INFORMATION TECHNOLOGY AND EMPLOYEES PERFORMANCE:
A CASE OF FINGERPRINT UNITAT TANZANIA POLICE FORCE

By

Violeth M Siwale

A Research Paper Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Human Resource Management (MSc-HRM) of Mzumbe University.

2015

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a research entitled “Information Technology and Employees Performance a case of fingerprint unit at Tanzania Police force ” in partial/fulfillment of the requirements for award of the degree of Master of Science in Human Resource Management (MSc-HRM) of Mzumbe University.

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Date_____

ACKNOWLEDGEMENT

First and foremost, I would like to express my gratitude, honor and heartiest thanks to Almighty God for giving me good health, courage and strength throughout my field work , and by his grace and helping hand enabled me to work well.

I am indebted to so many people and institutions to the extent that it is not possible to accord them due credit. However, my special thanks go to my parents and family. I would like to extend my sincere and grateful thanks to my supervisor Mr. G. Kolola for his constructive ideas and directions, which led me through my proposed research up to my research report.

My grateful thanks are also extended to TPF at Fingerprint unit management for their trust and concern to allow me to undertake the field practical work and collect data for my report writing.

Moreover, my thanks are extended to all TPF staff (headquarter office) that in one way or another contributed to the success of my fieldwork.

Lastly, I would like to appreciate the support given to me by my lecturers, classmates, and friends. May God bless them with success and happiness in their life.

LIST OF ACRONYMS/ ABBREVIATIONS

ATMs	-	Automatic Teller Machines
COSTECH	-	Commission for Science and Technology
CSE	-	Computer self-efficacy
DOI	-	Diffusion on Innovation
FBI	-	Federal Bureau of Investigations
FID	-	Forensic Investigation Department
FIU	-	Fingerprint Investigation Unit
ICT	-	Information and Communication Technology
IT	-	Information Technology
SACCOS	-	Serving and Credit Corporative Society
TPF	-	Tanzania Police Force
URT	-	United Republic of Tanzania
VSATs	-	Very Small Aperture Terminals

ABSTRACT

The purpose of this study was to find out the effectiveness on the use of Information Technology and Employee Performance in fingerprint unit, Tanzania police force, three research questions was formed to meet the objective which are; what is the employee capacity on using IT facilities, what is the relationship between IT adaption and employee performance? And what is the relationship between IT adaption and employee innovation?

To answer those three research questions the researcher used interview and questionnaire to 23 respondents who were employees from forensic unit and 20 employees from Information technology both from Tanzania police force who made a total of 43 respondents.

The study found out that the performance before the IT adoption was low; with all the works needed to be done using hands by writing, communicating and measuring.

The study concludes that there is good employee capacity on using IT facilities, there is relationship between employee adoption and employee performance and there is relationship between IT adoption and employee innovation.

The study recommends that Government should provide enough funds needed by its organizations in order to fulfill their IT requirements and policy makers should formulate laws and orders that will create favorable environment that require government institution to use IT facilities in order to increase employee's performance through clear formulated policies that will increase creativity and innovation.

TABLE OF CONTENTS

LIST OF TABLES

Pages

LIST OF TABLES AND FIGURES

Pages

CHAPTER ONE

PROBLEM SETTING

1.1 Introduction

This chapter introduces the study. The main purpose is to provide over view of the study. Section 1.2 provides the background of the problem, section 1.3 describes statement of the problem, and research objectives are presented in section 1.4. The research questions (section 1.5) are also included in this chapter.

1.2 Background of the Problem

Information technology (IT) increasingly affects virtually every aspect of work. IT has been hailed as one of the most important technological developments in recent history (Knol, 2001). It has been argued that advances in automation and IT will result in increased productivity and product quality. The prevalence and importance of information technology to the design and structuring of work in today's competitive environment speaks for understanding how such technology impacts the workers who must use it. Woodman and Balcer, (2004) they suggested that the study of information technology is emerging as an important area of interest from a change process perspective.

Balcer, (2004) stated that if information technology is "treated solely as a technological innovation, and its impact on the social fabric of the system ignored, then we will relearn the harsh lessons from socio technical systems theory. That is, information technology initiatives will fail, or at least fail to perform most effectively, if their human consequences are ignored.

In Africa, IT has been Africa’s quest for greater productivity, quality and morale is heightening (Balcer, 2004). And while employee involvement has become the catchword in much forward thing kind organization with their quality circles and labor management committees, many companies are pushing their commitment to employees a step further; they are turning to incentive programs at the workplace (Choi, 2001). According to Wafula (2008), technology, labour and capital are interconnected. Some technology use a lot of labour and some use more of other equipment or capital. Information and communication technologies (ICT) utilization have changed all aspects of organization direction and

operation. In work systems, workers, labour and employee performance have been affected by ICT in nearly and its major aspects, as employees and managers are interconnected through network of computers and other information gadgets. Many aspects of organization, industrial relations are organized and directed through ICT networking. These networking also connect production and service provision within and outside organizations.

As Kapur (2005) narrates, the apparent trend at work stations shows that the state of technology determines the performance and quality services produced. Organizational performance and development are determined by the state and types of technologies. Technology also influences living conditions of individual and groups in organizations and the relationship between them. Technology is prone to change, and the state of technology have direct link to the relationship between the employer, employee and their performance.

Organizations purchase the advanced technological tool for improving the employee's performance, facilitated job tasks, improved communication, increased efficiencies, and higher levels of effectiveness in work management (Dauda & Akingbade, 2011). The introduction of advance technology has changed the way of performing job. Technological advancement improved the employee performance as well as less the employee working effort and task completion time.

New technology is not only essential for company or government, it is also important for nation. Companies cannot run with old technologies. Technology increase human performance when human or employees use technology for the benefits of the organization and use with ethical values. Individual person cannot adopt technology easily and on the other side group of people can adopt technology easily. Computer is a greatest invention; it is useful only in that case when employees use it for their work. New technology can be used for both purposes for break or for make purpose. Employee work load reduce through technological advancement. Number of employees to perform one task is also reduced. Companies require not much more employees to perform one job. Human effort is also reduced through technological advancement. Single employee can perform its job without any hurdle.

Technological advancement has enormous influence on employee performance (Nohria and Gulati, 1996). Technological advancement is important factor for influencing the

improvement of performance (Hitt et al., 1997). Most of studies have repeatedly shown a positive relationship between a firm's technological advancement and performance, and concluded that technological advancement is important for employee performance (Foster, 1986).

Tanzania we are in the era of law enforcement where ICT and other advanced technologies is becoming a powerful tool for responding to criminals, engaging in hotspots policing, solving violent crimes, monitoring employees' performance and many other functions. Technologies, such as video cameras, data mining systems, heat sensors, biometrics, GPS tracking, internet and telecommunication systems are being used for the detection, investigation, prosecution and prevention of crime in the law enforcement community.

As it did in the middle of the 20th century, technology is beginning to alter the nature of policing and to impact on the management and delivery of police services. Emerging models of policing in the 21st century demand accurate real-time information for strategic planning, problem analysis, deployment decisions, community interface, inter organizational communication, accountability, threat detection and many other functions.

Technological innovation has been the driving force leading to reform of crime prevention and crime control strategies, both by individual citizens and concerned
groups, and by formal police agencies(Reichert, 2001; Chan, 2001; Harris, 2007). There are two general types of technological innovations that can be identified: information based technologies and material-based technologies. Both types of technological innovation have been linked to "dramatic changes in the organization of police" (Reichard, 2001:1), particularly at the turn of the last century, while similar linkages can be offered to more general crime prevention strategies employed by individuals and groups of residents.

1.3 Statement of the Problem

In this era of rapid technological advances, people spend considerable amounts of money on technology to increase productivity in almost all organizational structures across the world. However, whether this investment really results in efficient output is a big concern for not only policymakers but also investors (Malhotra & Galletta, 1999).

Several paradigms have been developed and used to explain the acceptance of information technology by users. Researchers have tested user technology acceptance in various occupations by using different instruments stemming from those theories. However, few studies have been conducted in law enforcement setting to examine usability features of police officers. Since the police organizations tend not to disclose their activities publicly, the police officer's adoptions of information technology are not well identified and studied by researchers (Manning, 2003).

Each profession has different structures, cultures, and usability features. In addition, police agencies in each country have unique characteristics and different features in terms of organizational structure; therefore, it is really difficult to make generalizations about them (Sheptycki, 2004).

The research on information technology based on user needs and usability has grown and continues to interest researchers (Hu, Lin, & Chen, 2005; Premkumar & Bhattacherjeeb, in press). Adoption is not instantly embraced and comprehended; rather, it is a complex and continuing process of which every part needs to be clear. For this reason, researchers have developed many theories, conducted numerous studies, and tested these theories in different environments. In business settings, researchers have concentrated on identifying the factors of usage because they have found that information technology has been used by enterprises to reduce costs, increase production, and raise the quality of service (Legris, Ingham, & Collerette, 2003).

However, most previous research has concentrated on user acceptance in business settings but few research studies have been conducted in non business settings, such as law enforcement environments thus the study aimed to find out the effectiveness on the use of Information Technology and Employee Performance, a case of fingerprint unit at Tanzania police force.

1.5 General Objective:

The general objective of this study was to find out the effectiveness on the use of Information Technology and Employee Performance."

1.5.1 Specific Objectives:

This study was guided by the following specific objectives:

i. To assess the employee capacity on using IT facilities
ii. To analyze relationship between IT adoption and employee performance
iii. To determine relationship between IT adoption and employees innovation

1.5.2 Research questions

i. What is the employee capacity on using IT facilities?
ii. What is the relationship between IT adaption and employee performance?
iii. What is the relationship between IT adaption and employee innovation?

1.6 Significance of the study

This study was intended to find out the effectiveness on the use of Information Technology and Employee Performance, the findings of the study was expected to be significant and of value to:

1.6.1 Government

This Study was expected to help the government through the Ministry of home affairs to understand the effectiveness on the use of Information Technology on police Performance.

1.6.2 Fingerprint Unit

The study was expected to raise awareness among the fingerprint unit employees on the use of Information technology

1.6.3 Citizens

The finding of this study was expected to help citizens understood the use of their tax on Fingerprint unit.

1.6.4 Academicians

The findings of this study were expected to provide a foundation for further studies in the effectiveness on the use of Information Technology and Employee Performance Tanzania, East Africa or Africa at large.

1.6.5 Researcher

The findings of the study were expected to help the researcher have a deep and broader knowledge base on the effectiveness on the use of Information Technology and Employee Performance as well as identify viable area for further research.

1.7 Limitation of the Study

As it was expected, the practical constraints that the researcher encountered were:

1.7.1 Financial limitation

Even though cost was high but interview was the best method used to collect data on time.

1.7.2 Time limitation

The researcher was forced to squeeze her time in the schedules to get time with the respondents for interviews and gathering of data thus the result will be narrowed, due to shortage of time.

1.7.3 Access to information

The researcher used courteous (polite) language in both data collection techniques to obtain concealed information, although there was some information which was not provided due to its importance to National security.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical and empirical framework of the study. Section two focuses on theories and concepts. Theories help in understanding the study problem and guidance through the study in which concepts are discussed and defined. **Information and communication technology (ICT)** refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies; **Job performance** and **Organization performance: Organization performance** refers to the effectiveness of the organization in fulfilling its purpose; **Employee performance** refers to the job performance of an employee which shows his/her contribution to the objectives of the company; **Diffusion of innovations and Institutional theory**: **Diffusion of innovations** is a theory that seeks to explain how, why, and at what rate new ideas and technology spread through cultures; **Technology, organization and Environment context** describes factors that influence technology adoption and its likelihood; **Technology acceptance (TAM); ICT Infrastructure, Utilization and Performance,** Khalil (2001) define ICT infrastructure as everything that supports the flow and processing of information in an organization, including hardware, live ware, software, data and network components; **Reasons for low ICT**; **Tanzanian ICT Policy 2003**; **Developing the ICT Workforce:** In general, there is a shortage of well-qualified professionals of ICT in Tanzania; ICT in Workplace; **Innovations in Organizations:** Transmission of innovations is different within organizations as they are a group of individuals making collective decisions; Policy challenges; **Technological Advancement and Employees Performance**, Advancement makes employees more effective and firm more efficient (Muhammad, 2014). **Training and Employee Performance;** Technology Innovation and Organizational Performance; Technological Change and Employee Relations; Empirical Review; Research Gap; and also Conceptual Framework

2.2 Definitions of key concepts

2.2.1 Information and Communication Technology

Is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. ICTs are often spoken of in a particular context, such as ICTs in education, health care, or libraries. Converging technologies that exemplify ICT include the merging of audiovisual, telephone and computer networks through a common cabling system. Internet service providers (ISP) commonly provide Internet, phone and television services to homes and businesses through a single optical cable.

The elimination of the telephone networks has provided huge economic incentives to implement this convergence, which eliminates many of the costs associated with cabling, signal distribution, user installation, servicing and maintenance costs.

2.2.2 Job performance

Job performance assesses whether a person performs a job well. Job performance, studied academically as part of industrial and organizational psychology (the branch of psychology that deals with the workplace), also forms a part of human resources management. Performance is an important criterion for organizational outcomes and success.

John P. Campbell (1990) describes job performance as an individual level variable, or something a single person does. This differentiates it from more encompassing constructs such as organizational performance or national performance, which are higher level variables.

2.2.3 Organization performance

Organizational performance comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). According to Richard et al. (2009) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product

market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.)

2.2.4 Employee performance

The job related activities expected of a worker and how well those activities were executed. It also refers to the job performance of an employee which shows his/her contribution to the objectives of the company. One example of how to manage or measure the employees' performance via-online is by using a time tracking software like hubstaff, odesk, paymo or time doctor that monitors activity levels and takes random screenshots in your computer

2.3 Theoretical Review

2.3.1 DOI Theory

DOI is a theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Rogers, 1995). Individuals are seen as possessing different degrees of willingness to adopt innovations, and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time (Rogers, 1995).

The innovation process in organizations is much more complex. It generally involves a number of individuals, perhaps including both supporters and opponents of the new idea, each of whom plays a role in the innovation-decision.

Based on DOI theory at firm level (Rogers 1995), innovativeness is related to such independent variables as individual (leader) characteristics, internal organizational structural characteristics, and external characteristics of the organization

(a) Individual characteristics describes the leader attitude toward change.

(b) Internal characteristics of organizational structure includes observations according to Rogers (1995) whereby: “centralization is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals”; “complexity is the degree to which an organization’s members possess a relatively high level of knowledge and expertise”; “formalization is the degree to which an organization emphasizes its members’ following rules and procedures”;

"interconnectedness is the degree to which the units in a social system are linked by interpersonal networks"; "organizational slack is the degree to which uncommitted resources are available to an organization"; "size is the number of employees of the organization".

(c) External characteristics of organizational refer to system openness.

An overview of diffusion of innovations theory (Rogers, 2003) follows that includes: the elements of diffusion, the innovation-decision making process, the importance of communication channels (Frank, Zhao, & Borman, 2004), the innovation decision making period, the attributes of innovations and rates of adoption, determining innovativeness and identifying the adopter categories, the importance of diffusion networks, the influence of the change agent, the innovation process within organizations (Yang & Patterson, 2005), The elements of diffusion process can be divided into four stages.

The process starts first with an innovation defined as anything perceived as a new idea, such as technology, by the individual. The second element is the communication channel, namely the diffusion of the idea from one individual to another. The third element in the process is time, which includes: 1) how much time is involved from the when the individual knows about the innovation to when either adoption or rejection occurs, 2) when the individual adopts the innovation compared to others within the social system, and 3) the rate of adoption within the system. The fourth element is the social system, the population of individuals collectively involved in a problem solving behavior.Within the social system there will be innovations adopted by individuals,or by groups of individuals. Occasionally there is a group decision that forces acceptance of the innovation on all people within the social system (Rogers, 2003).

2.3.2 Institutional Theory

Institutional theory emphasizes that institutional environments are crucial in shaping organizational structure and actions (Scott, 2001). According to the institutional theory, organizational decisions are not driven purely by rational goals of efficiency, but also by social and cultural factors and concerns for legitimacy. Institutions are transported by cultures, structures, and routines and operate at multiple levels. The theory claims that firms become more similar due to isomorphic pressures and pressures for legitimacy. This means

that firms in the same field tend to become homologous over time, as competitive and customer pressures motivate them to copy industry leaders. For example, rather than making a purely internally driven decision to adopt e-commerce, firms are likely to be induced to adopt and use e-commerce by external isomorphic pressures from competitors, trading partners, customers, and government.

Several recent studies have taken an institutional approach to e-commerce or EDI diffusion and assimilation (Teo et al. 2003). It is well known that mimetic, coercive, and normative institutional pressures existing in an institutionalized environment may influence organizations' predisposition toward an IT-based inter organizational system (Teo et al. 2003). Mimetic pressures are observed when firms adopt a practice or innovation imitating competitors (Soares-Aguiar and Palma-Dos-Reis 2008). Coercive pressures are a set of formal or informal forces exerted on organizations by other organizations upon which the former organizations depend (Dimaggio and Powell 1983). Normative pressures come from dyadic relationships where companies share some information, rules, and norms. Sharing these norms through relational channels amongst members of a network facilitates consensus, which, in turn, increases the strength of these norms and their potential influence on organizational behavior.

2.3.3 Technology, organization and Environment context

The TOE framework was developed in 1990 (Tornatzky and Fleischer1990). It identifies three aspects of an enterprise's context that influence the process by which it adopts and implements a technological innovation: technological context, organizational context, and environmental,

(a)Technological context describes both the internal and external technologies relevant to the firm. This includes current practices and equipment internal to the firm (Starbuck1976), as well as the set of available technologies external to the firm (Thompson 1967, Khandwalla 1970, Hage 1980).

(b)Organizational context refers to descriptive measures about the organization such as scope, size, and managerial structure.

(c) Environmental context is the arena in which a firm conducts its business its industry, competitors, and dealings with the government (Tornatzky and Fleischer 1990).

The TOE framework as originally presented, and later adapted in IT adoption studies, provides a useful analytical framework that can be used for studying the adoption and assimilation of different types of IT innovation. The TOE framework has a solid theoretical

basis, consistent empirical support, and the potential of application to IS innovation domains, though specific factors identified within the three contexts may vary across different studies.

This framework is consistent with the DOI theory, in which Rogers (1995) emphasized individual characteristics, and both the internal and external characteristics of the organization, as drivers for organizational innovativeness. These are identical to the technology and organization context of the TOE framework, but the TOE framework also includes new and important component, environment context. The environment context presents both constraints and opportunities for technological innovation. The TOE framework makes Rogers' innovation diffusion theory better able to explain intra-firm innovation diffusion (Hsu*etal.*2006). Thus, the next Section analyses the studies that adopted TOE framework.

Several authors used only the TOE framework to understand different IT adoptions, such as: electronic data interchange (EDI) (Kuan and Chau 2001); open systems (Chau and Tam 1997); (Oliveira and Martins 2008); e-commerce (Liu2008, Martins and Oliveira 2009, Oliveira and Martins 2009) ;enterprise resource planning (ERP) (Pan and Jang 2008);business to business(B2B) e-commerce (Teo*etal.* 2006);e-business (Zhu*etal.* 2003, Zhu and Kraemer2005, Zhu*etal.* 2006 b, Lin and Lin 2008, Oliveira and Martins 2010a); knowledge management systems KMS) (Lee*etal.* 2009).

Some authors used the TOE frame work with other theories to understand IT adoption (Thong 1999, Gibbs and Kraemer 2004, Hsu*etal.* 2006, Zhu*etal.* 2006a,Li 2008, Soares-Aguiar and Palma-Dos-Reis 2008, Chong*etal.* 2009, Oliveira and Martins 2010b), Studies combining the TOE framework and DOI theories include the following. Thong (1999) joins CEO characteristics from DOI to the TOE framework. Chong *etal*. (2009) add innovation attributes (relative advantage, compatibility, and complexity) from DOI and an additional new factor in the adoption study called information sharing culture characteristics to the TOE framework. Zhu*etal*. (2006a) combined relative advantage, compatibility, cost, and security concern from DOI with the TOE framework. Wang*etal.* (2010) add relativeve advantage, complexity, and compatibility from DOI to the TOE framework.

2.3.4 Technology acceptance

Davis et al. (1989) proposed TAM as a way to explain and predict technology acceptance of an information system by its end users. TAM is an adaptation of Fishbeinand Ajzen's

(1975) theory of reasoned action (Ajzen & Fishbein, 1980), which had “proven successful in predicting and explaining behavior across a wide variety of domains” (Davis et al., 1989, p. 983)

TAM proposes six constructs (Davis et al., 1989): actual system use, behavioral intention to use, attitude toward using, perceived usefulness, perceived ease of use and external characteristics. The relationship between attitude toward using, behavioral intention to use and actual system use were derived from the theory of reasoned action (Davis et al., 1989). The other technology acceptance model constructs and their relationships were new ones proposed by Davis et al (1989) for explaining the beliefs that affect the attitude towards using technology and how external characteristics affect these beliefs Two constructs, namely external characteristics and actual system use, were introduced to encapsulate observable components of technology adoption. External characteristics refer to all the external features of a system ranging from menus, icons to output produced by the system (Davis et al., 1989). Actual system use refers to the potential adopter’s system usage behavior.

TAM explains how the external characteristics of the system affect the potential adopter’s attitudes and perceptions leading to actual use of the system. The direct effect of behavioral intention on actual system usage is adapted from the theory of reasoned action. Similarly, the positive direct effect of attitude on behavioral intention is also adapted from the theory of reasoned action.

The two behavioral beliefs introduced by TAM consisting of perceived ease of use and perceived usefulness was a new contribution to research in technology acceptance. Perceived ease of use is defined as “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989, p. 320). The complexity of the external characteristics of the system has a direct effect on perceived ease of use. Perceived ease of use is considered to have a positive direct effect on attitude; for example, if an individual views that using a system is fairly free of effort, their affect with regards to using the system will increase positively. Perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989, p. 320).

A potential adopter's perceived usefulness is directly affected by the degree to which they perceived that the external characteristics of a system aided them in performing a task or a set of tasks. Equivalently, the ease of use of a system can also contribute to increased performance; thus, ease of use has a direct effect on perceived usefulness. Perceived usefulness is also considered to have a positive direct effect on behavioral intention; for example, if potential adopters believe that the system delivers useful outcomes; their intention to use is increased. Perceived usefulness is considered to have a positive direct effect on attitude towards using a system. When potential adopters observe that the system delivers positive outcomes this will positively increase their affect with regards to using the system.

2.4 ICT Infrastructure, Utilization and Performance

Khalil (2001) define ICT infrastructure as everything that supports the flow and processing of information in an organization, including hardware, live ware, software, data and network components. In a study carried out by Albion (1999) in to investigate the factors that influence school level ICT adoption using the theory planned behavior. Their results using Spearman's correlation coefficient revealed that there was a strong positive relationship between available ICT infrastructure and ICT utilization. Syed s*et al* (2009) suggests that it is very important for an organization to determine its employee knowledge and skills of ICT. This may influence organization decisions in adopting and utilizing ICT. They add that the ability of managers or owners in ICTs knowledge and skills is definitely likely to increase the opportunity of ICT utilization. Managers are unlikely to adopt more sophisticated technologies if they are not familiar with the basic ones.

Zhang *et al* (2004) assert that organizational support systems within the structures are the most investigated organizational characteristics in organizational literature. They institutionalize how people interact within each other, how communication flows, and how power relationships are defined (Hall, 1987). The structure of organization and support to organizational members reflects the value based choices made by the organization (Quinn, 1988); it refers to how job tasks are formally divided, grouped and coordinated. Usually ICT infrastructure conceptualize organizational support systems as a facilitating interaction and communication for the coordination of the organization's activities and it usually entails top management support in facilitation especially where ICT utilization target performance improvement.

Fullan (2003) contends that no successful large scale change or ICT adoption effort has advanced without the support of the top management, Organizational learning is a key ICT implementation strategy when ICT application development is frequently subject to change, sharing tacit ICT knowledge among peers built from users' experience can improve ICT utilization within the organization (Attewell, 1992).

Adequacy of the ICT for research and development in the light of globalization; Provision of Internet facilities to the community and being in the forefront of ICT development in the country; Steps to be taken could perform the roles expected of them in ICT innovations. Necessity for institutional ICT policy, plans and strategies for implementation; Identification and development of ICT models that can be utilized from the experiences gathered from the case studies; Pinto *et al* (1999) argues that, to management usually needs to establish willingness on the part of organizational members by creating a climate of cooperation, demonstrating the efficacy of the new system and its benefits over the old used ways of doing things.

They add that the degree of acceptance or resistance to ICT projects will always be due to the degree of top management support for the project. Phelps (2000) as cited by Kyakulumbye*et al* (2012) argues that engaging leaders in ICT training enables them to reach greater understanding of potential of technology in challenging and enhancing ICT.

2.5 Reasons for low ICT uptake

Today Africa welcomes technology; the use of computers, peripheral devices connected to it and communication tools for collecting, processing, storage and dissemination of information called information and communication technology. Information and communication technology is a term that applied to any communication device or program, such as: radio, television, cellular phones, computers, software, hardware, networking, satellite systems and the like it that is related numerous services, programs and services to them. Information and communication technology is often in specific concept and position in a more accurate review of application, such as information and communication technologies in education and health, libraries and so on, convergence between computer and communications.

The most important feature of information and communication technology is storage method, processing and access to information (Malekian, 2010). It is worthy to mention that ICT use in developing countries has been hindered by many problems which include; insufficient fund allocation, inadequate manpower requirement, power outages, prohibitive cost of importation of hardware, software and the accessories of ICT, conservatism on the part of management and unfavorable government policies. Others include; lukewarm attitude towards alleviating the sufferings of academic institutions by the government, lack of training culture in ICT skills, inadequate infrastructures such as personal computers and communication facilities (Lymer, 1997).

2.6 Tanzania ICT Policy (2003)

2.6.1 The ICT Environment in Tanzania

Despite the rapid improvements Tanzania's ICT environment is still somewhat challenged. ICT is concentrated in Dar es Salaam, the commercial capital with little deployment or access in other urban centers or in rural Tanzania.

Currently very few educational institutions have computer laboratories and other multi-media facilities and these are more prevalent in private educational institutions than in public ones. In any event facilities are insufficient to meet demand. In addition while there Page 8 is an official Secondary School Computer Studies Syllabus for Forms I –IV developed in 1996 and issued in 1997, it is out of date with respect to the evolution of technology since the early 90`s.

Furthermore the lack of programme for training teachers on computers and other multi-media utilization has been identified as a major reason for slow take up of computer studies in primary and secondary schools. Typing skills and the use of "mock-ups" as teaching aids to simulate computers and peripherals should be promoted in schools that cannot afford to purchase ICT equipment.

In general, there is a shortage of well-qualified professionals of ICT in Tanzania. There are also no well-established ICT professional profiles, and a standardized process of evaluation or certification of the different courses offered by various training centers is lacking. Access to online and distance learning for ICT is also still limited. Furthermore, opportunities for training are mostly limited to few urban centers.

Most Tanzanian web sites are written in English, and are not, therefore, a dominant medium for society to access information. Many websites are not updated regularly and appear to be an advertising presence on the Web. However some are vibrant websites with the majority publishing local news on the Web, while others demonstrate some convergence by giving access to local radio programmes on the Internet. There has been recent controversy on access to pornography via the Internet causing concern for safeguarding of our diverse mores, morals and culture. The potential for e-commerce is constrained by the lack of local credit cards and an appropriate legal framework that engenders an environment of trust, security and accountability.

2.6.2 Developing the ICT Workforce

In general, there is a shortage of well-qualified professionals of ICT in Tanzania. There is also no well-established ICT professional profiles, and a standardized process of evaluation or certification of the different courses offered by various training centers is lacking. Access to Online and distance learning for ICT is also still limited. Furthermore, opportunities for training are mostly limited to few urban centers.

2.6.3 ICT in the Workplace

There is sufficient evidence that several large organizations and companies make extensive use of networked computers, some with Internet access. The banking sector makes heavy use of ICT to provide improved customer service with some banks using Very Small Aperture Terminals (VSATs) or public leased lines to interconnect their branches and cash dispensing Automatic Teller Machines (ATMs). However, anecdotal evidence suggests that smaller companies, and many institutions outside Dar es Salaam, make marginal use of ICT in their daily operations. The greatest obstacle to effective use of ICT in the workplace according to the Sida Survey and the e-Readiness Report is the low capacity of human capital in the use and maintenance of ICT

2.6.3.1 Innovations in Organizations

Transmission of innovations is different within organizations as they are a group of individuals making collective decisions. Within organizations, Rogers (2003) identifies three main types of innovative decisions: 1) operational innovative decisions which are made by the individual, 2) collective innovative decisions which are made by a group

consensus within a social system and 3) authority innovation-decisions which are made by a few individuals in a system who possess power, status, or technical expertise. Within a system, an individual's decision making process on whether to accept or reject the innovation may be influenced by other individuals. When this is done informally, it is called opinion leadership. When there is an attempt to directly influence an individual in the decision making process toward a certain innovation, this person would be called a change agent (Rogers, 2003).

Description of the adoption of an innovation process in organizations includes the time before the decision to adopt, the initiation process, and afterwards, the implementation process. The whole innovation process is divided into five stages, of which the initiation process includes: 1) agenda setting, where organizational problems create a perceived need for an innovation, and 2) matching, where the organization's agenda is considered together with an innovation which involves planning to integrate the innovation (Rogers 1995). At this point in the process, the decision to adopt is made. Following this is the implementation process, divided into three stages: 3) redefining/ restructuring where the innovation is modified to fit the situation of the organization, which includes some alteration of the structures of the organization, 4) clarifying, where the relationship between the innovation and the organization is defined more clearly as the innovation is regularly used, and 5) reutilizing, where the innovation loses its separate identity and is incorporated into the regular activities of the organization (Rogers, 1995).

Yang and Patterson (2005) explored technology diffusion from the perspective of organizational change. They recognized the multi-dimensional nature of technology diffusion within teacher education and suggested a number of approaches to increase the chances of successful implementation for IT leaders. They derived a table of faulty assumptions and compared these with organizational realities. One faulty assumption was that people work in the interests of the organization when in reality they work first in their own self-interest, not in the interest of the organization. The assumption that most institutions follow value-driven changes is countered with the reality that most organizations follow event driven changes. The people within the organization should make changes that reflect the organization belief system and not pursue quick fix mentality to problems.

There is an assumption that most organizations center their energy on achieving performance results when the reality is that they equate activities with results. Performance improvement should determine results. There is an assumption that people choose to be the architects of change initiatives in organizations when the reality is that people choose to be the victims of change rather than the architects of change

2.6.4 Policy Challenges

(i.) Finding appropriate mechanisms for policy coordination.

(ii.) Creating awareness among leaders and the public, and political championing of ICT.

(iii.) Promoting ICT to further productivity among the sectors that are key drivers of the national economy.

(iv.) Prioritizing of development assistance in ICT.

(v.) Developing ICT sector parameters and indicators.

(vi.) Participation in global governance of ICT and the Internet.

(vii.) Creation of an environment conducive for effective ICT deployment.

(viii.) Addressing rural/urban imbalances.

(ix.) Promotion of regional integration and international cooperation.

(x.) Promotion of more effective and increasingly broad-based national participation in international for an Internet policy making and governance.

2.7 Technological Advancement and Employees Performance

Technologies can only lead to increased productivity or improve performance when combined with other resources effectively by human resources or when done effectively, and use technology productively and ethically (Dauda & Akingbade, 2011).

Advancement makes employees more effective and firm more efficient (Muhammad, 2014). Motivation of the employee has direct influence on technological advancement Employee's performance is closely linked with technological advancement. Technological advancement can be managed effectively through employees. Resource- based theory suggests that a firm's resources are extremely important for the firm's development, and that human capital is a key resource of a firm. The function of this resource depends on the employees' ability and enthusiasm, and on efficient human resource management (Muhammad, 2014).

Technological advancement has enormous influence on employee performance Technological advancement is important factor for influencing the improvement of performance. Most of studies have repeatedly shown a positive relationship between a firm's technological advancement and performance, and concluded that technological advancement is important for employee performance (Dauda & Akingbade, 2011)

2.7.1 Training and Employee Performance

Training helps to overcome gaps between employees and senior level management. It enables employee to participate in decision making and provide active output in decision making. Employee coordination with peer, subordinates and with its senior officers increases after training. These types of steps create better image in front of those think tanks who are working for value maximization of organization. Most important for the organization employee performance increases after training. Organizations which are working around the global are more concerned about their employees. These types of organizations launch different type of training programs for value creation into their employees. Global organizations train their employees in aspect of working field. Training not only develop employees mental ability but also after training employees can take benefit physically such as active participation in decision making it can release mental disturbance (Farooq & Khan, 2011).

Employees performance is also relate with commitment of employees with organization. High commitment leads to high performance and low commitment leads toward low performance. So in simple when employees are so committed with organization we will determine from that employee's performance is good. Training improves employee's commitment with organization. Training improves skills of employees that thing insist organization to improve benefits and pay of employees. Scholars and researchers accept that training increase commitment of employees with organization but training produce desired out comes only in that situation when employees also accept that training program. It means that training is effective only in that when from both sides cooperation occurred. Employees enter in training program with lot of expectations when these expectations are not fulfilled; it comes in result of employee's low commitment and high turnover. Because in case of low commitment whenever they got opportunity they will prefer to leave organization (BRUM, 2007)

Training has bigger impact on the performance of employees, where as an employee acquire knowledge and skills on how to do a certain work. But training is not only single factor which effect the performance of employees, other factors may include motivation and rewards. Trained employees are more efficient in group work because they are well known about the expectation of other workers. Employees who take regular training programs are easily accepting changes in organization. Whenever organization launches innovative programs they resist from those employees who do not attend regular training programs. Trained employees help organization to reduce training cost of other employees. Because when one employee is full trained, he was capable to train other untrained employees in the organization. Training helps the employees to achieve different task of the organization and vice versa. Training is systematic approach of behaviours that enables employees to change their behaviors according to the norms and values of the organization (Jagero & Komba, 2012)

2.7.2 Technology Innovation and Organizational Performance

The starting point of technological development, changes and innovations is always people. It is the people who create, initiate, use and manage ideas that are the bases and directions of technology. Identity theory provides a way of assessing individual relations to organizational objectives and national goals and enables us to understand human resource inspiration and readiness for technology innovation. The motivation individual that receives determines the extent of its identity and his readiness to innovate for organizational and national development. This theory to Dauda (2011) provides strategies intended to change beliefs, attitudes, values and structure of an organization so that they can better adapt to new technologies, market challenges and changes. It can also be used to plan intervention in organization process to increase organization effectiveness and health. Both (Bechard, 2010) and Dauda (2011) demonstrated the relationship between organizational development and managerial effectiveness.

2.7.3 Technological Change and Employee Relations

Many organizations and nations in the developed and developing countries have established research and development units, departments and organizations to enable them to cope with technological change. The degrees of aggregation of technological innovation by organization and nation determine its performance and development. This is related to

management and control of internal and systems and its response to external system. Significant improvement in output, productivity and growth are achieved when they use new technology. Increased productivity and general economic growth in most developed nations have been attributed to increasing technology and technological innovation. In these countries a significant proportion of R & D expenditure are devoted to the introduction of new product. Productions of large quantity and quality of goods and services have been traced to improved technology through R & D.

Organizations have also tended to lie emphasize on capital in terms of machinery and equipment and less on labour to increase their profitability. But these have not positively increased labour productivity. The substitutions of capital for labour have not really improved labour productivity or performance. The substitution of one by the other depends on the organization assessment of its environment and needs rest. Companies where large number of labour are displaced or removed to be replaced by capital without proper assessment may not record significant price and profit. Improved performances of many organizations were often traced to the improved performance of all the factors of production and the number of customer not only on technology (Dauda, 2000).

Investors and manager may consider improvement in either technology or labour to respond to customer desire for lower prices and to increase profit improved performance. Employees demand for increase wages may be traced to increase performance and productivity that are often due to management and control of technology system. There may be no scope for increased wages profit margin and price of unit of service if the cost of technology is high and the demand is not high enough to increase profit margin. (Dauda, 2000). In advanced countries the cost of technology is low, but that of labour is high and quantity of goods and services are large and the number of customer, are many. These may offset labour cost, reduce price margin and increased profits. In most developing nations low technological progress reduces the ratio of marginal product of labour to that of capital but in the developed nations where rapid technological change reduces price of capital and increase that of labour.

Unemployment and labour reduction due to technological advances may be prevented by proper management of the level of aggregate demand. Structural unemployment occurs because the unemployed do not possess the skills required by the expanding industries

despite the expansion of aggregate demand. This situation leads to structural unemployment different from deficient unemployment caused by lack of job. Structural unemployment can be reduced by improving employee skills in forms of training and development and of education. Since the works in industry have been divided into smaller and simpler parts it was easy for the unemployed to acquire necessary training and reduce the level of unemployment and be re – integrated into the system.

In most conventional high tech industries individual employee received two or three weeks training as against four years engineering apprenticeship training required four years engineering apprenticeship training required for factory worker. Technological advances in industry may in three major ways affect employment. Technological change is labour saving biased or capital saving biased, the latter could led to reduction in total cost of production and the latter and the former enhance labour productivity. In the second instance, same output can be produced with fewer men; the third is the reaction of demand to any consequent change in relative price which increases production and efficient. This expands output and promote employment prospect.

Despite these, the rate of the transition from older technologies is accelerating and is creating what Joseph Schumpeter regarded as “creative destruction” whereby innovation would destroy existing technologies and method of production. Technological change has created newer and more efficient machines which workers will replace them.

Trade unions in developed countries have also through television videotape, radio and other media sensitize and inform their member of the danger which unilateral employers decision on purchase of new technology posed to their members‟ employment. Labour union mobilization of their member through media is low in Nigeria. In developed countries, trade union have consistently requested for law that will make technology subservient to the needs of the people rather than the other way round. Trades unions in Nigeria have not sufficiently make use of the media to educate and mobilize their members. Management unilateral decisions on technology have not been criticized by the trade unions in the manufacturing industry and it is not part of the bargaining issue between trade union and management or collective bargaining and negotiation (Dauda, 2010). Employers restructure, reengineer and reposition their organization to maintain a system that will

enable them to cope with rapid and radical technological change, but with little or no regard for workers inputs and interest.

2.8 Empirical Review

Sonja researched on the effects of computerization on saving and credit cooperatives in Uganda and found out that Technology is likely to increase the efficiency, outreach and sustainability of microfinance institutions. ICT's has been found to promote the dual objectives of micro finance- sustainability and outreach to the poor people and noted that Management information systems are essential in order for a microfinance institution to operate efficiently. In the study several managers stated that they are not able to use all the functions the system offers such as backup systems or different financial reports, the study found out that technology has positively influenced SACCOs by making daily work easier and quicker and recommended that as technology evolves, more training is required to ensure necessary human resource capacity and it is possible to transfer technology from one country to another and except the local capabilities to be existent (Sonja, 2010).

Amonko in his research on the impact of ICT on banking operations in Ghana, ICT has contributed positively to the provision of banking services and the growth of the Ghanaian banking industry (Amaoko,2012).Internet banking and on-line banking is not yet developed in Ghana. The study recommended that banks should develop user friendly systems and applications for general population, Government and banks should play a key role in enhancing ICT infrastructure, put in place incentives like tax reduction, make PC available and affordable for every Ghanaian.

Financial institutions should offer programs to reassure customer's safety with regards to ICT through sensitization, workshops and support the skills development among bank personnel, there should be a central monitoring unit permanently manned by personnel to check the operations of all the bank's ATM's so that shortage of funds, occasional shut downs, seizure of electronic cards etc. are handled with dispatch. Lastly the banking institutions should also come out with more electronic products and services to reduce the turnaround time of customers. Such products will give them the opportunity to sit at the comfort of their homes, workplaces and transact business with the banks.

Morufu and Taibat (2012) researched on banker's perception of electronic banking in Nigeria purposely to find out how bankers perceive the benefits and threats associated with electronic banking by investigating banks employees' perception on electronic banking and its implications on bank service delivery. The study concluded that it 'minimizes inconvenience' and 'government access to data' appear as the most important benefit and risk respectively while 'reduces HR requirements' and 'charges high costs for services' are the least important benefits and risk associated with electronic banking.

According to Ahamadkaleem (2008) bankers in Pakistan perceive electronic banking as a tool for minimizing inconvenience, reducing transaction costs and saving time. Similarly, they believe that electronic banking increases the chances of government access to public data, increases the chances of fraud and that there is lack of information security.

In the study conducted by Nyangosi and Arora (2009) focused on the adoption of internet banking in Kenya, the perceived usefulness of mobile banking, analyze the banking services provided by internet and mobile phone banking, the study revealed that ATM technology was the most available technology in user's banks. Therefore internet banking was gained popularity and become vital in financial transaction events, IT state is at initial stages and the study was useful to institutions planning to offer digital financial services especially internet banking and mobile banking to know the extent it can be used by customers and the services already in the market. Also the regulatory authorities to know the area of much interest in provision of banking services through internet and mobile phones.

Information Technology has tremendously contributed to the expansion of the banking networks and range of the offered services during recent years (Evadat and Kozak, 2005). Information Technology or Information and communication (ICT) Technology is the combination of computer, electronics and telecommunication equipment to generate information (Oladejo, 2007).

Agboola (2006) observed that some payments are now being automated and absolute volume of cash transactions have declined under the impact of electronic transaction brought about by the adoption of ICT to the payment system especially in the developed countries. Emmanuel and Sife, (2008) observed that positive effects of ICT have

continually been noted in business, production, education, politics, governance, culture and other aspect of human life.

The increase in emerging Information Technology has made banking services become more and more automated and less paper work than in the past as averred in the Central Bank of Nigeria reports and statistical bulletins (Keramati, 2007).

Bankers' perceptions of the benefits of electronic banking have attracted the attention of many researchers, especially in recent years. Banks normally assign their managers responsibility for the promotion of the use of electronic channels to customers (lymperopoulos, and chaniotakis, 2004). This is in line with the view of Moutinho, (1997) that the managers input as delivery staff is important and that is the manager's responsibility to ensure that branch staffs are professional, well–trained and knowledgeable about the range of services provided by bank.

Furthermore, moutinho and Philips (2012) found that Scottish bank managers considered efficiency and enhancement of customer service to be perceived advantages of Internet banking. Similarly, Aladwani (2009) highlighted faster, easier, and more reliable service for customers, and improvement of the bank's competitive position to be the most important drivers of online banking among bank and IT managers in Kuwait.

Madueme, Ifeoma, Stella (2010) researched on evaluating banking productivity and ICT using Translog production function in Nigeria, the results showed that bank output such as loans and other assets increased significantly to charges in expenditure on Information Communication Technology.

According to different studies conducted in Tanzania concerning ICT in education, teachers agree that ICT is a useful tool for transforming classroom practices (Muhozaet.al, 2014; Mwalongo, 2011; Tedreet.al, 2008; Hardman et.al 2011). This is a good sign and is an instrument towards a successful integration of ICT4E in Tanzania since teachers will also be able to create, deepen and digitize their knowledge (Becker, 2000, Frank et.al. 2004). The recent development of Technological Pedagogical Content Knowledge (TPACK) and the ICT Competency Standards for Teachers Framework in Tanzania which guide the integration of technology, can help teachers to understand how ICT is used in education

(Hooker et.al 2011; UNESCO, 2008; Kafyulilo, 2010). The learning of TPACK can have a far reaching impact in the development of technology integration competencies among teachers as it enables teachers to acquire the knowledge required for integrating technology into their teaching in any content area (UNESCO, 2008).

According to Nihuka (2011), the increasing teacher's collaboration in design team using ICT is a useful opportunity for teachers to share their knowledge, skills, abilities and experiences as they design their technology integrated lessons Muhoza et al 2014). In addition, the increasing penetration and access to mobile phones among Tanzanians brings up new opportunities of having technological tools available in learning institutions. This is so because a mobile phone can play a role of a radio, a TV, a computer, a digital camera, iPod or mp3 and newly emerging mobile phones have internet and supports programs such as Ms words, Excel, PPT, etc (Kafyulilo, Fisser & Voogt, 2011). If more teachers will have access to internet through their mobile phones and laptops then, there can be more internet use in the teaching and learning environment.

The Government of the United Republic of Tanzania should take advantage of all these ICT4E initiatives and integrate them into the national implementation levels. In addition, the government should give support by strategizing and encouraging the local production of ICTs and open the ICT industry where the first priority should be given to education sector in order to go in line with the ever changing technological world of the 21st century.

Although there is lack of ICT resources in Tanzania, there have been notable efforts to remedy this situation. The major policy documents concerned with national ICT issues are the National ICT Policy (Ministry of Communications and Transport, 2003) and Development Vision 2025 (Planning Commission, 1999). The National ICT Policy document gives an account of the most important problems that currently affect the ICT sector in Tanzania. These include factors that hinder the development of quality ICT education and ICT availability in general (Ministry of Communications and Transport, 2003). The Development Vision document foresees that ICT development will act as one of the primary stimulants of economic growth in the country (Planning Commission, 1999).

2.8.1 Research Gap

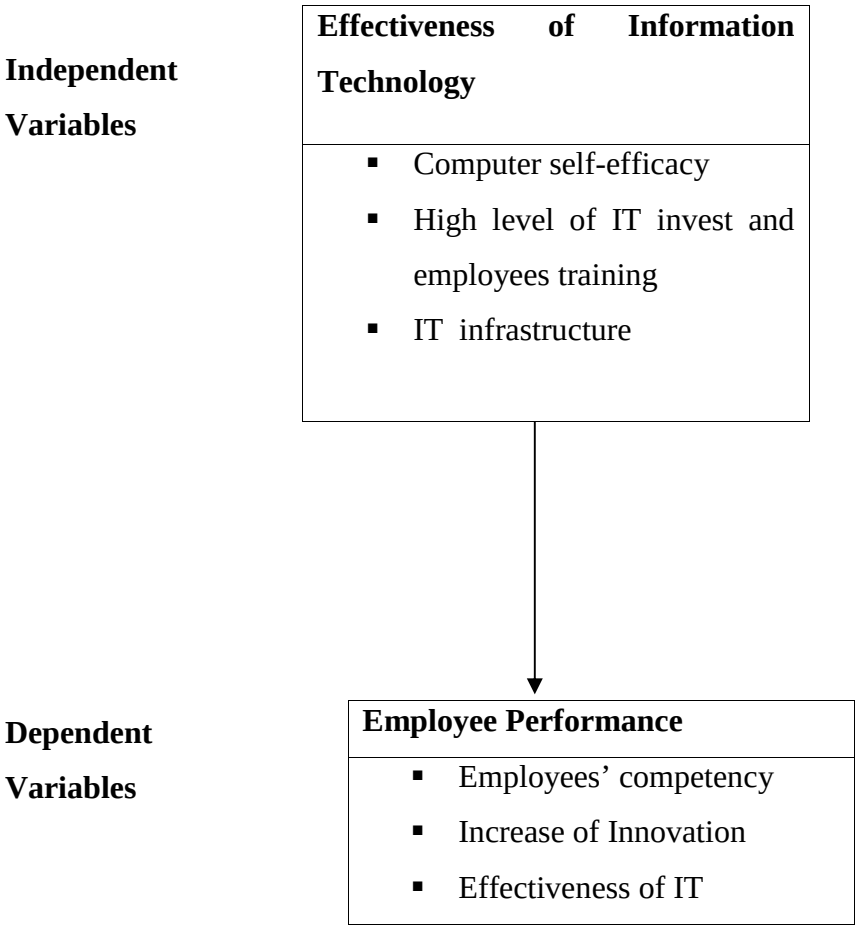
It is up to here indubitable that all reviewed studies have provided great reason for way the study in hand needs to be carried out. More precisely it is clear that all reviewed studies touched different areas with similarity in focus. Sonja (2010) researched on the effects of

computerization on saving and credit cooperatives in Uganda and found out that Technology is likely to increase the efficiency. Also Amaoko in his research on the impact of ICT on banking operations in Ghana, ICT has contributed positively to the provision of banking services and the growth of the Ghanaian banking industry Amaoko, (2012). Despite all these studies carried out still this explicates the extent to which all together were apparently unable to provide information on how IT adoption increase employees innovations and employees performance at Tanzania Police force especially in Fingerprint unit.

2.8.2 Conceptual Framework

Chan & Tsou (2009) suggested that information technology adoption can be categorized into distinct types; information technology infrastructure (High investment of IT), strategic alignment, (i.e employees training) employees competency, and employees attitude and behavior. Categories of innovation are process innovation. Innovation is commonly defined as the initiation, adoption and implementation of ideas or activity that are new to the adopting organization. To create new market, firms must implement specific innovation practices to develop scalar business models, manage customer experience, monitor employee performance and provide managerial process innovation (Berry et. al., 2006). The performance implications can vary across different types of innovation, depending on firm internal and market specific factors (Koellinger, 2008). Performance in this research is measured in terms of information technology performance. The research framework proposed was developed after an analysis of the literature. The framework leads to the development of hypotheses. Figure 1 depicts the proposed research model that was used in the study.

Figure 2.1: Conceptual Framework



2.8.3 Variable of the Study

Independent Variable

(i.) Computer self efficacy

CSE is the judgment of one's ability to apply computer skills to complete the specified tasks. Chalmers (2003) indicated that CSE represents an individual's perceptions of his or her ability to use computers to accomplish a task. This is a specific application of the broader and more general construct of self efficacy, which is defined as the belief in one's ability to engage in specific actions that result in desired outcomes. Self efficacy does not focus on the skills one has, but rather the judgments of what one can do with his or her skills. Traditionally, a distinguishing feature of self efficacy is its domain-specificity. In other words, judgments are limited to certain types of performances as compared to an overall evaluation of his or her potential

(ii.) High level of IT investment

High level of IT investment is time, energy, or matter spent in the hope of future benefits actualized within a specified date or time frame, investment in IT is done by sending people to study IT, buying best IT equipments and conducting researches on IT, the better IT investment, the better the results.

(iii) IT infrastructure

IT infrastructure refers to the composite hardware, software, network resources and services required for the existence, operation and management of an enterprise in IT environment. It allows an organization to deliver IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities, it consist of servers, computers, data centers, switches, hubs and routers, software such as Enterprise resource planning (ERP), customer relationship management (CRM), productivity applications and network as Network enablement, Internet connectivity, firewall and security.

Dependent Variable

(i.) Employees Competency

The term technical skills refer to abilities needed to do a task (Investopedia, 2012). In most cases these tasks are mathematical, engineering, and scientific or computer related duties. Technical skills are critical in the process of implementing e-services in the Tanzanian public sector. The skills of employees are required together with competency in designing, installation and maintenance of the online platforms (AlSalti & Hackney, 2011).

(ii.) Employees Innovation

Innovation is commonly defined as the initiation, adoption and implementation of ideas or activity that are new to the adopting organization. To create new market, firms must implement specific innovation practices to develop scalar business models, manage customer experience, monitor employee performance and provide managerial process innovation.

(iii.) Effectiveness on IT

Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents Research Methodology. Research methodology enables a researcher to focus the objectives and questions of the study by proving the systematic way of doing research. According to (Kothari 2004), Research Methodology is the systematic way of solving research problem. It may be understood as the way of ensuring research is done scientifically. Through it we study the various steps that are general to be adopted by researchers to her research problem along with the logic behind them. Therefore in short we can say that, when we talk about research methodology we not only talk about research method but along consider the logic behind the methods or techniques and why we are not using others so that results are capable of being evaluated either by a researcher or others.

3.2 Area of the study

Area of study is a place where data are to be collected (Frankfort, 1996). The study was carried out in Tanzania police head quarters (Fingerprint Unit), Dar es salaam, It was selected because Dar es salaam is experiencing high criminal actions more than any other Tanzanian cities.

3.3 Research design

Research design relates largely to decision making which impacts the research question; formulating the research problem, conceptualizing and taking action on the research, collecting the research data and analyzing and interpreting the results (Mouton & Marais, 1990). Research design entails consideration of the measurement of the research variables (Bailey, 1987). A descriptive design was adopted in this study preferably because it makes enough provision for accurate profile of persons, events, or situations (Saunders et al., 2007), Kothari (2004) defined descriptive research as the kind of research which is concerned with describing characteristics of a particular individual, group or situation. It enabled the researcher to describe the state of affairs as it exists.

3.3.1 Quantitative approach

A quantitative approach was adopted in this research. The quantitative approach is described as “that approach to research in the social sciences that is more highly formalized as well as more explicitly controlled, with a range that is more exactly defined, and which in terms of the methods used, is relatively close to the physical sciences” (Mouton & Marais, 1990). By nature, quantitative research involves measurement. It focuses on causality with a view to making generalizations and is geared towards replication and verification (Bryman, 1995). Quantitative research entails the gathering of data in numbers and the statistical analysis thereof. Results of the data analyzed were used to make generalizations (Durrheim, 2002).

3.4 Population and Sampling

3.4.1 Population

According to Best and Khan (1998), population is any group of individuals who have one or more characteristics in common that are of interest to researcher. Therefore, the population of the study was 23 employees from Forensic unit and 20 employees from Information Technology.

3.4.2 The Study Sample

According to Moore (2004), the study sample is a part of a population that we examine to gather information. It is a group of individuals from the population that posses the information of interest to the researcher, the study sampled 43 employees from Tanzania police force, 23 employees from Forensic unit and 20 employees from Information Technology.

Table 3.1: Sample size

S/N	Department/Units	Number of respondents	Percentage
1	Information Technology Unit	20	47
2	Forensic Unit	23	53
TOTAL	**Sample size**	**43**	**100**

Source; Research Field Data, 2015

3.4.3 Sampling Procedures

Sampling technique is a process of drawing the sample from a large population, Moreover, Kothari (2004) defines sampling techniques as the techniques or procedures that the researcher would adopt in obtaining the participant (respondent) for the study from the given population. He proceeds further that, the guiding principles in the selection of samples is that, the sample has to be information rich.

a) Fingerprint Unit was selected out of other units in Tanzania police force due to the fact that this unit has more technological challenges compared to other units although it have the same characteristics as other police units, using fingerprint unit was aimed to present other units with the same characteristics and that, together with other constraints the researcher believed that, it facilitated the successful conduction of the study.
b) In selecting a study sample, a list of employees from Information technology and fingerprint unit was used to select the names for study sample using Purposive sampling to constitute a sample of 43 respondents, the researcher purposively sampled 23 employees from Forensic unit and 20 employees from Information Technology as they are directly involved with Information and technology.

3.5 Data Collection Methods and Techniques

This study used different methods and instrumentations; this was done intentionally because no single method is adequate.

3.5.1 Secondary data collection

Documentary review consists of the written information whereby the researcher has to review such as an intimate diary, personal letters, autobiography, books and journals so as to get useful information related to a particular study (Creswell, 2012). Various documents were reviewed to support the study.

3.5.2 Primary data collection

Data collected mainly involved primary data. According to Kothari (2000), this is the type of data that is extracted directly from the field. It is the first hand data that is not processed. This was because; from findings of other researchers including that of Nchimbi (2007), the data collected is qualitative, reliable and valid that eventually is quantified for analysis

3.5.2.1 Interviewing

The researcher collected data from the intended respondent by means of interviews; this was done either face to face or through the phone as case necessitated. An interview is purpose discussion between two or more people (Khan, 1957). The use of interview can help to get valid and reliable data that are relevant to research questions and objectives (Sunders, 2009). The researcher conducted interview to 13 employees from forensic unit and 10 employees from Information Technology Unit to obtain information on employee capacity on using IT facilities, the relationship between IT adoption and employee performance and the relationship between IT adoption and employees innovation.

3.5.2.2 Questionnaires

Kothari (2000), contends that, this instrument consists of a number of questions printed or typed in a definite order on a form or set of forms. Questioners were responded by 10 employees from forensic unit and 10 employees from Information technology unit. This instrument was used to collect information in all three research objectives which are to assess the employee capacity on using IT facilities, to analyze relationship between IT adoption and employee performance and to determine relationship between IT adoption and employees innovation

3.6 Validity

Validity can be described as the extent to which the instrument measures what it purports to measure. According to Healy and Perry (2000), validity determines whether the research truly measures that what it was intended to measure. Thus validity measures how truthful the research results are or the extent to which scores truly reflect the underlying variable of interest. Faux (2010) asserts that an effective and practical approach to pre testing questionnaire instruments is to ensure that the questionnaire is understood by participants. Also, the benefits of the approach are improved questionnaire reliability and planning which results in better response rates (Faux, 2010). After the design, the questionnaire was given to supervisor for his comments and suggestions. This was done to ensure refinement and content validity.

3.7 Management and Data Analysis

After collection, data editing and cleaning were done to ensure data consistency, uniformity and completeness. The researcher employed the use of computer software such as MS

Excel and STATA for analysis and presentation. These statistical packages are useful because of their simplicity and ability to draw graphs and tables.

According to Kerlinger (1973) content analysis refers to a technique used to analyze communication with systematic, objectives and qualitative manner in order to measure variables. And thus in this Fingerprint unit and information technology qualitative data were quantified subject to content analysis with a view to extract relevant information. Data analysis also involved making comparisons and contrasts from one respondent to another so as to obtain alternative explanations for the findings. Data analysis was made simultaneously with data collection, data interpretation and report writing of this study.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND DISCUSSION

4.1 Introduction

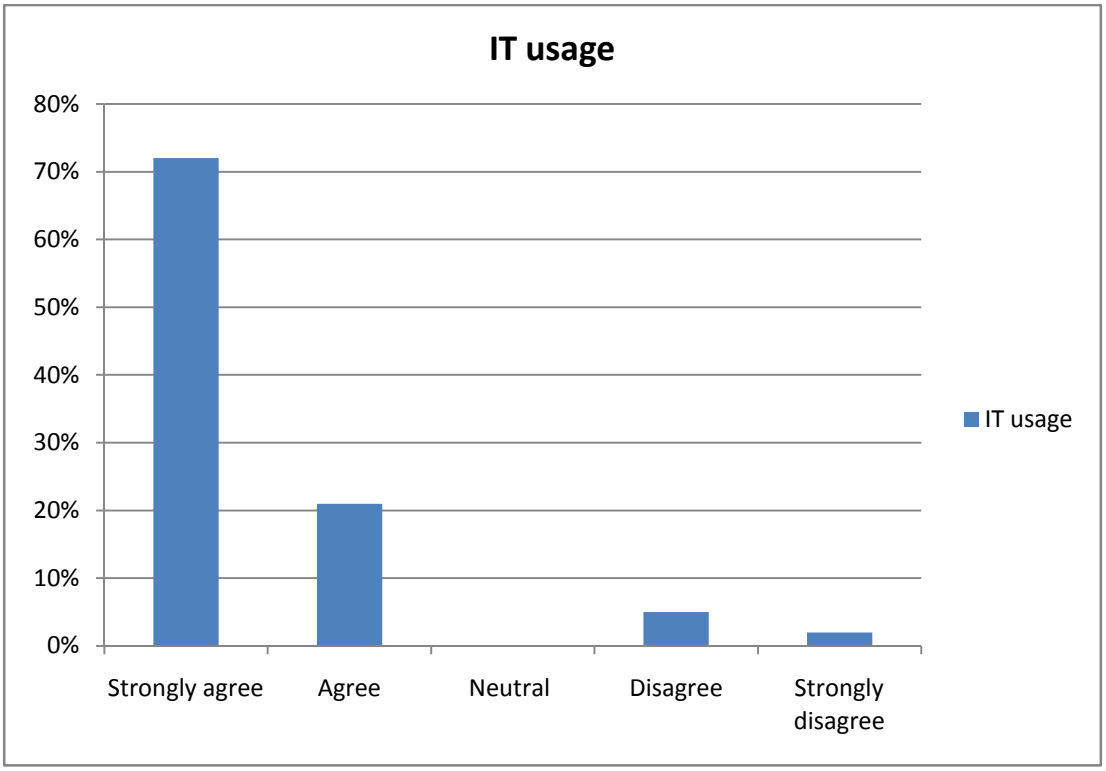
The purpose of this chapter is to present and analyze data obtained in the field in simpler measures of statistics so that the data can be interpreted and understood by the majority of people. The data presented in this chapter are the data obtained from the three research questions respective to the three research instruments corresponding to the three objectives.

4.2 The employee capacity on using IT facilities

4.2.1 IT usage in fingerprint unit

To assess the employee capacity on using IT facilities the researcher analyzed the feedback from respondents on if employees at Fingerprint Unit use IT and the feedback was documented as shown in figure 4.1

Figure 4.1: IT usage in finger print unit



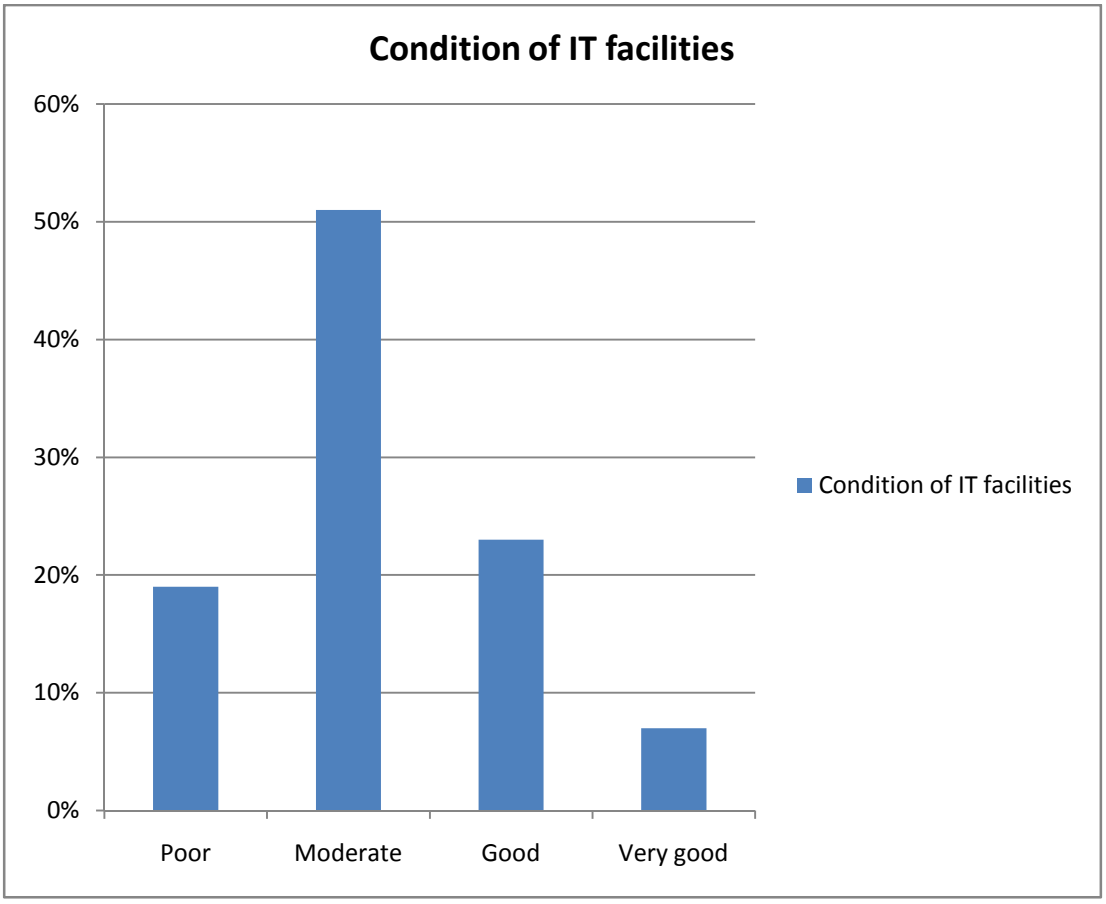
Source: Research field data, 2015

The findings from figure 4.1 shows that 31(72%) of respondents strongly agree that they use IT in fingerprint Unit, 9(21%) of respondents agree that they use IT in fingerprint Unit, 0(0%) of respondents they were neutral that they use IT in fingerprint Unit, 2(5%) of respondents disagree that they use IT in fingerprint Unit and 1(2%) of respondents strongly disagree that they use IT in fingerprint Unit. According to the data finding, most of respondents strongly agree that they use IT in finger print unit; according to the respondents they use IT for filling cards, coding finger print, scanning finger print, searching finger print and matching finger print. With advancements in science and technology, newer and more effective techniques for the identification of criminals are available to police and criminal investigators which led to the use of IT in almost each activity conducted in a day, use of IT has became inevitable in each organization including Government organizations and institutions. According to Fingerprint devices McGuire in a study in (2003), states that IT facilitates and speeds up data collection, categorization, access and exchange. It also helps in efficient management of resources, decreases inappropriate reception of patients and avoids repeated works leading to less organizational expenses.

4.2.3 Condition of IT facilities

To assess the employee capacity on using IT facilities the researcher analyzed the feedback from respondents on condition of IT facilities and the feedback was documented as shown in figure 4.2

Figure 4.2: Condition of IT facilities



Source: Research field data, 2015.

The findings from figure 4.2 shows that, 8(19%) of respondents said IT facilities are poor, 22(51%) of respondents said IT facilities are moderate, 10(23%) of respondents said IT facilities are good and 3(7%) of respondents said IT facilities are very good. The findings shows that most respondents said that IT facilities are moderate, which means are neither poor nor good, Africa's countries including Tanzania has poor IT infrastructures and inadequate electricity supply which hinder the IT sector, IT devices are always not to date compared to developed countries, it took almost 3 years for the new device to be in Africa, Tanzania.

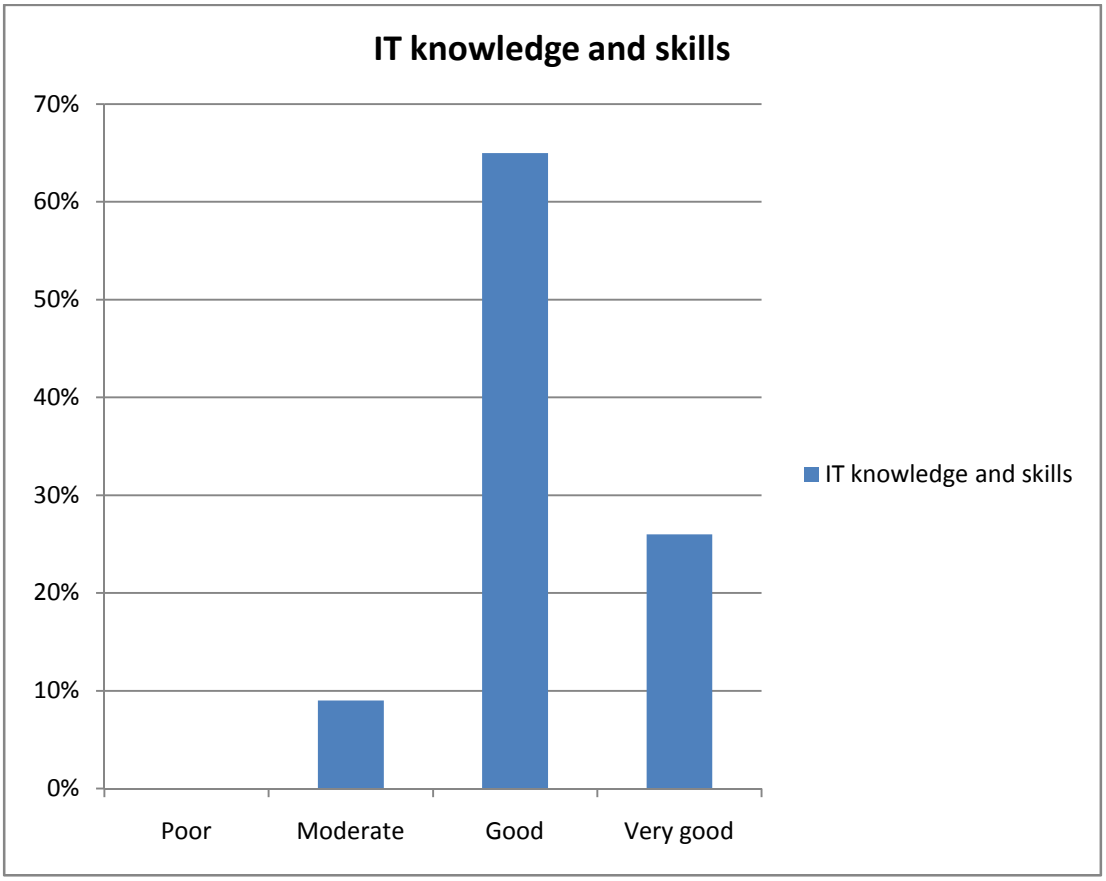
While ICT continues to advance in western and Asian countries, African countries still experience a lag in its implementation, and that continues to widen the digital and knowledge divides, Kiptalamet.al (2010), observed that access to ICT facilities is a major challenge facing most African countries, with a ratio of one computer to 150 students

against the ratio of 1:15 students in the developed countries. The difference is not only in education sector but also in other sectors where there is shortage of IT facilities, 1 computer can be used by more than 5 government employees in District offices while there still no computers in wards offices. In a country with a low Gross Domestic Products (GDP), majority of the individuals and Government institution cannot afford to buy a computer and consider it as a luxury item, more expensive than a TV. While 2nd hand computers cost as little as 300,000/= Tsh and branded new computers being sold at 800,000/= Tsh or higher which hinder IT facilities conditions to be very good.

4.2.3 IT knowledge and skills

To assess the employee capacity on using IT facilities the researcher analyzed the feedback from respondents on their knowledge and skills on IT and the feedback was documented as shown in figure 4.3

Figure 4.3: IT knowledge and skills



Source: Research field data, 2015

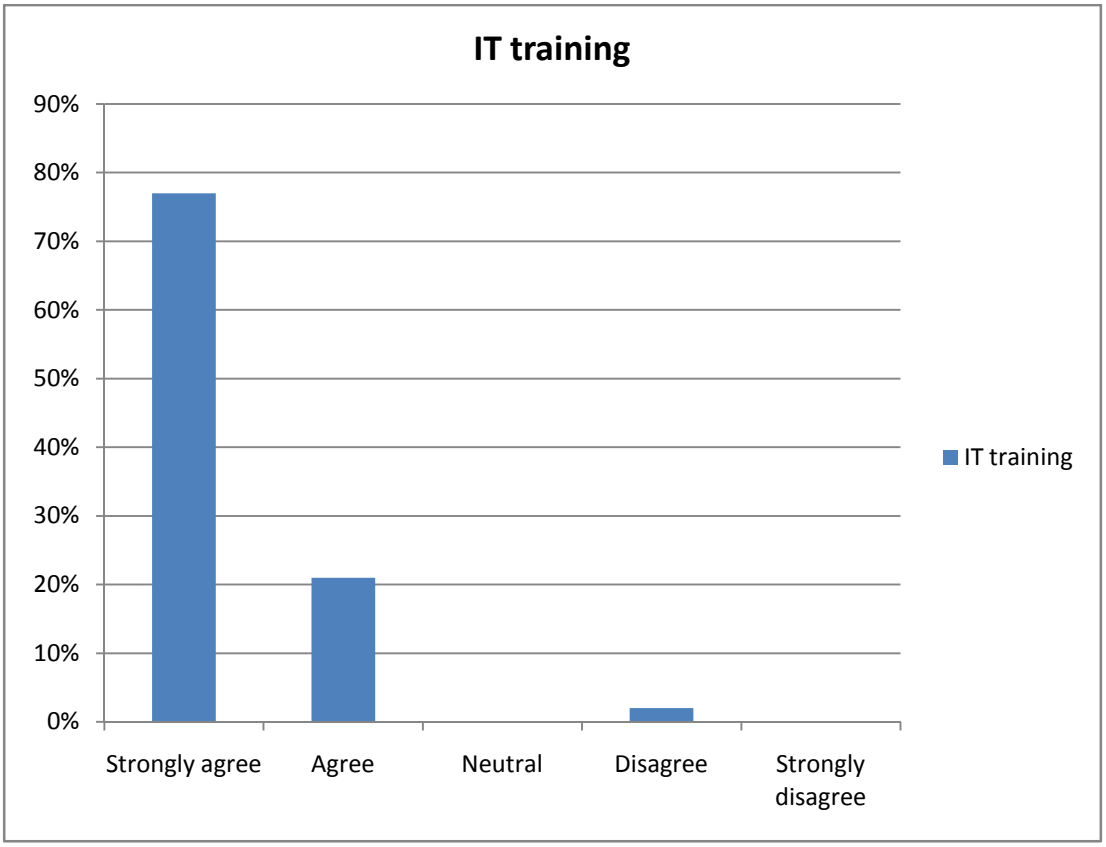
The findings from figure 4.3 shows that, 0(0%) respondents they have poor IT knowledge and skills, 4(9%) respondents they have moderate IT knowledge and skills, 28(65%) respondents they have good IT knowledge and skills and 11(26%) respondents they have very good IT knowledge and skills. From the data findings, it shows that most respondents have good IT knowledge and skills that might happen due to the fact that most of respondents were employees of information and technology unit and fingerprint unit, one of the key factors for the employment in those units is having knowledge and skills in IT.

The demand for IT learning has been tremendous and the budget allocation cannot meet the demand. There are more police officers willing to be taught computing skills than the budget allocated to them. Knowledge for technologies is important to police for effective integration of technologies in various problem solving. The study conducted by STIPRO (2012) poor skills on ICT among their staff members are one of the major bottlenecks for the efficient utilization of the technology. Some literature sources revealed a number of efforts aimed at promoting the ICT training at both vocational and academic levels. The National ICT Policy of 2003 recognizes the role of ICT in education as well as ICT education Okiy (2005) argued that, Low level of ICT skills; lack of functional ICT policy; economic barriers (funds); ICT infrastructure; resistance to change; low capacity of communication facility; absence of digital or electronic libraries are common barriers mentioned as factors undermining the use of ICTs in Africa.

4.2.4 IT training

To assess the employee capacity on using IT facilities the researcher analyzed the feedback from respondents on if they have attended IT training and the feedback was documented as shown in figure 4.4

Figure 4.4: IT training



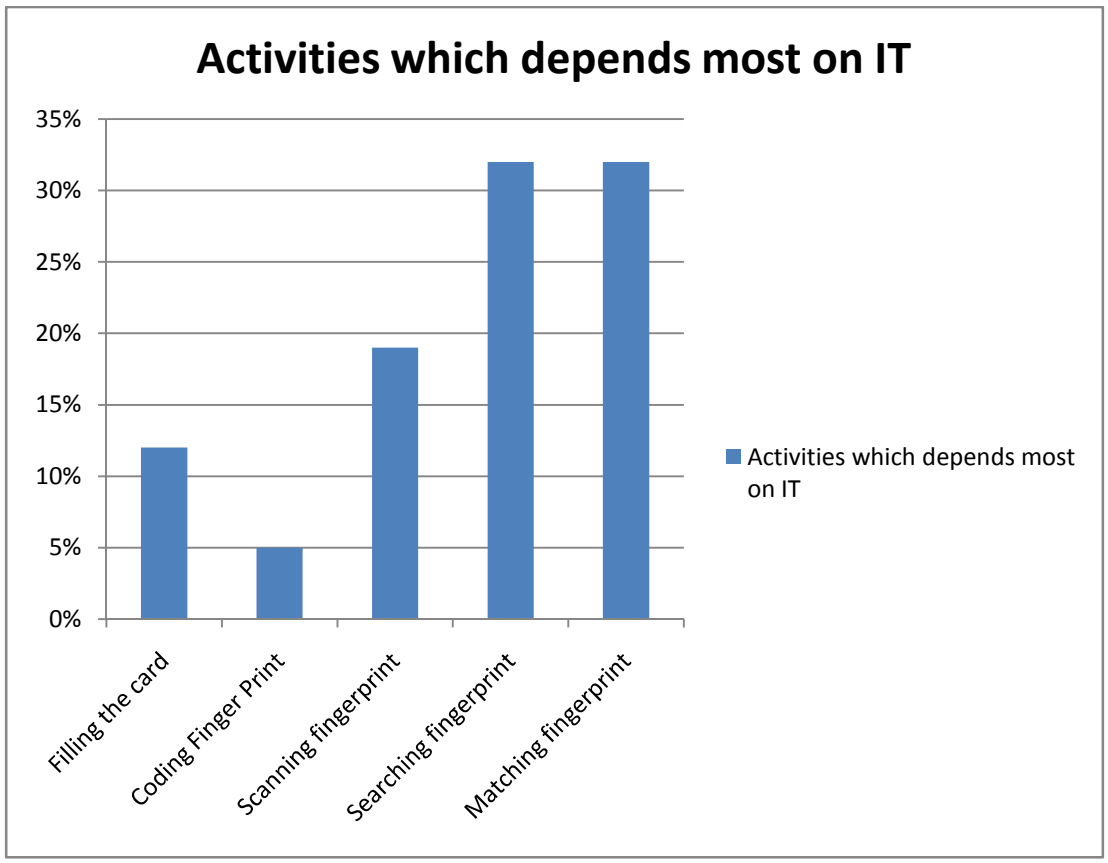
Source: Research field data, 2015

The findings from figure 4.4 shows that 33(77%) of respondents strongly agree that they have attended IT trainings, 9(21%) of respondents agree that they have attended IT trainings 0(0%) of respondents they were neutral that they have attended IT trainings, 1(2%) of respondents disagree that they have attended IT trainings and 0(0%) of respondents strongly disagree that they have attended IT trainings. The findings shows that most respondents have attended IT trainings, According to respondents, the trainings they attended are mostly self sponsored rather than government trainings due to unavailability of funds from the government, According to the ministry of home affairs the government does not have sufficient fund to train all the police officers on IT.

4.2.5 Activities most depends on IT in fingerprint Unit

To assess the employee capacity on using IT facilities the researcher analyzed the feedback from respondents on activities most depends on IT in fingerprint Unit and the feedback was documented as shown in figure 4.5

Figure 4.5: Activities most depends on IT in fingerprint Unit



Source: Research field data, 2015

The findings from figure 4.5 shows that 5(12%) of respondents said filling the card is the activity depends most on IT in fingerprint Unit, 2(5%) of respondents said that coding fingerprint is the activity depends most on IT in fingerprint Unit, 8(19%) of respondents said scanning fingerprint is the activity depends most on IT in fingerprint Unit, 14(32%) of respondents said searching fingerprint is the activity depends most on IT in fingerprint Unit, 14(32%) of respondents said Matching fingerprint is the activity depends most on IT in fingerprint Unit. According to data collected, most respondents said they use IT in searching and matching finger print, this is because of the nature of the job of Fingerprint Unit. A fingerprint matching depends on the comparison of local ridge characteristics and

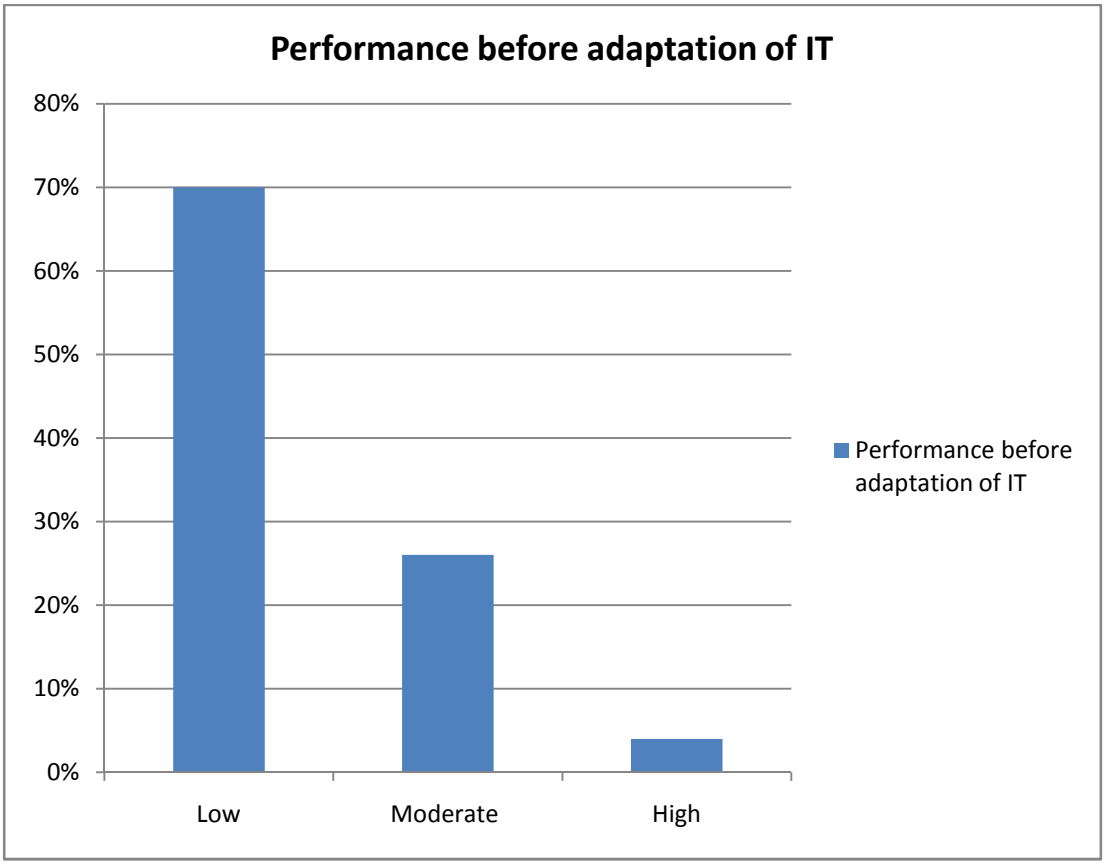
their relationship to determine the individuality of fingerprint, the better the IT, the better the results (Ludeksmolik), that's can be done only in Fingerprint department.

4.3 The relationship between IT adoption and employee performance

4.3.1 Performance of fingerprint unit before the adaptation and using of IT

To analyze the relationship between IT adoption and employee performance the researcher analyzed the feedback from respondents on the performance of fingerprint unit before the adaptation and using of IT and the feedback was documented as shown in figure 4.6

Figure 4.6: Performance of fingerprint Unit before the adaptation and using of IT



Source: Research field data, 2015

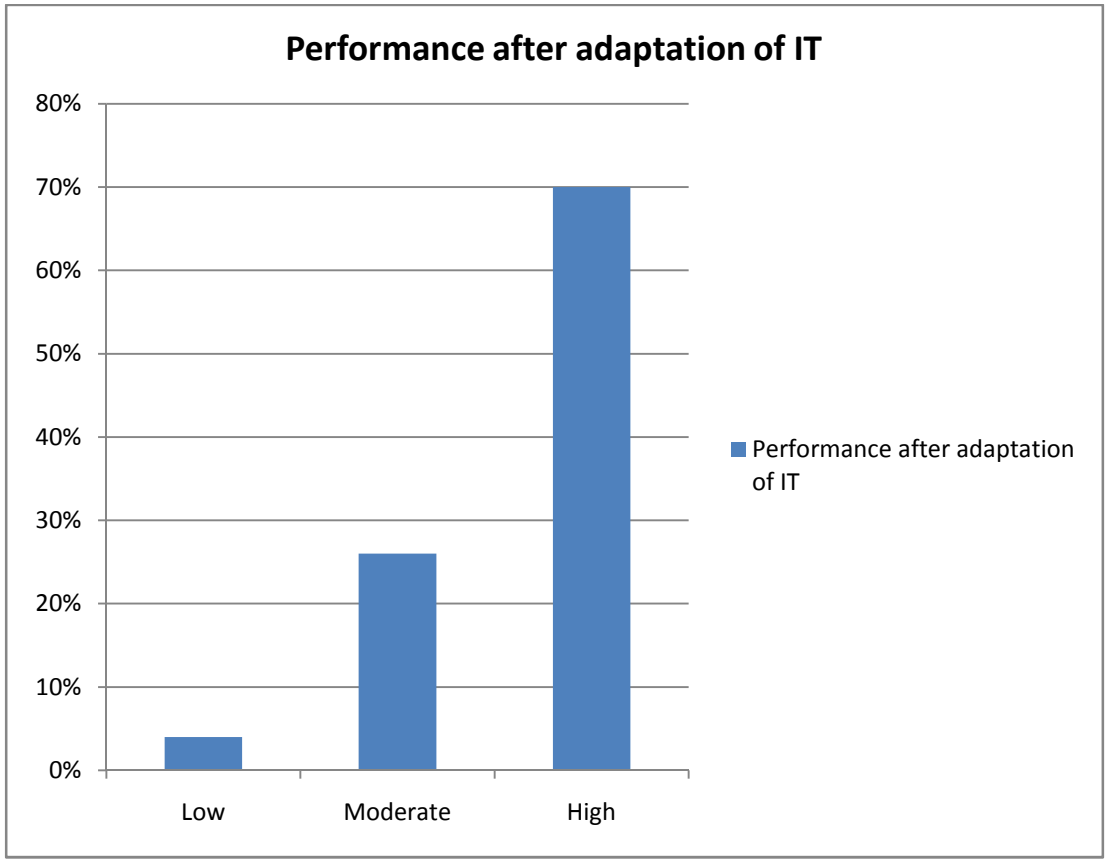
The findings from figure 4.6 shows that, 30(70%) respondents said performance before the adaptation of IT was low, 11(26%) respondents said performance before the adaptation of IT was moderate and 2(4%) respondents said performance before the adaptation of IT was high. The findings reveal that the performance before the IT adoption was low; with all the works needed to be done using hands by writing, communicating and measuring, with the availability of ICT police can communicate with another police without sweating by using

phones and radio calls, people are identified by using their fingerprints rather than signatures, before the adoption of ICT the performance of employees was low.

4.3.2 Performance of fingerprint unit after the adaptation and using of IT

To analyze the relationship between IT adoption and employee performance the researcher analyzed the feedback from respondents on the performance of fingerprint unit after the adaptation and using of IT and the feedback was documented as shown in figure 4.7

Figure 4.7: Performance of fingerprint Unit after the adaptation and using of IT



Source: Research field data, 2015

The findings from figure 4.7 shows that, 2(4%) respondents said performance after the adaptation of IT is low, 11(26%) respondents said performance after the adaptation of IT is moderate and 30(70%) respondents said performance after the adaptation of IT is high. The findings shows that most respondents said performance is high after the adoption of IT, almost all the works now are done by using IT, filling the cards, coding finger prints, scanning finger print, searching finger print and matching finger print, the work became

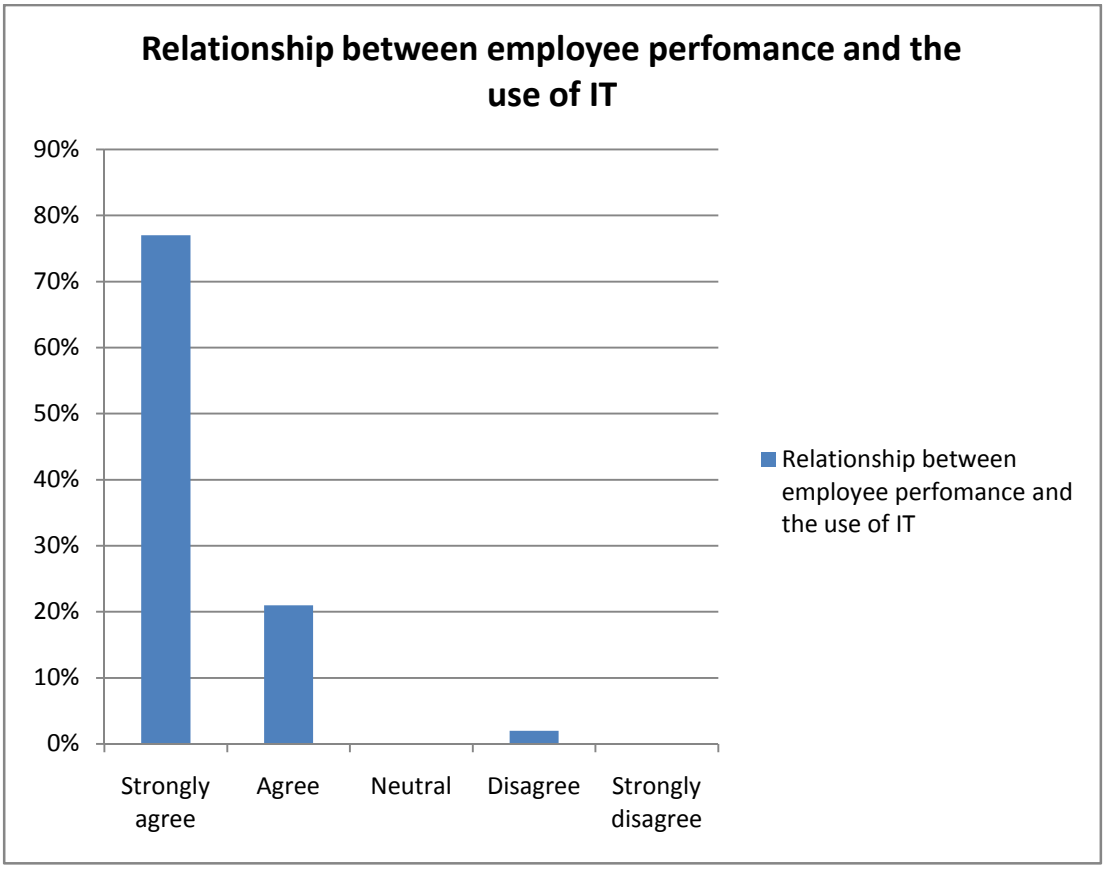
simple and easy to perform compared to before the IT adoption, According to Wafula (2008), technology, labour and capital are interconnected. Some technology use a lot of labour and some use more of other equipment or capital.

Information and communication technologies (ICT) utilization have changed all aspects of organization direction and operation. In work systems, workers, labour and employee performance have been affected by ICT in nearly and its major aspects, as employees and managers are interconnected through network of computers and other information gadgets. Many aspects of organization, industrial relations are organized and directed through ICT networking. These networking also connect production and service provision within and outside organizations. Currently there is no need to write letter, police are sending emails and use of radio calls to simplify works

4.3.3 Relationship between employee performance and the use of IT

To analyze the relationship between IT adoption and employee performance the researcher analyzed the feedback from respondents on if there is a relationship between employee performance and the use of IT and the feedback was documented as shown in figure 4.8

Figure 4.8: The relationship between employee performance and the use of IT



Source: Research field data, 2015

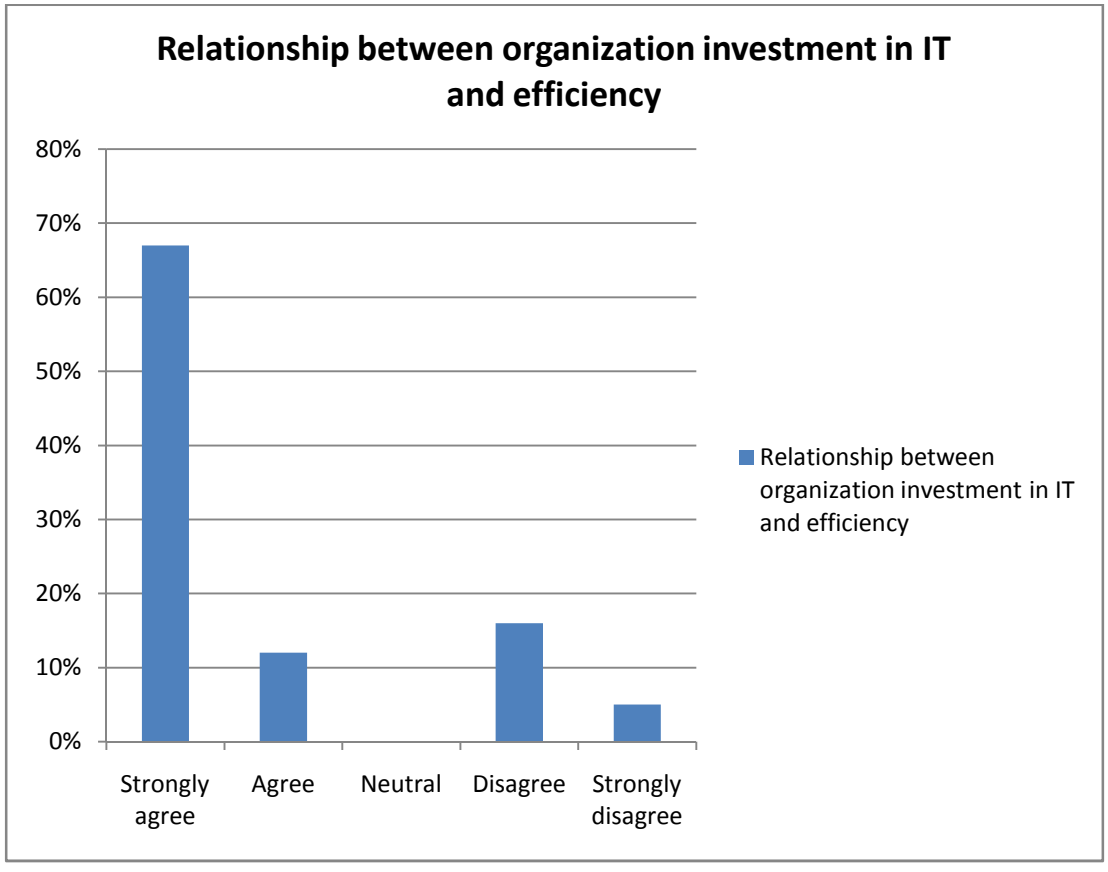
The findings from figure 4.8 shows that 33(77%) of respondents strongly agree that there is a relationship between employee performance and the use of IT, 9(21%) of respondents agree that there is a relationship between employee performance and the use of IT, 0(0%) of respondents they were neutral that there is a relationship between employee performance and the use of IT, 1(2%) of respondents disagree that there is a relationship between employee performance and the use of IT and 0(0%) of respondents strongly disagree that there is a relationship between employee performance and the use of IT. Most of respondents strongly agree there is relationship between employee performance and the use of IT, the performance increase with the use of IT and decrease without the use of IT, the same work can be done in 5 hours without IT and half an hour or less with the use of IT, the time spent without IT decreases the performance of an employee per day while the time use with an IT increases performance of an employee per day, also there is high possibility of making errors without the use of IT.

According to Kapur (2005), the apparent trend at work stations shows that the state of technology determines the performance and quality services produced. Organizational performance and development are determined by the state and types of technologies. Technology also influences living conditions of individual and groups in organizations and the relationship between them. Technology is prone to change, and the state of technology have direct link to the relationship between the employer, employee and their performance.

4.3.4 Relationship between organization investment in IT and efficiency

To analyze the relationship between IT adoption and employee performance the researcher analyzed the feedback from respondents on if there is a relationship between organization investment in IT and efficiency and the feedback was documented as shown in figure 4.9

Figure 4.9: The relationship between organization investment in IT and efficiency



Source: Research field data, 2015

The findings from figure 4.9shows that 29(67%) of respondents strongly agree that there is a relationship between organization investment in IT and efficiency, 5(12%) of respondents agree that there is a relationship between organization investment in IT and

efficiency,0(0%) of respondents they were neutral that there is a relationship between organization investment in IT and efficiency, 7(16%) of respondents disagree that there is a relationship between organization investment in IT and efficiency and 2(5%) of respondents strongly disagree that there is a relationship between organization investment in IT and efficiency. The data indicate that there is relationship between organization Investment in IT and efficiency.

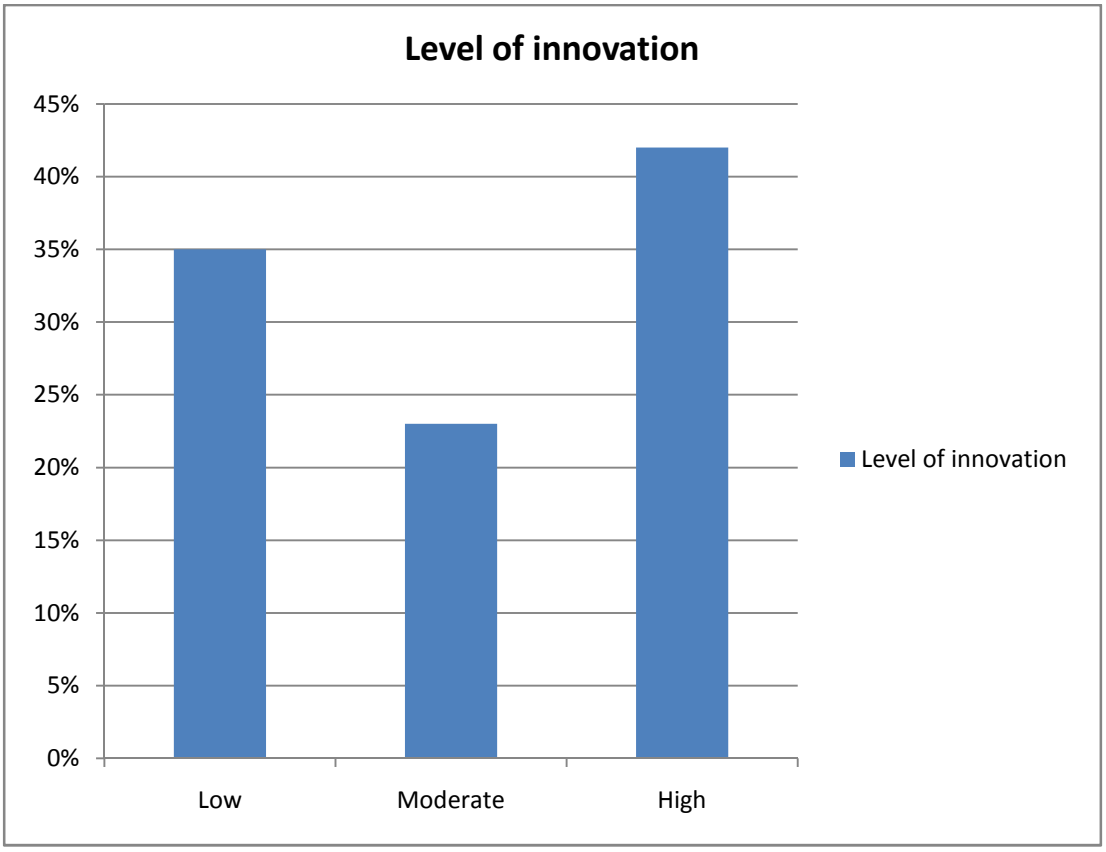
The more the IT used the more the efficiency and the less the IT used the higher the errors, currently there is less error in fingerprint department compared to the past years, this is due to the use of better IT equipments, Kapur (2005) indicated that IT adoption is positively related to work efficiency in an organization. According to Ajami (2014) argued that IT leads to a better performance accompanied by higher efficiency in service providing all of which will cause more satisfaction from fast and high-quality services. This is in fact related to the organization's performance improvement or correction which can be dependent on IT; it provides managers an opportunity to control and co-ordinate complex structures using quick information processing which eventually leads to coherent and rapid management and better organizational performance.

4.4 The relationship between IT adoption and employees innovation

4.4.1 Level of employee innovation after adoption of IT

To determine relationship between IT adoption and employees innovation the researcher analyzed the feedback from respondents on the level of employee innovation after adoption of IT and the feedback was documented as shown in figure 4.10

Figure 4.10: Level of employee innovation after adoption of IT



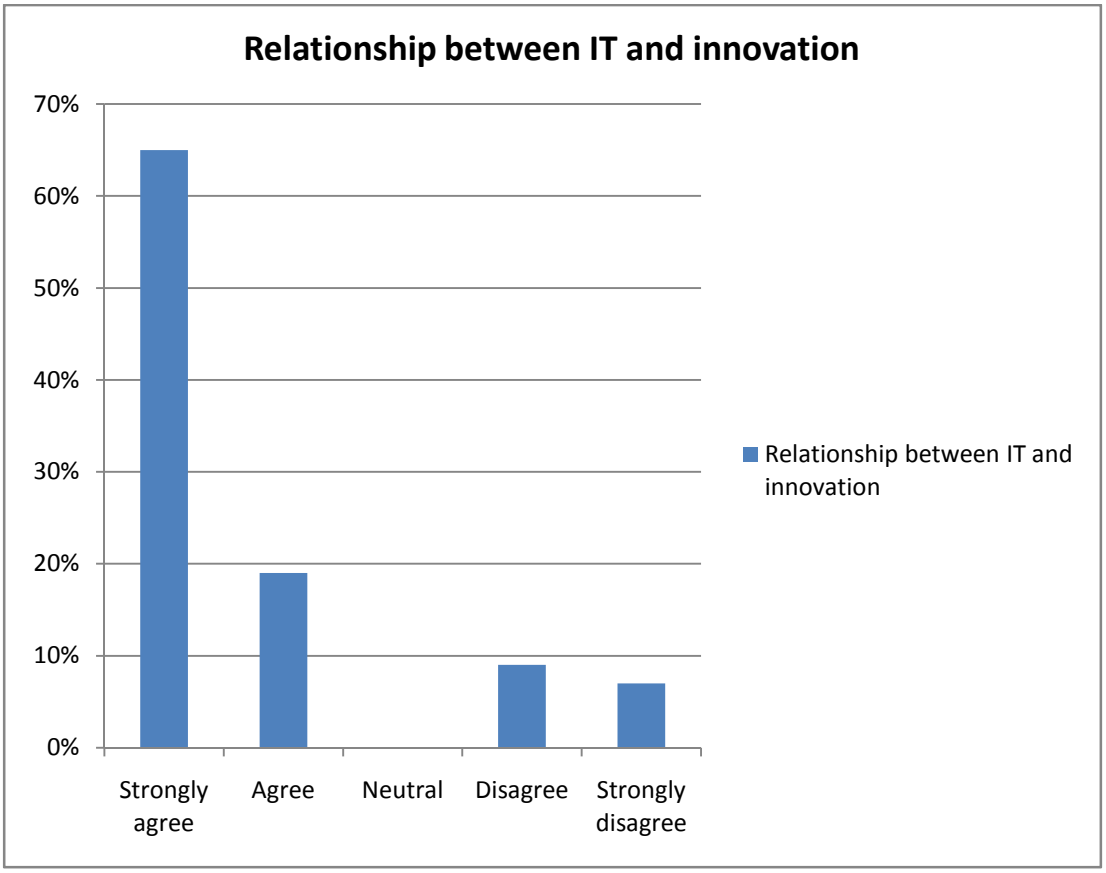
Source: Research field data, 2015

The finding shows that, 15(35%) of respondents said there is low level of employee innovation after adoption of IT, 10(23%) of respondents said there is moderate level of employee innovation after adoption of IT, 18(42%) of respondents said there is high level of employee innovation after adoption of IT. Most respondents said there is high level of employee innovation after adoption of IT, Gatchalk (2002) mentioned that use of ICT by employee as well can effect on the degree of creativeness and innovation.

4.4.2 Relationship between IT usage and innovation

To determine relationship between IT adoption and employees innovation the researcher analyzed the feedback from respondents on if there is relationship between IT usage and innovation and the feedback was documented as shown in figure 4.11

Figure 4.11: Relationship between IT usage and innovation



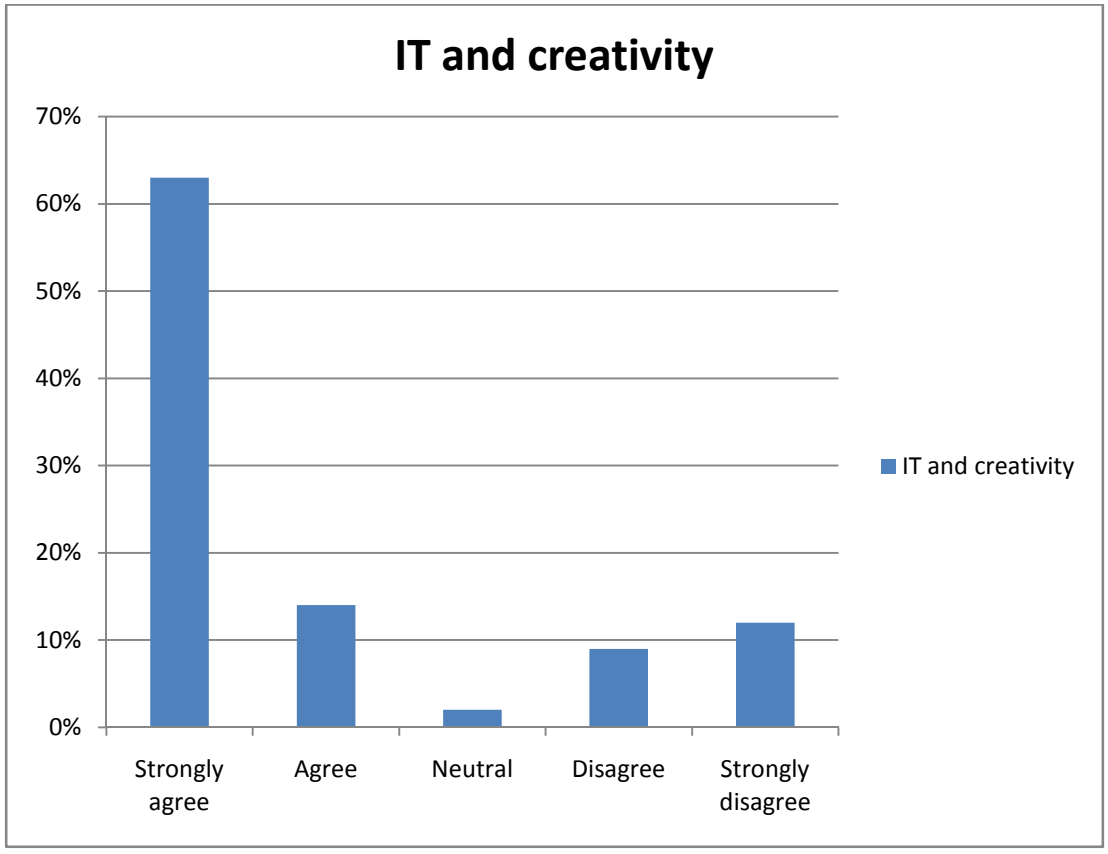
Source: Research field data, 2015

The findings from figure 4.11 shows that 28(65%) of respondents strongly agree that there is a relationship between IT and employee innovation, 8(19%) of respondents agree that there is a relationship between IT and employee innovation, 0(0%) of respondents they were neutral that there is a relationship between IT and employee innovation,4(9%) of respondents disagree that there is a relationship between IT and employee innovation, and 3(7%) of respondents strongly disagree that there is a relationship between IT and employee innovation. Data implicate that most respondents strongly agree that there is relationship between IT and employee innovation, employee innovate more with the presence of IT and innovate less with no IT, there are several software which have been innovated by police force, the software cannot be put into open to the community due to the importance to national security, according to Diffusion of Innovations Theory (DoI) which according to Kyakulumbye et al (2012), propounds that there are different forms of adopters who require organizational support as they interact with the new innovations ICT utilization to be able to change their different perceptions.

4.4.3 IT usage and creativity

To determine relationship between IT adoption and employees innovation the researcher analyzed the feedback from respondents on if IT usage increases creativity in fingerprint Unit and the feedback was documented as shown in figure 4.12

Figure 4.12: IT usage and creativity



Source: Research field data, 2015

The findings from figure 4.12 shows that 27(63%) of respondents strongly agree that employee usage of IT increases creativity 6(14%) of respondents agree that employee usage of IT increases creativity 1(2%) of respondents they were neutral that employee usage of IT increases creativity,4(9%) of respondents disagree that employee usage of IT increases creativity, and 5(12%) of respondents strongly disagree that employee usage of IT increases creativity. The data reveal that employee usage increases creativity. According to Efatnejad (2003), the amount of

information technology usage by Melli bank employees showed that information technology (IT) has a significant effect on user's creativeness, If creative ideas are successfully implemented will produce innovative works (Tushman & O'Reilly III,

1997).Sawitri, (2004) states that the organization's responsiveness in addressing the changes will determine its success.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter summarizing the overall research findings, conclusion and make recommendations

5.2 Summary of the findings.

The study found out that in Fingerprint unit the employees highly use IT for their daily activity for filling the cards, coding fingerprints, scanning fingerprints, searching fingerprints and matching fingerprints.

Conditions of IT devices is moderate, they neither good nor bad, and that is due to the low budget provided by the government.

The findings reveal that the performance before the IT adoption was low; with all the works needed to be done using hands by writing, communicating and measuring, with the availability of ICT police can communicate with another police without sweating by using phones and radio calls, people are identified by using their fingerprints rather than signatures, before the adoption of ICT the performance of employees was low.

The study also found out that there is relationship between employee performance and the use of IT, the performance increase with the use of IT and decrease without the use of IT
The more the IT used the more the efficiency and the less the IT used the higher the errors, currently there is less error in fingerprint unit compared to the past years, this is due to the use of better IT equipments.

5.3 Conclusions

Basing on the objectives of the study and findings so obtained, the study concludes that; Objective one, employees have good capacity on using IT as they use IT for filling cards, coding finger print, scanning finger print, searching finger print and matching finger print, IT facilities are moderate as they are neither good nor poor and employees have good IT knowledge and skills as they have attended IT trainings.

Objective two, there is relationship between IT adoption and employee performance as the performance before the adaptation of IT was low with all the works needed to be done using hands by writing, communicating and calculating, with the availability of ICT police now can communicate with another police by using phones and radio calls, people are identified by using their fingerprints rather than signatures and currently there is less errors in fingerprint department compared to the past years, this is due to the use of better IT equipments, the more the IT used the more the efficiency and the less the IT used the higher the errors.

Objective three, there is relationship between IT adoption and employee innovation, as currently there is high level of employee innovation after adoption of IT and employee usage of IT have increased their creativity.

The study concludes that there is good employee capacity on using IT facilities, there is relationship between employee adoption and employee performance and there is relationship between IT adoption and employee innovation.

5.4 Recommendations

In view of the major findings and conclusions, of the study, the following recommendations are made in order to improve employees' performance through using modern Information Technology tools in the organization.

- Government should provide enough funds needed by the organizations in order to fulfill their requirements, for stance purchasing modern technological tools and other requirements in relation to that.

- Organization (TPF) should use available funds to create favorable work conditions that will guide the employees to communicate effectively, build a good interpersonal environment within the company, in order to create good work conditions.

- Organization should provide training opportunities for employees inside and outside the country so that they can adopt what other organization of the same function operate technologically.

- ICT facilities should be made adequately available by administration such that user department and employees can utilize them in their offices. This is necessary because ICTs are regarded as integral parts of day to day operations.

- The governments should as a matter of priority, fund Ministry very well according to the importance requirement of the Department.

- Modalities should be set in motion to enable employees acquire ICT skills through training. This has the tendency of enabling them to enrich their content knowledge through searching for more and new materials, make learning more meaningful and improve job performance.

- Available IT tools must be used effectively and its output must be measured.

5.5 Implication to Policy Makers

The policy makers play a big role in the development of a nation. They ensure the government resources are properly utilized. Policy makers should formulate laws and orders that will create favorable environment that require government institution to use ICT facilities in order to increase employee's performance through clear formulated policies that will increase creativity and innovation.

5.6 Implication to Decision Makers.

The findings of this research imply that decision makers must be careful in their concern, the TPF in collaboration with Ministry of Science and Technology should ensure that ICT policy is implemented and should decide time frame for monitoring and evaluation of policy implementation. Management team of organization should ensure that all staffs who directly/indirectly involved in Fingerprint unit are well equipped with high knowledge of ICT.

5.6 Area for Further Research

This study was conducted only in Tanzania police force, fingerprint unit; findings cannot be generalized to reflect the situation of all government Institutions. The same type of study should be conducted to involve more government institutions to find out the Effectiveness on the use of Information Technology and Employee Performance.

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APPENDICES

Appendix 1: Questionnaire User Departments

Introduction

The intention of this research is to **find out effectiveness on the use of IT on employee's performance a case of fingerprint section at Tanzania police force.** All the information that was provided will seriously be conceded as a confidential data and will only be used for the purpose of this research.

Round up correct answer and fill the blanks for the question below:

1. Gender:
   (a.) Male
   (b.) Female

2. Education Level
   (a.) Certificate
   (b.) Diploma
   (c.) Advance diploma/degree
   (d.) Masters
   (e.) PHD.

3. For how long have you been working with Tanzania police force?
   (a.) Less than a year
   (b.) 2-5 years
   (c.) 6-10 years
   (d.) More than 10 years

4. Do you use IT facilities in your organization?
   (a.) Yes
   (b.) No

5. What is the condition of IT facilities in your organization?
   (a.) Poor
   (b.) Moderate

(c.) Good

(d.) Very good

6. If poor in question above explain

_____

_____

7. Have you attended any training relating to IT?

(a.) Yes

(b.) No

8. If no in question 7 above give the reason

_____

_____

9. How do you rank the knowledge of employees on using IT facilities in the day to day operation?

(a.) High

(b.) Moderate

(c.) Low

10. Do you think there is any relationship between employee's performance and the use of IT facility?

(a.) Yes

(b.) No

11. What was the performance of your organization before adoption of IT?

(a.) High

(b.) Good

(c.) Moderate

(d.) Low

12. What is the performance of your organization after adoption of IT?

(a.) High

(b.) Good

(c.) Moderate

(d.) Low

13. What is the level of employees' innovation after adoption of IT?

(a.) Increase

(b.) Moderate

(c.) Decrease

14. Do you think organizations that have high level of investment in IT increase efficiency as compared to other organization that has moderate investment?

(a.) Agree

(b.) Disagree

15. What is your opinion on how to improve effectiveness of IT on employees' performance?

_____

_____

Appendix 2: Questionnaire for Fingerprint Staff

Introduction

The intention of this research is to **find out effectiveness on the use of IT on employee's performance a case of fingerprint section at Tanzania police force.** All the information that was provided will seriously be conceded as a confidential data and will only be used for the purpose of this research.

Round up correct answer and fill the blanks for the question below:

1. Do you use IT tools at fingerprint section
   (a.) Yes
   (b.) No

2. To what extent do your activities depend on usage of IT facilities?
   (a.) High dependent
   (b.) Moderate
   (c.) Low

3. What activities most depend on using IT facilities?
   (a.) _____
   (b.) _____
   (c.) _____
   (d.) _____

4. Due to the nature of your organization what is the contribution on use of IT facilities in day to day operation?
   (a.) _____
   (b.) _____
   (c.) _____
   (d.) _____

5. Do you think available IT facilities are enough for your department?
   (a.) Yes
   (b.) No

6. If no in question 4 above explain how should organization do in order to handle the deficit?

_____

_____

7. Is the government allocates enough budgets for ICT facilities for fingerprint unit?
   (a.) Yes
   (b.) No

8. If no in question 7 above explain

_____

_____

9. What is the performance of fingerprint unit before adoption of using IT facilities?
   (a.) High
   (b.) Moderate
   (c.) Low

10. What is the performance of fingerprint unit after adoption on using IT facilities?
   (a.) High
   (b.) Moderate
   (c.) Low

11. Is there any relationship between usage of IT facilities and increase of employees' innovativeness in day to day operation.
   (a.) Yes
   (b.) No

12. Do you think the usage of IT increase employees creativity?
   (a.) Agree
   (b.) Disagree

13. What do you rank IT facilities used by organization of similar function in other country?

(a.) High quality

(b.) Moderate quality

(c.) Low quality

14. What are the factors hindering effectiveness of IT in your department?

_____

_____

15. In your opinion what should be done in order to ensure effectiveness of IT on employee's performance.

_____

_____

Appendix 3: Research Budget

S/NO.	DESCRIPTIONS OF EXPENSES	COST
1.	(a) USB (Flash Disk Data Storage)	30,000
	(b) Pencils	500
	(c) Secretarial Services	50,000
	(d) Photocopy	100,000
	(e) Proposal Clearance	40,000
	(f) Calculator	25,000
	(g) Staple Machines & Pins	10,000
	(h) Maker Pens	5,000
	(i) Drafting Papers	5,000
	(j) Modem for internet access	50,000
	SUBTOTAL	315,**500**
	DATA COLLECTION EXPENCES	
2.	(a) Transport cost to data collection	80,000
	(b) Meals Allowance	350,000
	(c) Surfacing Service and Scanning	20,000
	SUBTOTAL	45O,OOO
3.	DATA ANALYSIS DISSERTATION PRODUCTION	
	a) Secretarial service 1	75,000
	b) binding	75,000
	c) Finalizing the report	240,000
	SUBTOTAL	**490,000**
	GRAND TOTAL	**1,255,500**

Appendix 4: Research Work Plan

ACTIVITIES DESCIPTION	TIME SCHEDULE IN WEEKS								
	1ST	2ND	3RD	4TH	6TH	7TH	8TH	9TH	10TH
Synopsis									
Proposal presentation									
Structuring questionnaire									
Pre-tasting questionnaire									
Data collections									
Literature review									
Data entry									
Data presentation									
Hypothesis									
Testing									
Interpreting findings									