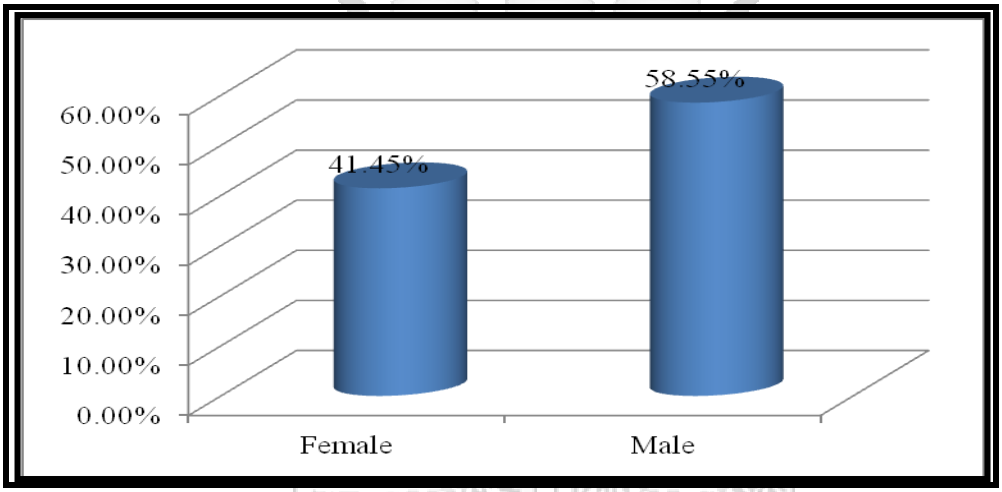


Figure 4.1 Gender of Respondents

From the results in figure 4.1 above, it was found out that 41.45% of the respondents were female and 58.55% were male. This implies that the study did not suffer from gender bias.

4.3 Work experience

In relation to the Number of years the respondents have been working in the organization, the findings indicated that majority (63%) of the respondents have been in the organization for 3 to 5 Years, 26% have been in the organization for 2 years, while the remaining 11% of the respondents have been in the organization for 5 years and above. The findings of study are presented in the figure 4.2;

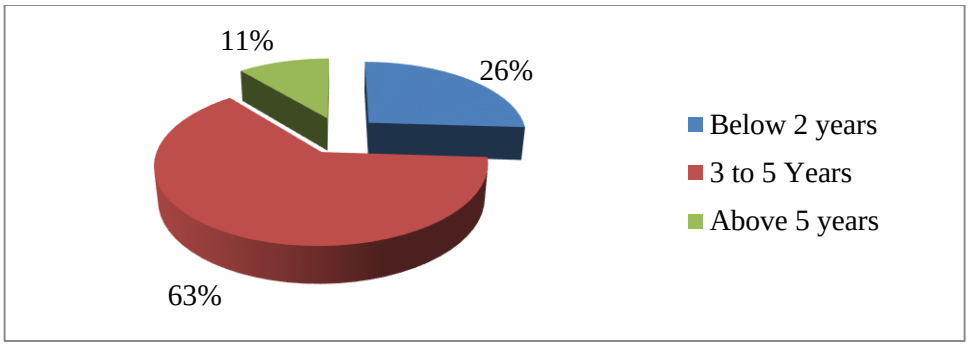


Figure 4.2 Years of experience

Inferences can therefore be made that over 50% of the respondents had worked in the Comboni missions for a long time and thus understood technical issues on the adoption of information and communication technology therein. These findings were in tandem with findings by Braxton (2008) who found out that the respondent with a high working experience assists in providing reliable data on the problem at hand since they have acquired technical experience in regard to the study problem.

4.4. Economics and ICT adoption

The first objective of the study was to determine the influence of economics on ICT adoption by faith-based organizations in Kenya.

4.4.1 Extent to which economics influence adoption of ICT in faith-based organizations in Kenya

The respondents were asked to indicate the extent to which economics influences the adoption of ICT in faith-based organizations in Kenya. The information gathered is as shown in Table 4.4:

Table 1.1 Extent to economics influence adoption of ICT

Extent	Frequency	Percentage
To a very large extent	18	36
To a large extent	12	23
To a moderate extent	9	18
To a small extent	7	14

Not at all	5	9
Total	51	100

From the findings in table 4.4 majorities of the respondents (36%) indicated economics affects organization performance to a very large extent, 23% to a large extent, 18% to a moderate extent, 14% to a small extent and 9% not at all. Many faith-based organizations have embraced the fact that adoption of ICT helps organizations attain efficiency and improve service delivery.

4.4.2Economics issues

The following economics issues were identified as critical in the adoption of ICT by faith-based organizations: accountability; management style; ICT management cost; governance; grants and contracts. Accountability is an important ingredient of economics and that it influences adoption of ICT; management style is an important ingredient of economics and that it influences adoption of ICT. Governance is a key factor of economics and that it influences adoption of ICT. ICT management cost is a factor in economics and it influences ICT adoption. A scale of 1-5 was used where 1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent. The findings were as shown in Table 4.5.

Table 4.2 Economics issues in determining ICT adoption

Statement	N	Mean	Std	Variance
Accountability	26	4.133	0.754	0.569
Management style	26	4.234	0.706	0.499
Governance	26	4.691	0.74	0.548
Grants & contracts	26	4.190	0.862	0.743
ICT Management cost	26	4.309	0.765	0.589

From the findings in table 4.5, ICT investment offers had a significant mean score of (M=4.133). Management style is also an important issue with a mean of (M=4.234); grants and contracts is an important consideration of cost and that it influences ICT adoption with a score of (M=4.691); governance is an important component of ICT investment cost and it determines ICT adoption by

a score of (M=4.190). Lastly, ICT management cost is a key factor of ICT investment with a determining score of (M=4.309).

4.4.3Employee ICT competence

The second objective of the study was to establish the extent to which employee ICT Competence determines the adoption of ICT at Comboni missions and by other faith-based organizations.

4.4.4 Extent to which Employee ICT competence influence adoption of ICT in faith-based organizations

The study sought to determine the extent to which Employee ICT competence influence adoption of ICT in Kenya. The findings were as shown in table 4.6.

Table 4.3 Extent to which employee ICT competence affects adoption of ICT

Employee competence	Frequency	Percentage
To a very large extent	14	27
To a large extent	10	32
To a moderate extent	9	18
To a small extent	12	24
Not at all	5	9
Total	51	100

From the findings in table 4.6; it can be established that the majority of the respondents (32%) indicated that Employee ICT competence affects adoption of ICT to a very large extent, 27% to a large extent, 18% to a moderate extent, 14% to a small extent and 9% not at all. The findings mean that every employee in the organization needs fundamental skills as to be ICT competent and ICT-security aware. Employee ICT competence refers to the behaviors and skills expected of employees so that the ICT assets of the organization are safeguarded.

4.4.5 Extent of Employee ICT competence and determination of the adoption of ICT

The study sought to determine the extent to which factors of Employee ICT competence determines the adoption of ICT. The following factors were studied; Knowledge of ICT by employees is a key factor of competence and it determines the adoption of ICT, Experience of ICT employees is a key factor of competence and that it determines the adoption of ICT, ICT employees with Technical skills is a critical factor and that it influences adoption of ICT, ICT employees with Cognitive skills is a key competency factor and that it influences adoption of ICT, and Training on ICT Skills is a factor that influences adoption of ICT. A scale of 1-5 was used where 1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent. The findings were as shown in table 4.7;

Table 4.4 Employee ICT competence and literacy on adoption of ICT

Statement	N	Mean	Std. Deviation	Variance
Knowledge of ICT by employees	26	4.166	.8530	.728
Experience of ICT by employees	26	4.333	.9016	.813
ICT employees with Technical skills	26	3.928	.8942	.800
ICT employees with Cognitive skills	26	4.452	.7054	.498
Employee Training on ICT Skills	26	4.476	.7404	.548

From the findings in table 4.7; Knowledge of ICT employees is a key factor of competence and it determines the adoption of ICT with a mean score of 4.166,Experience of ICT employees is an important factor of competence with a determining mean score of 4.333,ICT employees with Technical skills is a critical factor with a determining mean score of 3.928,ICT employees with Cognitive skills determines adoption with a mean score of 4.4.52,while Training on ICT Skills is an important factor with a determining mean score of 4.190. Other factors to consider here include implementation of effective communication systems, adoption of organization-wide ICT systems, employment of professional IT staff and IT training policy.

4.4.6. Donor & Organization policy

The third objective of the study was to ascertain the donor & organization policy and its impact on adoption of ICT by faith-based organizations in Kenya.

4.4.7 Extent to which donor& organization Policy influences the adoption of ICT

The study sought to determine the effect of donor & organization ICT Policy and its impact on the adoption of ICT. The findings were as shown in Table 4.8.

Table 4.5 Extent to which donor & organization Policy determines the adoption of ICT

Extent	Frequency	Percentage
To a very large extent	16	32
To a large extent	12	23
To a moderate extent	9	18
To a small extent	9	18
Not at all	5	9
Total	51	100

From the results in table 4.8; majority (32%) indicated that donor & organization Policy determined the adoption of ICT to a very large extent, 23% to a large extent, 18% to a moderate and small extents, 9% not at all.

4.4.8 Extent to which respondents agreed with elements of donor regulations

The study sought to determine the extent to which respondents agreed with the statement that donor policies and regulations issues determine the adoption of ICT by faith-based organizations, notably; Accountability is an important aspect of donor regulations and it determines the adoption of ICT, management style is a critical factor of donor regulations and it influences adoption of ICT, and the existence of donor ICT Policy and standards influence adoption of ICT.

Table 4.6 Donor policy and regulations and the adoption of ICT by faith-based organizations

Statement	N	Mean	Std. Deviation	Variance
Accountability	51	4.347	.6265	.438
Management style	51	4.543	.1016	.813
The existence of donor ICT Policy and standards	51	4.234	.6574	.543

A scale of 1-5 was used where 1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent. As presented in table 4.6, a mean of 4.357 was scored on accountability, a mean of 4.357 was scored in management style is a critical factor of donor regulations, a mean of 4.357 was scored on the existence of donor ICT Policy and standards. This demonstrates that all the factors of donor regulations to a large extent influence the adoption of ICT. These findings were fact that donor regulations challenges such as change of project regulations, change of political climate affects ICT project operating environment and this has negative impact on adoption of ICT. This study therefore infers that that factors of donor regulations such as accountability, management style a critical factor of donor regulations and the existence of donor ICT Policy and standards to large extent influence adoption of ICT

4.4.9 Organization Structure

The fourth objective of the study was to assess the influence of organization structure on adoption of ICT in Kenya

4.5 Extent to which organization structure influence adoption of ICT

The objective was to examine the extent to which organization structure influence adoption of ICT in faith-based organizations in Kenya. The findings were as shown in table 4.10;

Table 4.7 Extent to which Organization Structure influence adoption of ICT

Extent	Frequency	Percentage
To a very large extent	18	36
To a large extent	21	41
To a moderate extent	6	12
To a small extent	4	7
Not at all	2	4
Total	**51**	**100**

From the findings in Table 4.10;, majority (41%) indicated that organization structure affects adoption of ICT to a large extent, 36% to very a large extent, 12% to a moderate extent, 7% to a small extent and 4% not at all. Factors like authority, resources availability, control of project's budget, role of project manager and project management administrative staff. Therefore, it can be concluded that organizational structure is a key factor in adoption of ICT.

4.5.1 Extent to which respondents agree with issues regarding organization structure

The study sought to determine the extent to which factors of organization structure notably; Leadership style is a major contributor of ICT organization structure and it influences project performance, Commitment of Team Leaders is a critical ingredient of organization structure and it influences adoption of ICT, and an organization structure that enables participation of team member's influences adoption of ICT. The study sought to examine the influence of ICT organization structure on the adoption of ICT of organization. Organization structure is the typically hierarchical arrangement of lines of authority, communications, rights and duties of an organization. The findings were as shown in Table 4.11;

Table 4.2 Organization structure on adoption of ICT

Statement	N	Mean	Std. Deviation	Variance
Leadership style	51	4.023	.8968	.804
Commitment of Team Leaders	51	4.095	.9578	.918
Organization participation of members	51	4.357	.7593	.577

As can be observed from Table 4.11; Leadership style had a mean score of 4.023, Commitment of Team Leaders had a mean score of 4.095 An organization structure that enables participation of team members. Inference from the findings and existing literature shows that organization structure factors notably; Leadership style, Commitment of Team Leaders, and An organization structure that enables participation of team members influence project performance to a large extent. Organizational structure determines how the roles, power and responsibilities are assigned, controlled, and coordinated, and how information flows between the different levels of management (Milgrom & Roberts, 2000).

Table 4.3 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.719[a]	.517	.103	.255

a. Predictors: (Constant), Economics, Employee ICT Competency, Donor & organization policy, ICT Organization structure

Table 4.4Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	P-Value.
1	Regression	9.119	4	2.280	47.899	.000
	Residual	1.000	46	.0476		
	Total	10.119	50			

a. Predictors: (Constant), X1, X2, X3, X4

b. Dependent Variable: Y

c. Critical value = 23.456

The table 4.14 shows that the independent variables statistically significantly predict the dependent variable, F (4, 46) = 47.899, p< .0005, this shows that the overall model was significant.

From the results in Table 4.13; The coefficient of determination (R^2) explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable adoption of ICT) that is explained by all four independent variables (Economics, Employee ICT Competency, Donor & organization policy,

Organization structure). According to the four independent variables studied, they explain only 51.70% of the influence on the adoption of ICT in Kenya as represented by R^2. This therefore means that factors not studied in this research contribute 48.30% on the adoption of ICT. Therefore, further research should be conducted to investigate the other factors that influence the adoption of ICT in faith-based organizations in Kenya. This implies that these variables are very significant and therefore need to be considered in any effort to boost adoption of ICT in faith-based organizations in Kenya. The study therefore identifies variables as critical determinants of adoption of ICT in faith based organizations.

CHAPTER FIVE
FRAMEWORK OF ICT ADOPTION

5.1 Introduction

Basing ourselves on research findings above, all four independent variables (Economics, Employee ICT Competency, Donor & organization policy, Organization structure) explain only 51.70% of the influence on the adoption of ICT in Kenya. This therefore means that factors not studied in this research contribute 48.30% on the adoption of ICT. This implies that these variables are very significant and therefore need to be considered in any effort to boost adoption of ICT in faith-based organizations in Kenya. This chapter presents the other factors that influence the adoption of ICT in faith-based organizations in Kenya and later incorporates them into a framework.

5.2 Theoretical framework

The proposed framework will be based on a theory on implementation of ICT adoption in Comboni missions. For our purposes here the theory is named the unified theory of acceptance and use of technology, (UTAUT). It was formulated by Venkatesh and others as a theory to represent a comprehensive approach to factors determining the adoption of ICT. Venkatesh, et al (2003)

5.2.1 The Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology postulates a framework in which four constructs play a significant role as direct determinants of user acceptance and of usage behavior in a system: these are; performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy is defined as “the degree to which an individual believes that using the system will help he or she to attain gains in job performance” Effort expectancy is defined as “the degree of ease associated with the use of the system”. Social influence is defined as “the degree to which an individual perceives that [other important people] believe he or she should use the new system”. Facilitation conditions are defined as “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system”. Ntshakala, et al (2013)

This framework is significant in that it factors additional factors in the adoption of ICT by organizations. Its weakness is that it leads to the consideration of many factors in the process. (www.wikipedia.org)

5.2.2 Factors in the framework of ICT adoption

The other factors that influence adoption in faith-based organizations are: Policy, ICT infrastructure, Community participation, and user behaviour. These factors were identified from respondents in the course of the research.

Comboni missions are expected to develop a policy that identifies ICT as central component in the work of evangelization. This policy should prioritize ICT systems and technologies adoption, training, and research for the greatest number of people as is possible. The missions should also complement the work of government in the sphere of ICT infrastructure development. This implies community participation, which contributes to ICT adoption success. Finally, users of the adopted systems should feel the organizational and technical support to use the system for individual gain.

The factors have been weighted as follows: Policy 50%; ICT infrastructure 30%; Community participation 10%; User behaviour 10% in terms of relevance. Policy is the most critical factor since in the case of Comboni missions, faith-based organizations make the critical decision to adopt ICT for the missions. Where possible, the missions should factor the provision of ICT infrastructure. For success, they have to factor the community by involving them in the adoption process. Finally, user behaviour is equally critical in the adoption of ICT systems and eventual success. The formula should be policy+infrastructure+community participation+user behavior =ICT adoption in that order.

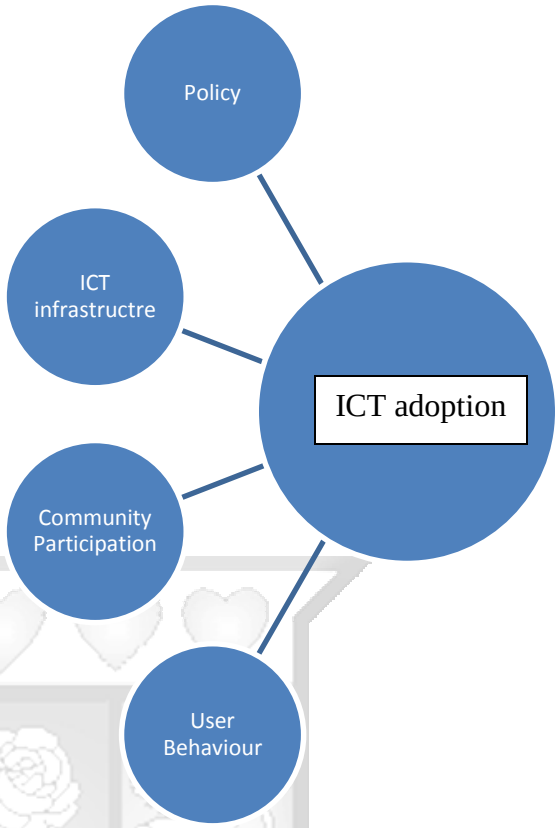


Figure 5.1 Framework of ICT adoption by Comboni missions, adapted from Venkatesh, et al 2003

5.4 Reliability analysis

Reliability is the extent to which a research instrument yields findings that are consistent each time it is administered to same subjects; Mugenda and Mugenda (2003). Cronbach's alpha was the basic formula for determining the reliability based on internal consistency; Kim & Cha, (2002). The standard minimum value of alpha scale of 0.7 is recommended by Malhotra, (2004) as the minimum level for item loadings. The findings were as shown in table 4.1.

Table 5.5Reliability analysis

Variable	**Cronbach's alpha**
Policy	0.843
ICT infrastructure	0.775
Community participation	0.767
User behaviour	0.834
Average overall	**0.791**

From the results as shown in table 4.1, the constructs used in the study were tested for internal consistency and a value of 0.79 was obtained. This implied the instrument was reliable as emphasized by Malhotra (2004).

5.5 Validity analysis

If a measurement is valid, it is also reliable Joppe, (2000). The formula is; Content Validity Index = (No. of judges declaring item valid) / (Total no. of items). It is recommended that instruments used in research should have CVI of about 0.78 or higher and three or more experts could be considered evidence of good content validity. The results were as shown in table 4.2.

Table 5.6Content Validity Index

Rater	Variable	Total items	Valid items	Fraction
1	Policy	11	10	0.865
2	ICT infrastructure	13	12	0.888
3	Community participation	10	9	0.876
4	User behaviour	11	9	0.777
Average				**0.852**

From the results in table 4.2, the validity of test yielded an average index score of 85%. This implied the instrument was valid as emphasized by Amin, (2005).

5.6 Response Rate

A total of 75 questionnaires were administered. Out of these questionnaires given to the respondents, 24 of them were partially filled or not returned representing 31.33% while 51 of them were dully filled by respondents and returned, giving a response rate of 68.67%. This information is as shown in Table 4.3.

Table 5.7 Response rate

Questionnaires	Frequency	Percentage
Dully filled and Returned	51	68.67
Partially filled and not returned	24	31.33
Total	**75**	**100**

From the results in table 4.3 above, the response rate was considered satisfactory to make conclusions for the study. Mugenda & Mugenda (2003) observed that a 50% response rate is adequate, 60% good and above, while 70% and above is rated very well. This collaborates with Bailey's (2000) assertion that a response rate of 50% is adequate, while a response rate greater than 70% is very good.

5.7Multiple Linear Regression Analysis

The researcher conducted a multiple regression analysis test to establish how these factors determine the adoption of ICT. The researcher applied SPSS version 20 to code, enter and compute the measurements of the multiple regressions for the study. The results are as shown in Table 4.13.

Table 5.4Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	P-Value.
1	Regression	9.119	4	2.280	47.899	.000
	Residual	1.000	46	.0476		
	Total	10.119	50			

a. Predictors: (Constant), X1, X2, X3, X4

b. Dependent Variable: Y

c. Critical value = 23.456

The table 5.1 shows that the independent variables statistically significantly predict the dependent variable, F (4, 46) = 47.899, p< .0005, this shows that the overall model was significant.

The significance value is 0.0179which is less than 0.05; thus the model is statistically significant in predicting how policy, ICT infrastructure, Community participation, and User behaviour influence the adoption of ICT in faith-based organizations in Kenya. The F critical at 5% level of significance was 23.456. Since F calculated is greater than the F critical (value = 9.475), this shows that the overall model was significant. The reports summary ANOVA and F statistic (47.899) is significant at 0.05 confidence level. The significance value is .000 and the value of F is

large enough to F critical and we conclude that the set of independent variables; policy, ICT infrastructure, Community participation, and User behavior influence the adoption of ICT in faith-based organizations and Comboni missions in particular. The table 4.14 shows that the independent variables statistically significantly predict the dependent variable, F (4, 46) = 47.899, p< .0005, this shows that the overall model was significant.

Table 5.2 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	*P* values
		B	Std. Error	Beta		
1	(Constant)	12.008	4.483		2.439	.002
	Policy	.654	.108	.002	.435	.865
	ICT Infrastructure	.553	.346	.135	.366	.553
	Community participation	.865	.444	.017	.511	.048
	User behaviour	.701	.654	.109	.469	.012

a. Dependent Variable: Adoption of ICT in faith-based organizations.

From the findings in Table 5.1; it presents the results of the test of beta coefficients which indicates that the significant relationship between independent variables notably; (X_1**)** Policy,(X_2)ICT infrastructure, (X_3) Community participation (X_4) User behaviour and dependent variables Y= Adoption of ICT. As presented in table 4.17, (X_3) Policy coefficient of 0.865 was found to be positive at significant level of 0.012 and this indicates that organizational policy has a positive influence on Adoption of ICT. (X_2) ICT infrastructure coefficient of 0.553 was found to be positive at significant level of 0.048 and this indicates that Community participation has a positive influence on adoption of ICT. (X_3) Organizational structure coefficient of 0.701 was found to be positive at significant level of 0.023 and this indicates that organizational structure has a positive influence on adoption of ICT. (X_4) policy coefficient of 0.654 was found to be positive at significant level of 0.044. This clearly demonstrates that all the independent variables significantly influenced adoption of ICT but the relative importance of each independent variable was different. However, since the significance values were less than 0.005, all the coefficients

were significant an thus the regression equation was; $Y= 12.008 + 0.654X_1 + 0.553X_2 + 0.865X_3 +0.701X_4$; The regression model above has established that taking all the independent variables into account notably; (X_1) Policy, (X_2**)** ICT infrastructure, (X_3) Community participation (X_4) User behaviour constant at Zero influences project performance (12.008). The results presented also shows that taking all other independent variables at zero, a unit increase in Policy leads to a 0.654 increase in Adoption of ICT; a unit increase in ICT infrastructure leads to 0.553 increase in project adoption of ICT; a unit increase in policy leads to 0.865 increase in adoption of ICT and a unit increase in ICT infrastructure leads to 0.701 increase in adoption of ICT. Inferences can therefore be made that policy followed by ICT infrastructure, Community participation and user behaviour influence adoption of ICT.

CHAPTER SIX
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the results regarding the determinants of ICT adoption in faith-based organizations in Kenya. The chapter draws conclusions from the research conducted and discusses recommendations and attempts to give suggestions for further studies.

6.2 Summary of the Findings

As it may be recalled, the main objective of this study was to establish the determinants of the adoption of ICT in Comboni missions and other faith-based organizations in Kenya. The study established that the major determinants of ICT adoption in faith-based organizations include; policy**,** ICT infrastructure**,** community participation and user behaviour**.** A detailed summary of these findings is presented as hereunder.

6.2.1 Policy

The findings of the study revealed that policy had a p-value of 0.044. This value reflects the positive policy has on ICT adoption in faith-based organizations since it demonstrates the fact that ICT can only be adopted successfully with existence of organizational policy. Comboni missions and other faith-based organizations need to design policies that view ICT as an important activity. In addition, the existence of effective ICT training policy helped in the adoption of ICT.

6.2.2 ICT Infrastructure

The study identified that ICT infrastructure had a p-value of 0.048, which is less than the 5% level of significance. This has a significant influence on the adoption of ICT in faith-based organizations. ICT infrastructure plays a key role in the execution of project operations, thus ensuring that organizations are able to offer other related services.

6.2.3 Community participation

The study found out that community participation had a p-value of 0.000 which is less than the 5% of recommended p-value; thus becoming a significant factor to influence ICT adoption. This positive influence is because community participation in ICT adoption greatly ensures success of ICT projects by Comboni missions and other faith-based organizations in Kenya.

6.2.4 User behaviour

The study found that user behavior in faith-based organizations determined ICT adoption to a great extent. User factors viz; performance expectancy, effort expectancy, social influence, greatly affect ICT adoption, performance and success. It is individuals who believe that using the system will help him or her to attain gains in job performance. Users also influence others to use systems. In addition, users demand the organizational and technical infrastructure to support them in the use of the system.

Management users also determine ICT adoption through effective leadership, human resource, technical and analytical skills in the missions. Successful implementation of ICT in organizations is determined to a large extent by an organizations managers' ability.

6.3 Conclusion

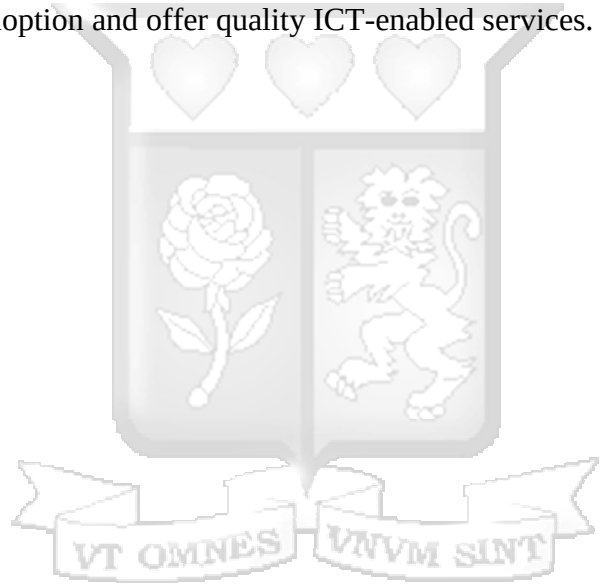
The study concluded that the following factors are significant determinants of ICT adoption in faith-based organizations in Kenya, namely;policy, ICT infrastructure**,** community participation and finally, user behaviour. In terms of significance, the study found out that policy was the most significant factor followed by ICT infrastructure. Community participation and user behaviour played an equally significant role in influencing ICT adoption by faith-based organizations.

However, this study is cognizant of the fact that there are other determinants that may be considered in the adoption of ICT; such as security implications in ICT adoption (Mohamad, et al 2012). Indeed, this research concludes that there is need for further research in the area of ICT adoption by faith-based organizations.

6.4 Recommendations

To adoption ICT adoption successfully, the Comboni missions should come up with policy to guide the process, involve the community in for needs assessment and system acceptance, and factor ICT user satisfaction. In addition, the missions should participate in infrastructure development where needed. A framework is recommended as an effective tool for guidance in the process.

In addition, the study recommends that comboni missions improve on employee ICT competence through recruitment of professionally trained ICT staff, further training and the acquisition and maintenance of quality ICT systems. This way, Comboni missions in Kenya will be able to realize benefits of ICT adoption and offer quality ICT-enabled services.



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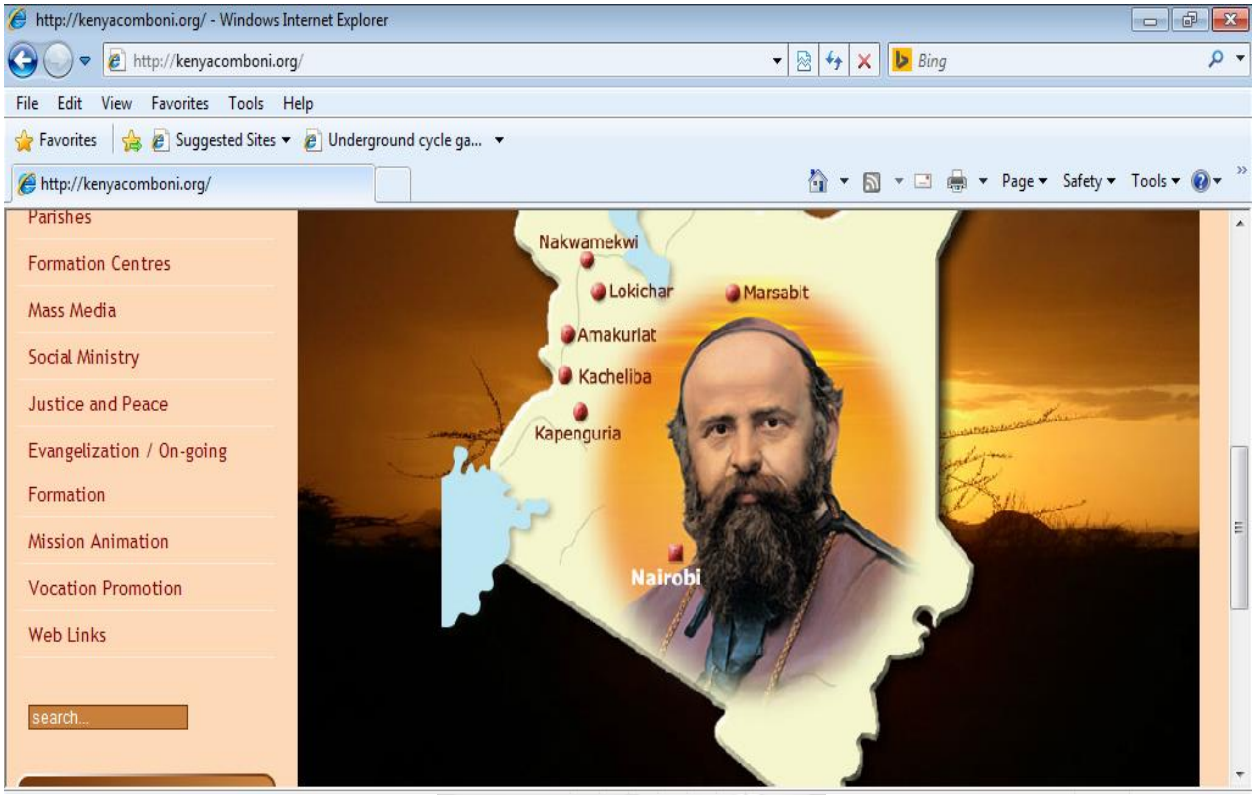
Appendix I: map of Comboni missioncentres in Kenya

Figure 5.1Map of Comboni Missionaries Missions



Appendix II: Questionnaire

Section A: Demographic Information

Please respond to the following questions by making a "√" in the appropriate space provided.

1. Name of the department ……
2. Name of the respondent (optional)…….
3. Position (optional) ……
4. Number of years you have been in the Comboni Missions organization (Tick)

   Below 2 years [ ]

   3 to 5 Years [ ]

   Above 5 years [ ]

5. No of years you have been in your position (Tick)

   Below 2 years [ ]

   3-5 Years [ ]

   Above 5 years [ ]

6. Based on the nature of faith-based organizations, the following are the factors determining ICT adoption in Comboni missions: Economics, Donor and organization Policy, ICT competence of Employees and Organization structure: Do you agree?

Section B: Economics

7. Does economics determine ICT adoption in Comboni missions?
8. Please give reasons for your answer

   ……

   ……

9. To what extent does economics affect ICT adoption in Comboni missions?

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

   Less extent [ ] Not at all [ ]

10. Please indicate the extent to which you agree with the following economics issues. Please record your answer by ticking at the space provided, by the scale indicator.

    (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Statement	1	2	3	4	5
Accountability is an important ingredient of Economics and it influences ICT adoption					
Governance is an important ingredient of Economics that it influences ICT adoption					
Management style is an important ingredient of economics and it influences ICT adoption					
Grants & contracts is an important ingredient of economics and it influences ICT adoption					
ICT Management cost is a key factor of economics and it influences ICT adoption					

11. How else does an economics affect ICT adoption that is not mentioned above?

    ……

    ……

Section C: Employee ICT competence

12. Does Employee ICT competency affect ICT adoption?

    Yes [ ] No [ ]

13. Please give reasons for your answer

    ……

    ……

14. To what extent does Employee ICT competency affects ICT adoption in Comboni missions?

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

    Less extent [ ] Not at all [ ]

15. Please indicate the extent to which you agree with the following issues regarding to Employee ICT competency and literacy. Please record your answer by ticking at the space provided, by the scale indicator.

    (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Statement	1	2	3	4	5
Knowledge of ICT employees is a key factor of competency and that it influences ICT adoption					
Experience of ICT employees is an important factor of competency and that it influences ICT adoption					
ICT employees with Technical skills is a critical factor and that it influences ICT adoption					
ICT employees with Cognitive skills is a key competency factor and that it influences ICT adoption					
Training on ICT Skills is a factor that influences ICT adoption					

16. How else does ICT competency affect ICT adoption that is not mentioned above?

……

……

Section D: Donor & Organization Policy

17. Does Donor Policy and Regulations on ICT have any influence on ICT adoption?

Yes [ ] No [ ]

18. Please give reasons for your answer

……

……

19. To what extent does donor policy affect ICT adoption?

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

Less extent [ ] Not at all [ ]

20. Please indicate the extent to which you agree with the following donor policy issues. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Statement	1	2	3	4	5
Accountability is an important aspect of donor policy and it influences ICT adoption					
Governance is a critical factor of donor policy and it influences ICT adoption					
The existence of donor ICT Policy and standards influence ICT adoption					

21. How else does donor policy and regulations on affect ICT adoption that is not mentioned above?

……..……

……

Section E: Organization Structure

22. Does organization structure affect ICT adoption?

Yes [ ] No [ ]

23. Please give reasons for your answer

……

……

24. To what extent does organization structure affects ICT adoption?

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

Less extent [ ] Not at all [ ]

25. Please indicate the extent to which you agree with the following issues regarding to organization structure. Please record your answer by ticking at the space provided, by the scale indicator.

(1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Statement	1	2	3	4	5
Leadership style is a major contributor of ICT organization structure and it influences ICT adoption					
Commitment of Team Leaders is a critical ingredient of organization structure and it influences ICT adoption					

An organization structure that enables participation of team members influences ICT adoption					

26. How else does organization structure affect ICT adoption that is not mentioned above?

……

……

Section F: Summary

27. To what extent do you agree with the influence of the following factors on ICT adoption in Comboni missions?

	Strongly agree	**Agree**	**Moderate**	**Disagree**	**Strongly disagree**
Economics					
Organization					
Employee ICT competence					
Donor & organization policy					

28. What other factors do you think affect ICT adoption in Comboni missions not mentioned above?

……..

…….

…….

……..

…….

29. What weight, in terms of scale of significance, do you think differentiate them?

a) 100% .....

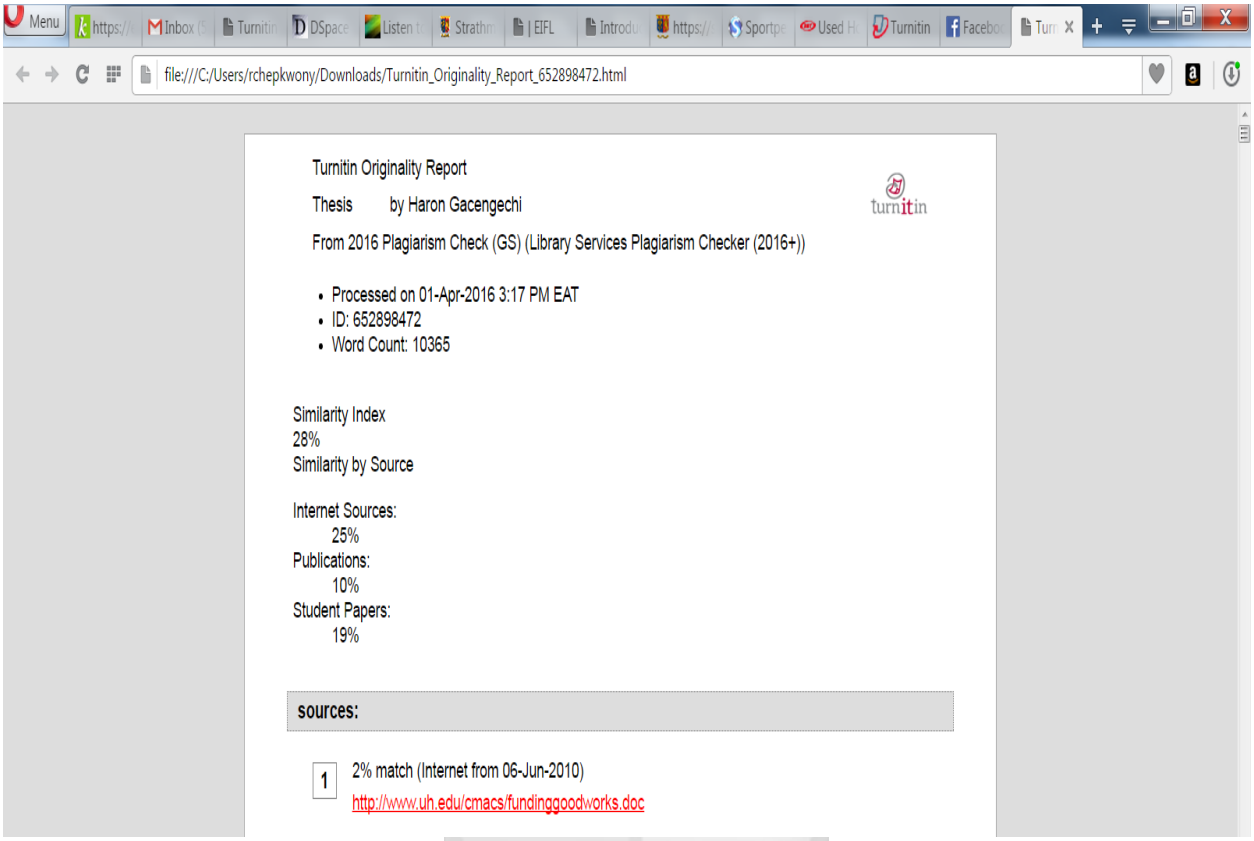
b) 50% .....

c) 30% .....

d) 20% …….

e) 10% …….

Appendix IV: Turnitin Report



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