

**FACTORS INFLUENCING ADOPTION OF ELECTRONIC COMMERCE BY
EXHIBITION STALLS BUSINESSES IN NAIROBI'S CENTRAL BUSINESS
DISTRICT**

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**A research report submitted to the University of Nairobi in partial fulfillment for the
requirement of the award of the degree of Master of Arts in Project Planning and
Management**

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DECLARATION

This research report is my original work and has not been submitted for a degree to any other institution, college or university.

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DEDICATION

I would like to dedicate this research report to my brother Abu Rithari , my mother Faiza Ngatia and my father Rithari Ngatia

ACKNOWLEDGEMENT

I would like to thank God for His mercies. I also want to extend my appreciation to my supervisor, Dr. Harriet Kidombo, for her priceless insight, patience and wisdom. It has been a pleasure working with her and I believe she has made me a better researcher and professional. I would like to appreciate the University of Nairobi for offering this program, the course instructors for letting us tap into their vast knowledge. My thanks goes to my employer and the entire staff of Scanner Insurance Brokers Ltd. for their, patience, support and understanding while I pursued this program.

TABLE OF CONTENT

| | |
|--|-------------|
| DECLARATION..... | ii |
| DEDICATION..... | iii |
| ACKNOWLEDGEMENT..... | iv |
| | |
| LIST OF TABLES | viii |
| LIST OF FIGURES | ix |
| LIST OF ABBREVIATIONS | x |
| ABSTRACT..... | xi |
| CHAPTER ONE | 1 |
| INTRODUCTION..... | 1 |
| 1.1 Background of the Study..... | 1 |
| 1.2 Statement of the Problem..... | 3 |
| 1.3 Purpose of the Study | 3 |
| 1.4 Objective of the Study | 3 |
| 1.5 Assumptions of the study..... | 4 |
| 1.6 Research questions..... | 4 |
| 1.7 Significance of the Study | 5 |
| 1.8 Limitation of the Study..... | 5 |
| 1.8 Definition of Significant Terms..... | 5 |
| 1.9 Organization of the Study | 7 |
| CHAPTER TWO | 8 |
| LITERATURE REVIEW | 8 |
| 2.1. Introduction to e-commerce..... | 8 |
| 2.2 The concept of e-commerce..... | 9 |
| 2.3. Small and Medium Sized Businesses in Kenya | 10 |
| 2.4. Models of Adoption of e-commerce..... | 10 |

| | |
|---|-----------|
| 2.4.1 Diffusion of Innovation (DOI) – Rogers 1962..... | 11 |
| 2.4.2. Technology adoption model (TAM) Fred Davis 1989..... | 12 |
| 2.5. Challenges facing e-commerce in developing countries | 12 |
| 2.6. Factors affecting E-commerce adoption in Kenya’s SMES | 13 |
| 2.6.1 Influence of knowledge on the adoption of e-commerce in ICT | 14 |
| 2.6.2 Influence of cost of ICT on the adoption of e-commerce..... | 15 |
| 2.6.3 .Influence of ICT infrastructure on adoption of e-commerce..... | 16 |
| 2.6.4 Influence of cyber security on adoption of e-commerce | 17 |
| 2.7. Conceptual Framework..... | 18 |
| 2.8. Summary of the Literature Review | 19 |
| CHAPTER THREE | 21 |
| RESEARCH METHODOLOGY | 21 |
| 3.1 Introduction..... | 21 |
| 3.2 Research Design | 21 |
| 3.3 Target Population | 21 |
| 3.4 Sampling Design..... | 22 |
| 3.5 Operationalization of Variables..... | 23 |
| 3.6 Data Collection Procedures..... | 26 |
| 3.7 Data Analysis..... | 26 |
| 3.8 Ethical considerations..... | 27 |
| 3.7. Reliability..... | 27 |
| 3.8. Validity..... | 27 |
| CHAPTER FOUR..... | 29 |
| DATA ANALYSIS PRESENTATION DISCUSSIONS AND INTERPRETATION | 29 |
| 4.0 Introduction..... | 29 |
| 4.1 Demographic data of respondents | 29 |
| 4.2 Adoption and use of E-commerce..... | 30 |
| 4.2.1 Performance of the business and adoption of e-commerce | 31 |

| | |
|--|-----------|
| 4.3 The influence of knowledge and skills on the adoption of e-commerce | 32 |
| 4.4 The influence of cost and access to ICT on the adoption of e-commerce..... | 34 |
| 4.5 The influence of ICT infrastructure affects on adoption of e-commerce..... | 36 |
| 4.6 The influence of cyber insecurity on adoption of e-commerce..... | 37 |
| 4.7 Regression analysis on the factors affecting adoption of e-commerce (Model)..... | 39 |
| CHAPTER FIVE | 43 |
| SUMMARY, CONCLUSIONS AND RECOMMENDATIONS OF THE FINDINGS | 43 |
| 5.1 Introduction..... | 43 |
| 5.2 Summary of the study findings | 43 |
| 5.4 Conclusions of the study | 45 |
| 5.7 Recommendations | 47 |
| 5.6 Suggestions for future research | 48 |
| REFERENCES..... | 49 |
| APPENDICES | 53 |
| Appendix 1: Letter of Transmittal | 53 |
| Appendix 2: Questionnaire | 54 |

LIST OF TABLES

| | |
|---|----|
| Table 1: Operationalization of variables..... | 22 |
| Table 2: Demographic information of respondents | 29 |
| Table 4: Use of e-commerce in business | 31 |
| Table 5 : E-commerce improves the performance of the business | 31 |
| Table 4.5: Statements on the performance of the business and adoption of e-commerce | 32 |
| Table 7: Training and experience in the use of ICT..... | 33 |
| Table 8: Statement on the skills and knowledge in the use of ICT | 34 |
| Table 9: Access to the internet..... | 35 |
| Table 10: Statements on the cost and access of ICT..... | 35 |
| Table 11: The quality and cost of internet connection..... | 36 |
| Table 12: Statements on ICT infrastructure..... | 37 |
| Table 13: Common crimes in ICT as identified by the respondents..... | 38 |
| Table 14: Statement on the influence of cyber insecurity..... | 38 |
| Table 15: Regression model- Adoption of e-commerce as dependent variable..... | 40 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1: Definition of Innovation..... | 10 |
| Figure 2: Technological Acceptance Model..... | 11 |
| Figure 3: Conceptual Framework..... | 18 |
| Figure 4.0: Have adopted and those planning to adopt e-commerce in future. | 30 |
| Figure 4.1: Use of e-commerce in business | 31 |
| Figure 4.2: E-commerce improves the performance of the business..... | 31 |

LIST OF ABBREVIATIONS

| | | |
|-------|---|---|
| CBD | - | Central Business District |
| DOI | - | Diffusion of Innovation |
| EC | - | Electronic Commerce |
| ICT | - | Information Communication Technology |
| IT | - | Information Technology |
| NCBDA | - | Nairobi Central Business District Association |
| PDA | - | Personal Digital Assistant |
| SME | - | Small and Medium Sized Enterprises |
| TAM | - | Technology Adaptation Model |
| TRA | - | Theory of Reasoned Action |
| WWW | - | World Wide Web |

ABSTRACT

The introduction of internet based electronic commerce offers significant opportunities for large and small firms across the world to expand their customer base, downsize their operation expenses and at the same time compete in the global market. In the Kenyan context the use of internet to conduct business offers great opportunity to small and medium sized enterprises. Some of the benefits include, interacting directly with their customers, entry into new markets, reduced costs associated with traditional business methods like obtaining business licenses, permits and operational costs among others. However many small and medium sized enterprises and especially the exhibition stalls business have failed to tap into e-commerce or achieve the threshold required to realize the benefits associated with e-commerce.

This research sought to investigate the factors that are influencing the adoption of electronic commerce among SMEs in Kenya with particular reference to exhibition stalls in Nairobi's CBD. The specific objectives of the study included determining the effect of skills, cost and access to ICT, ICT infrastructure, and cyber insecurity on the adoption of electronic commerce among exhibition stall business in Nairobi's Central Business District. The study adopted the following research methodology; First, the use of survey research design to collect data using a well developed questionnaire. The target population is exhibition stall operators or owners and managers within Nairobi's Central Business District.

In this research the researcher used purposive sampling which allows the researcher to hand pick the respondents having information relevant to the study. Using the rule of thumb the researcher selected 300 respondents. The data was analyzed using descriptive statistical analysis. The analyzed data was presented and interpreted through charts graphs and frequency tables.

The research findings of the study are that there is a major relationship between cost and access to ICT, ICT infrastructure and cyber in the adoption of e-commerce. The study reports that most of the exhibition stalls have adopted e-commerce. It is also revealed that the government has not formulated proper policy or put in place effective legislation to curb cyber crime. It is recommended that business owners need to be abreast with e-commerce developments and should not resist exploring new technological innovations for global business. It is also recommended that the government should put in place effective legal infrastructure and security measures to deal with cyber insecurity which hinder the adoption of e-commerce.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to Lee and Chin (2008), information and communication technologies are progressing at a relentless pace, affecting almost all aspects of our everyday lives. Lee and Chin (2008) further asserts that, computers and the Internet have become an crucial part of the modern society changing the way we communicate, the way we get education, and the way we do business. The Internet has many benefits to small businesses according to Chen et al, (2003) the Internet serves as a marketplace to whereby sellers and buyers from all over the world will come together to conduct business, it also serves as a communication medium whereby the World Wide Web provides a cheap, easy and fast way for interacting with customers, suppliers and other businesses. According to Al-Qirim (2007) small and medium sizes enterprises (SMEs) face various difficulties in adopting e-commerce; these challenges are brought about by factors within and without the business. Karanasios, (2007) suggests that small business in developing countries usually lack the technical knowledge, the financial power adopt and legal infrastructure implement e-commerce in to their day to day activities.SMEs play a are very important role in the development of a countries economy, Al-Hawari , Al-Yamani & Izwawa (2000). According to Bui,Le and Jones (2006)SMEs contribute to about to 45% of a country`s gross domestic product (GDP) .According to Main (2002) SMEs

According to Braun (2006) SMEs rely heavily on the flow of information to enable to increase sale and expand market share: in that the decision to purchase a service or a product is generally based on the information the buyer receives directly from the seller , word of

mouth or prior knowledge of the service of product. Braun (2006) further explains that information and communication technology (ICT) provides the best platform for SMEs to put out information about themselves to existing and potential customers. In this case Information and communication technologies can significantly enhance the way in which enterprises conduct their business Nodder et al. (2003). These technologies can reduce costs, enhance operational efficiency, help to access international markets and most importantly to improve service quality and customer experience in enterprises Law, Leung and Buhalis, (2009). The Internet can create a direct link between the members of the SME and consumers, and also websites can provide information about the services and create an instant confirmation response to an inquiry such as availability of various products (Braun, 2006). Despite these apparent benefits and advantages, the small business owners do not use the Internet and Web to its full advantage Lituchy and Rail, 2000; Hudson and Gilbert, (2006).

Adoption of electronic commerce offers a great opportunity to SMEs to gain greater global access and reduced transaction costs, provide substantial benefits via improved efficiencies and raised revenues; facilities access to potential customers and supplies, productivity improvement, customization of products and services and information exchange and management (UNCTAD, 2002). However usage patterns among SMEs in Kenya show a slow progression from the use of the Internet for communication (primarily electronic mail) to use of the Internet for research and information search, to the development of websites with static information about firm's goods or services (Macharia, 2009).

However, most of the studies on e-commerce adoption evaluation and benefits realization that have been done to-date have been carried out in large organization (Lin, 2005). According to Macharia (2009), there is limited systematic research into the challenges

enterprises face in adopting electronic commerce in developing countries and in particular the SMEs in Kenya. Given these issues, the main objective of this paper is to examine factors affecting the adoption of e-commerce by small businesses by using a case study approach. For this reason, this paper investigates the factors affecting the adoption of e-commerce by exhibition stalls in Nairobi's CBD.

1.2 Statement of the Problem

Adoption of electronic commerce offers a great opportunity to SME to gain global access and reduced transaction costs provide substantial benefit via improved efficiencies and raised revenues. However, the Small and Medium sized Business in Kenya are facing more stringent impediments to the adoption of e-commerce. Part of the problem relates to limited resources and technology capabilities, the scale and affordability of information technology, as well as the facility of implementation within rapidly growing and changing organizations (Raisinghani, Melemex, Zhou, Paslowski, Kikvidze, Taha & Simons, 2005 .Macharia (2009) explains the usage pattern of the internet among SMEs in Kenya show a slow succession from the use of information technology for e-commerce. This study therefore seeks to investigate the factors that influence adoption of e-commerce by SMEs with a special reference to exhibition stalls in Nairobi central business district.

1.3 Purpose of the Study

The purpose of this study is to investigate the factors influencing adoption of electronic commerce by exhibition stalls businesses in Nairobi's Central Business District.

1.4 Objective of the Study

The study was guided by the following specific objectives

1. To establish the influence of knowledge on the adoption of e-commerce by exhibition stalls in Nairobi's CBD.
2. To examine the influence of cost and access to ICT on the adoption of e-commerce by exhibition stalls in Nairobi's CBD.
3. To establish the influence of ICT infrastructure affects on adoption of e-commerce by exhibition stalls in Nairobi's CBD.
4. To ascertain the influence of cyber insecurity on adoption of e-commerce by exhibition stalls in Nairobi's CBD.

1.5 Assumptions of the study

This research assumes that; the Adoption of E-commerce by Exhibition Stalls Businesses in Nairobi's Central Business District has not been e realised because of the challenges being faced. Where clear strategies are formulated to overcome the existing challenges the adoption will be achieved and useful to users.

1.6 Research questions

1. How does knowledge and skills affect the adoption of e-commerce by exhibition stalls in Nairobi's CBD?
2. How does the cost and access to ICT influence the adoption of e-commerce by exhibition stalls in Nairobi's CBD?
3. How does the ICT infrastructure affect the adoption of e-commerce by exhibition stalls in Nairobi's CBD?
4. How does cyber insecurity influence on adoption of e-commerce by exhibition stalls in Nairobi's CBD?

1.7 Significance of the Study

Findings of this study would help policy makers and managers of SME as well as practitioners to formulate strategies and program to overcome challenges faced in the adoption of e-commerce in their business as well as to ensure efficiency, effectiveness and high productivity in their businesses..

1.8 Limitation of the Study

The research may encounter a few challenges during the study. Some of the challenges include; lack of cooperation by respondents and giving false information, suspicion by the respondents fearing the information may lead out to their competitors.. The second challenge the researcher may face is the financial aspect involved especially when it comes to the data collection phase and other activities related to the study. The third challenge anticipated by the researcher is the time management, being a working student the researcher is had to master the art of balancing the two so that his pursuit higher education does not interfere with his job and vice verse In view of the highlighted limitation the research ensured that the information received from the respondents is treated as confidential , secondly the the researcher came up with a budget to enable him keep track of the expenditure, thirdly the researcher came up with a time table in order to manage his time .

1.8 Definition of Significant Terms

Adoption of e-commerce – Refers to the decision to make full use of electronic commerce innovation as the best course of action available, while rejection is the decision to not adopt.

Central Business District –The central business district (CBD) refers to the focal point of a city. It is the commercial, administrative, retail and cultural heart of the city and usually is the core point for transportation networks. In this case Nairobi`s CBD lies in the middle of Moi Avenue to the north , Haile Selasie Avenue to the east, Uhuru Highway to the south and University way to the west.

Cyber security – This refers to the body of technological, process and practices designed to protect networks, computer, programs and data from attacks, damage or unauthorized access.

Electronic commerce (E-commerce) – E-commerce is the buying and selling of products or services over electronic systems such as the internet and other computer networks.

Exhibition stalls- Refers to structure used for showing and examples of products, and where sales people can talk and sell their products to customers.

ICT Infrastructure – Refers to ICT systems, services and networks which facilitates smooth running of the information communication technology.

Information and Communication Technology (ICT) - Refers to all the digital devices (computers, cell phones, PDAs, Smart phones, iPods etc) that play a role in the creation of new media modes of interaction between people.

Internet – refers to an electronic communications network that connects computer networks and organizational computer facilities around the world.

Small and Medium sized Enterprises (SMEs) - refers to non- subsidiary, independent firms which employ 1-5 people.

1.9 Organization of the Study

This research report is organized into five chapters, Chapter one gives a background of the study, the statement of the problem followed by the purpose of the study. The chapter also gives the objectives of the study, it discusses the research questions, assumptions of the study as well as the significance and study limitations. The close of this chapter is a definition of key terms used in this research report.

Chapter two reviews the literature related to the study and also provide theoretical background and conceptual framework to various aspects of the study. The chapter concludes by giving a summary of reviewed literature.

Chapter three gives the research design and methodology used in the research.

Chapter four looks at data analysis, presentation and interpretations of the study. Data analysis has been presented in tables.

Chapter five gives the summary, conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction to e-commerce

E-commerce has been the centre of debate in business management in the 21st Century across the globe, with the marketplace becoming increasingly global, many companies have thus come to the realization that it takes more than high quality, affordable privileges and differentiation to excel in today's highly competitive multinational market place Bernadas & Verville, (2005). According to a study by the U.S chamber of commerce in 2011 e-commerce is on the rise around the globe at a rapid pace, driven by the huge successes of online retailers in the US and Europe, such as Amazon.com and E- bay.com which has scaled up exponentially in recent years. The most successful ecommerce market place is actually in the Far East, South Korea to be precise, where the government and private sector are pushing for affordable broadband access, stimulating trust, and using cutting edge technology. Wang & Cheung (2004).

The introduction of Internet based electronic commerce offers significant opportunities for large and small firms across Kenya to expand their customer base, enter new markets and rationalize their businesses by competing in the global economies. SMEs especially exhibition stall business have generally been slow to adopt e-commerce into their day to day activities. Macharia (2009). Exhibition stalls business in Nairobi 's CBD are face with challenges such as cost of e-commerce infrastructure ,cyber insecurity, lack of knowledge on matters regards ICT and lack of access to ICT that that hinder the adaptation of e-commerce into their day to day activities

The chapter looks into the concept of e-commerce and its development over the years, the various adaptation models of e-commerce, and review of what academic scholars have written on the challenges facing the adaptation of e-commerce by SMEs.

2.2 The concept of e-commerce

According to Martin & Matlay (2001), the internet was invented in 1969 as a Department of Defence experiment in the United State of America which involved networking four computers to introduction of technology that provided access to World Wide Web (Zinatelli & Angele, 1996). According to Chieochan et al(2002), internet is used in various ways such as communication, information, entertainment and e-commerce which is composed of electronic exchanges, extranets and private exchanges, electronic storefronts, online ticketing and auctions. Small and Medium Enterprises are important to economic development which count for 60 to 70 per cent of all employment in developing countries (UNCTAD Secretariat, 2001). Clearly it is critical for such businesses to be prepared for and take full advantage of any benefits offered by electronic commerce (Farhad et al, 2011).

Business all over the world can benefit from electronic commerce techniques. They can use these techniques to: find new customers, serve current and new customers better, improve the efficiency of their business processes and offer entirely new services and products (Farhad et al, 2011). According to Laudon and Traver (2004) most companies consider electronic mail to be very important in gaining international exposure and connecting with potential customers. This is particularly true for companies that either have a website (Briggs, 2001).

facilitate communications in the event of nuclear war. Until about 1993, the Internet remained an obscure computer network with few commercial applications. By 2003, internet users numbered 390 million worldwide because the growth was facilitated by the

2.3. Small and Medium Sized Businesses in Kenya

The small business sector in Kenya has both the potential and the historic task of bringing millions of people from the survivalist level including the informal economy to the mainstream economy. Recognizing the critical role small business play in Kenya economy, the Government through Kenya Vision 2030 envisages the strengthening of SMEs to become the key industries of tomorrow by improving their productivity and innovation (Ministry of Planning, National Development & Vision 2030, 2007).

SME sector is perceived as the engine of growth in the economy of Kenya. It plays an important role in generating employment and income, provision of goods and services and as a driver of competition, industrialization and innovation. It comprises of about 75% of all businesses, employs 4.6 million people (30%), accounts for 87% of all new jobs and contributes 18.4% GDP. As such the government has hinged several development strategies on the sector (Kiveu, 2013).

2.4. Models of Adoption of e-commerce

As the twenty – first century unfolds, the internet and electronic commerce have become increasingly important to the business world (Maswera & Edwards, 2008). In particular, small to medium sized businesses (SMEs) can now overcome some of their major disadvantages such as size, limited financial, technological and human resources and limited exposure to the global market place, by adopting internet technologies (Cooper, & Burgess, 2000). Most small and medium sized entrepreneurs are faced with the challenge of adopting e-commerce as new technology to create a competitive edge over their competitors and enter new markets. There are a number of theoretical Models that seek to explain electronic commerce adoption by SMEs.

2.4.1 Diffusion of Innovation (DOI) – Rogers 1962

DIO is a theory of how, why and at what rate new ideas and technology spread through cultures operating at the individual and firm level. DIO theory sees innovation 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 innovation and thus it is generally observed That the portion of the population adopting an innovation is approximately normally distributed over time. Rogers (1995) breaking this normal distribution into segments leads to to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters: innovators, early adopters, early majority, late majority, laggards Rogers (1995). The innovation process in organization 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 environment-decision.

Based on DOI theory at firm level Rogers (1995).Innovativeness is related to such independent variables as individual (leader) characteristics, internal organization structural characteristics, and external characteristics of the organization. Figure 1 shows the various factors within and without the organization that affects the organizations innovativeness.

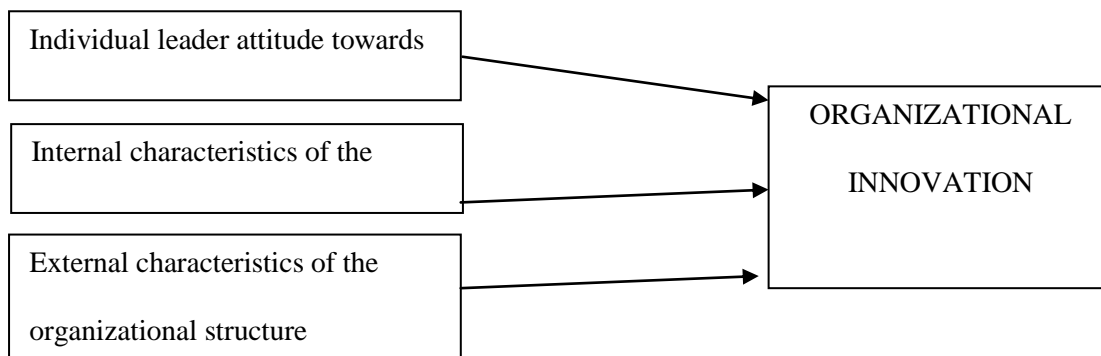


Figure 1: Definition of innovation

2.4.2. Technology adoption model (TAM) Fred Davis 1989

TAM is an extension of Azen and Fishbein's theory of reasoned action (TRA) which is a model for the prediction of behavioral intention, spanning predictions of attitude and predictions of behavior. The subsequent separation of behavioral intention from behavior allows for explanation of limiting factors on attitudinal influence Azen, (1980).

TAM replaces many of TRA's attitude measures with the two technology acceptance measures-*ease of use*, and *usefulness*. TRA and TAM, both of which have strong behavioral elements, assume that when someone forms an intention to act, that they will be free to act without limitation. In the real world there will be many constraints, such as limited freedom to act. Bagozzi, Davis & Warshaw (1992). The Technology Acceptance Model (TAM) is an information system theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use. Davis (1989).

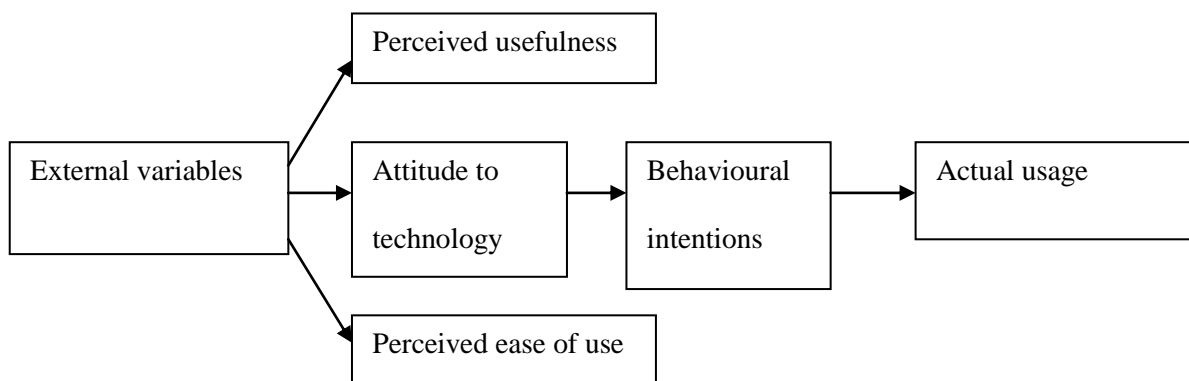


Figure 2: Technological Acceptance Model

2.5. Challenges facing e-commerce in developing countries

E-commerce has been predicted to be a new driver of economic growth for developing countries, Humphrey et al, (2003). The opportunities offered by Internet technologies, a necessity for e-commerce has led many to believe that e-commerce will grow rapidly and

help developing countries to overcome their problems of exclusion from the world economy and improve the terms of their participation Odedra-Straub, (2003). It does present great opportunities to business organizations in developing countries to gain greater global access and reduce transaction costs Kraemer et al, (2002); Humphrey et al, (2003). However, previous research has found that developing countries have not derived that expected benefits from e-commerce Pare (2002), Humphrey et al, (2003). Consequently, there is still about how e-commerce will actually lead firms in developing countries to new trading opportunities Humphrey et al. (2003); Vatanasakdakul et al, (2004).

The obstacles to reaping the benefits brought about by e-commerce are often underestimated. Accessing the Web is possible only when telephones and PCs are available, but these technologies are still in very scarce supply. In addition to this problem, Internet access is still very costly-both in absolute terms and relative to per capita income-in most developing countries. While PC prices have fallen dramatically over the last decade, they remain beyond the reach of individual users and enterprises in developing countries.

2.6. Factors affecting E-commerce adoption in Kenya's SMES

E-commerce has the potential of improving effectiveness and productivity in many areas in an organization, therefore, has received significant attention in many countries. In fact in Kenya it is one of the building stones for the countries Vision 2010. Kenya has taken several steps to make this achievable. Over the last couple of years, E-commerce has brought changes in the manner in which business is carried out. Firstly, it has changed people's life style and fashion because of the availability of internet. Secondly, it has changed the manner in which companies carry out their business such as SMEs, retail enterprises, post companies and logistics enterprises, however absence of adequate basic infrastructural, socio-economic and the lack of government national ICT strategies have created a significant barrier in the

adoption and diffusion of e-commerce in developing countries, cultural issues need to be considered. The following are the factors that hinder the adoption of e-commerce in Kenya.

2.6.1 Influence of knowledge on the adoption of e-commerce in ICT

According to MacGregor et al (1996), small business tends to avoid ICT into their business, if it is seen as complex to use. This is not surprising because SMEs always lack of skills amongst workforce to use ICT (Spectrum, 1997). Pauland Pascale (2003) study reveals that the ICT adoption in SME depends on the CEO/owner being the ICT decision-maker. Their findings clearly indicated that ICT adoption is positively related to firm size.

It is very important for organization to determine its employee's knowledge or skills of ICT because those knowledge or previous experiences may influence organization decision in adopting ICT. However, the ability of manager or owner in ICT's knowledge or skills is definitely increasing the opportunity of ICT use amongst SMEs. Reynolds (1994) found that small business owner/managers are unlikely to adopt more sophisticated technologies if they are not familiar with the basic ones. This is because of the limited number of employees with lack of technical knowledge. This lack of knowledge based employees might hinder or prevent technology adoption if the owner believes that this technology can only be employed using specialist staff (Reynolds, 1994). MacGregor et al. (1996) and Cragg and King (1993) also stressed that employees of small businesses tend to lack skills and expertise to use IT in their businesses. It examined that SMEs always lack of skills amongst workforce to use ICT (Spectrum, 1997). The lack of suitable technical and managerial staff with sufficient ICT expertise is another major barrier for SMEs in adopting ICT. Allison (1999) agrees that a skilled and knowledgeable work force was closely linked with the successful implementation of technology. Cragg and King (1993) found that one of the strongest inhibiting factors for

small firm to implement information technology was the lack of information system knowledge.

2.6.2 Influence of cost of ICT on the adoption of e-commerce

In an enterprise, the financial, human and technology resources such as computer, telephone lines, cables among other ply a very important role in the adoption of new technologies (Rachid & Al-Qirim, 2010). In the case of SMEs in particular, even if the manager perceives the adoption of new technologies and electronic commerce as important, the enterprises often do not have sufficient resources to adopt them (Thong & Yap, 1995). This is a major obstacle to the integration of new technologies and electronic commerce in SMEs. Severe organizationl constraints on financial, technological and human resources often cause businesse in developing countries to lag behind their counterparts in developed countries in using electronic commerce (Huy & Filiatrault, 2006).

According to OECD (2004), the cost of the internet access makes it inaccessible to most users in developing countries. The cost of accessing the infrastructure also influences the growth of e-commerce. People in rural areas use the internet to get information on current affairs, to communicate and for commercial and agricultural purposes. However, given the 45 percent of Kenya's population live below the poverty line (Oxford poverty and human development initiative, 2010).

According to OECD (2004), there is still a low level of personal computer penetration and the cost of internet access is too high. Majority of developing countries population lacks the income required to have a computer, especially the low-income and rural populations. According to Humphrey et al (2003), the cost of computers and internet connectivity far surpasses the monthly wage of the average person in developing country.

2.6.3 .Influence of ICT infrastructure on adoption of e-commerce

A well infrastructure is essential in the effective use of the internet for e-commerce. The ICT infrastructure in Kenya is not as developed as those in America, Europe and Asia (Buruchara, 2010), this is a significant impediment to the adoption and diffusion of e-commerce by Kenyan SMEs. There are a range of infrastructure components that hinder e-commerce such as the level of telecommunication network penetration, cost of the internet and access to computers that hinder the adoption of e-commerce by Kenyan SMEs. The capital infrastructure relates to how to secure funding for an electronic and subsequently value that businesses (WTO, 2001). The media infrastructure is an important issue for all electronic commerce managers because the internet is a mass communication platform (Daniel, Wilson & Myers, 2002).

According to Lawson, Alcock, Cooper and Burgess (2001), if electronic commerce is taken up by enterprises in developing countries it would require a number of underlying capacity to be present which may be available within the enterprise themselves while the market can supply some of these capacities. In other cases, though there may be a case of promotion intervention at a national level as national infrastructure (Mirchandani & Motwani, 2001). One reason why States succeed in establishing a good environment for implementation of electronic commerce is the existence of some common ICT infrastructure, standards and applications. This has made many internal electronic transactions commonplace and well-accepted (Looi, 2005). The infrastructure of a country positively influences the adoption of new technologies (Ling, 2001; Chiochan et al., 2000). In countries with good technological support and a sound infrastructure, adoption is more marked (Tan & Teo, 2000).

According to Buruchara (2010), although introduction of the fibre optic into the country has opened up Kenya into the cyber world it is only in major towns such as Nairobi, Mombasa and immediate environs that experience the benefits of the optic fibre leaving the rest of Kenya out of the cyber world. According to Buruchara (2010), there are currently about 400000 fixed lines serving 34.7 million people located mostly in the main urban areas between the cities of Nairobi, Mombasa and Kisumu. Outside of these, there are not sufficient lines for data and voice communication to facilitate efficient and effective e-commerce.

2.6.4 Influence of cyber security on adoption of e-commerce

It has become increasingly difficult to overlook the importance of electronic commerce (e-commerce) and the role it play in the national and international economy. Generally, in comparison with the developing countries, e-commerce has succeeded in the developed countries by putting in place an effective legal infrastructure and security measures. Although much of the publicity about internet security has focused on the potential risks to consumers who use credit cards to make purchases electronically, payment fraud is also a major threat to internet-based merchants (Murphy, 1998). Fraudulent or non-creditworthy orders account for as much as one-sixth of all attempted purchases on the internet. Security threats not only consist of break-ins and technology disturbance, but also stalking impersonating and identity theft are serious issues that everyone should be concerned about Janal, (1998). Computer hacking is another serious problem. Hacking can be either a benign or a malicious activity.

Many African countries such as Kenya and Nigeria lack effective cyber policies and laws, Cyber law Report (2009). Due to this cyber criminal escape without being caught. Kenya is worst hit by cyber insecurity, according to a research done by Price Water House Coppers, Financial Focus (2012), 66% of respondents in Kenya said their organizations were victims

of economic crime, nearly double the global average of 34% and a 9% point increase since 2009. Kenya recorded the highest level of economic crime among all 78 countries surveyed. It was ranked second highest in 2009 behind South Africa, According to Global Economic Crime Survey (2011) Two thirds of business and other organizations in Kenya were victims of economic crime in the last 12 months. As much as most of organizations in Kenya are aware of the cyber insecurity in the country they do not have the right legislative frame work and an effective cyber crime policy to enforce it Omwansa (2009). The lack of effective cyber crime laws and structures have hindered many customers and buyers from venturing to e-commerce since there are no recourse measures in case one is conned or transaction details such as credit account number, M-Pesa pin have been stolen.

2.7. Conceptual Framework

The conceptual model below contains constructs that have demonstrated theoretical support, based on a number of researches done ICT and other innovation perspective. The model examines the factors that would possibly affect the E-commerce adoption.

Independent Variables

Dependent Variable

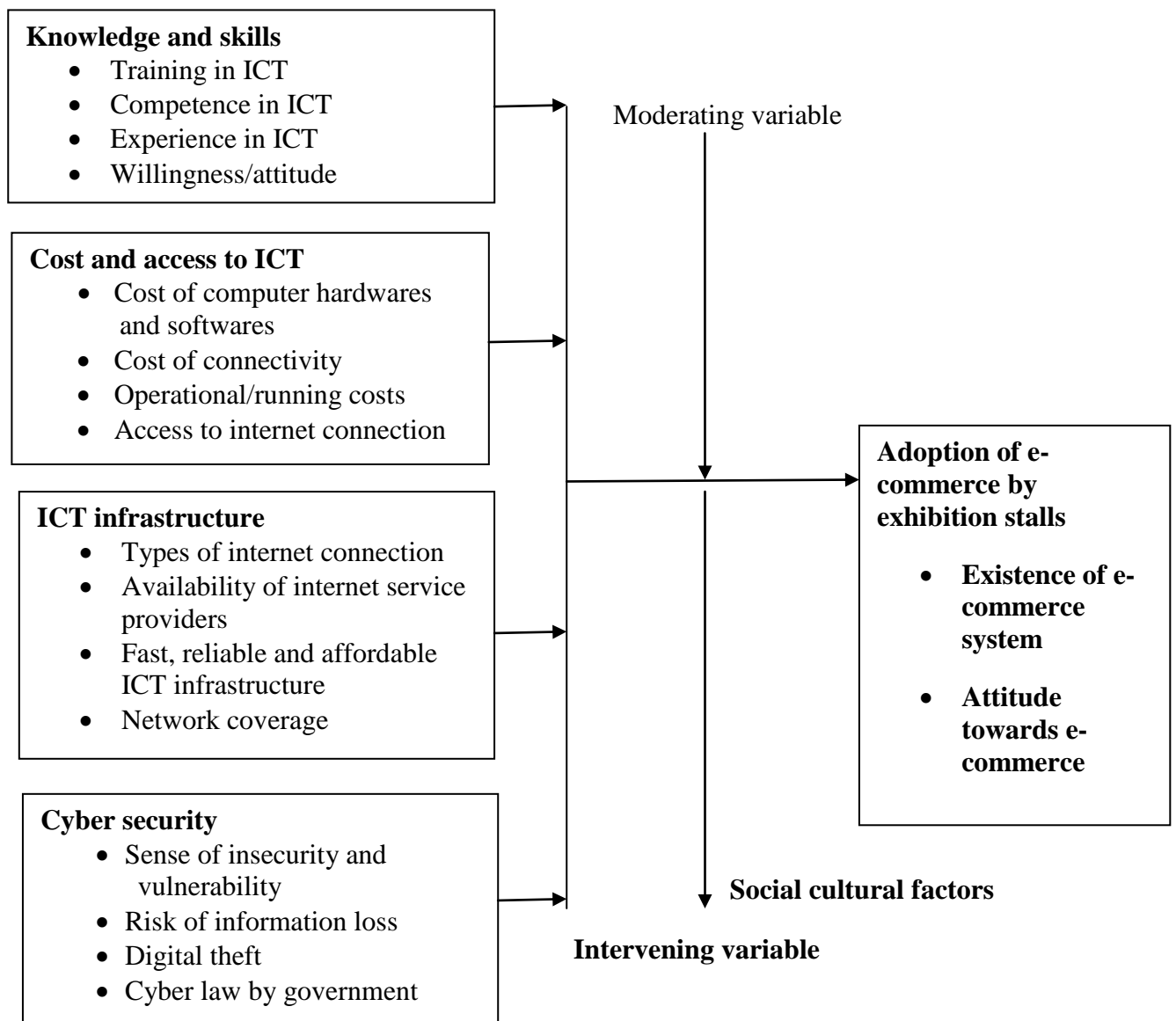


Figure 3: Conceptual Framework

2.8. Summary of the Literature Review

This chapter gives the in-depth literature analysis of various factors influencing adoption of e-commerce. Despite a number of previous studies that have investigated the factors that influence the adaptation of E.-commerce, studies specific to Nairobi`s exhibition stalls still remain scarce. To the best knowledge of the researcher, there is no other study on the factors influencing the adaptation of E-commerce by exhibition stalls in Nairobi`s CBD. Hence the

researcher seeks to fill the knowledge gap by investigating the factors that influence the adaptation of e-commerce as cases study of exhibition stalls in Nairobi's CBD.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the design and the methodology used in the research study. Research design includes some of the key decisions in research methodology that the researcher makes in conducting the study. Some of the vital decision include, sampling methods, data collection and data analysis. The methodology includes using logical methods in collecting of data, determining a target population, sampling design, data collection methods and techniques and data analysis methods.

3.2 Research Design

Research design is the blueprint that enables the investigator to come up with solutions to problems and guides him in the various stages of the research (Nachmias & Nachmias, 2004). The study uses a survey research design as it is helpful in indicating trends in attitudes and behaviours which enabled generalization of the findings of the research study done (Kuter & Yilmaz, 2001). This design is considered suitable because it saves time, expensive and the amount of quality information yielded was valid while the interviewer's biasness was reduced because participants completed identically worded measures (Ader, Millenbergh & Hand, 2008).

3.3 Target Population

According to Nachmias, (1996) a population is the total collection of elements about which we wish to make some references. A population is a complete set of individuals, cases or objects with some common observation (Mugenda & Mugenda, 2003). The target population of the study are owners /managers of exhibition stalls in Nairobi's Central business district.

According to a report by the Nairobi Central Business District Association (NCBDA) in 2004 Nairobi central business district is the home to 3000 exhibition stall owners /entrepreneurs

3.4 Sampling Design

According to Mugenda & Mugenda (2003), sampling design refers to a research plan that indicates how cases are to be selected for observation. Webster (1985), further defines a sample as definite part of a population that is a representation of the whole population .In this research the researcher used purposive sampling. According to Mugenda &Mugenda (1995) purposive sampling technique allows the researcher to hand pick respondents that are have the required information relevant to the study`s objectives According to Gay (1981) a sample of 10% of the target population is considered as a holistic representation of the total target population. The researcher thus had a sample size of 300 exhibition stall owners/operators.

3.5 Operationalization of Variables

The Operationalization of variables will explain the theoretical variables previously mentioned and giving measurements to them, as shown in the table below.

Table 1: Operationalization of variables

| Objectives | Variables | Indicators | Measurement scale | Data collection tool | Type of analysis | Tools of Data analysis |
|--|------------------------|---|--------------------------|-----------------------------|-------------------------|---------------------------------|
| To establish how knowledge and skills affect the adoption of e-commerce by exhibition stalls in Nairobi's CBD. | Knowledge and skills | Training in ICT Competence in ICT Experience in ICT | Ordinal | Interview/ questionnaire | Quantitative | Descriptive /statistical |
| To examine how the cost and access to ICT influence | Cost and access to ICT | Cost of computer hardwares and softwares | Ordinal | Interview/ questionnaire | Quantitative | Descriptive /statistical |

| | | | | | | |
|---|--------------------|--|---------|-----------------------------|--------------|-----------------------------|
| the adoption of e-commerce by exhibition stalls in Nairobi's CBD. | | Cost of connectivity Operational/running costs Access to internet connection | | | | |
| To investigate how ICT infrastructure affect the adoption of e-commerce by exhibition stalls in Nairobi's CBD. | ICT infrastructure | Availability of internet service providers Fast, reliable and affordable ICT infrastructure Network coverage | Ordinal | Interview/ questionnaire | Quantitative | Descriptive /statistical |
| To ascertain the influence of cyber insecurity on adoption of e-commerce by exhibition stalls in Nairobi's CBD. | Cyber security | Sense of insecurity and vulnerability Risk of information loss Digital theft Cyber laws by the | Ordinal | Interview/ questionnaire | Quantitative | Descriptive /statistical |

| | | | | | | |
|--|--|---|-------------------------|---------------------------------|-------------|--------------------------------|
| | | government | | | | |
| Adoptation of E-commerce by Exhibition stall business | | Existence of e-commerce system. Attitude towards e-commerce | Ordinal /Nominal | Interview /questionnaire | Qualitative | Descriptive /statistics |

3.6 Data Collection Procedures

The researcher utilized questionnaires to collect data. Questionnaire enables the researcher to accumulate data with ease and also help in obtaining important data from a number of respondents (Mugenda and Mugenda, 1999). The respondents were guided through the questionnaire by the researcher or through by trained research assistants. The questionnaire had both open ended and closed ended questions. Closed-Ended questions aimed at getting quantitative data while the open- ended questions aimed at getting qualitative data. The researcher also used secondary data from a diverse source of documents and electronically stored information.

The researcher trained a team of research assistants who administered the questionnaires. The researcher requested permission from the authority concerned to carry out the study. Once permission was granted, the researcher commenced data collection.

3.7 Data Analysis

In this study the data was analyzed using descriptive statistical analysis. A narrative summary of the open and closed questions was made. This includes tables, percentages, mean scores and cross-tabulation. The analyzed data was then presented and interpreted through charts, graphs, frequency tables and regression analysis. The statistical package for social sciences (SPSS) was used to analyze the data. SPSS was used because it is able to handle large quantities of data and is thus efficient for this study. The analysis was both quantitative (for structured questions) and qualitative (for unstructured questions).

3.8 Ethical considerations

Permission to conduct the study was sought. The researcher gave a full disclosure of the study objectives and how the research process was conducted. The data collected from primary and secondary sources was treated with confidentiality. The respondents were assured that the study was meant for academic purpose only and that the respondents' opinion were treated with integrity and confidentiality. The respondents were be required to write their names to seal the privacy.

3.7. Reliability

Reliability is the degree to which an apparatus measures the same way each time it is used under the same condition with the same subjects. Cronbach's alpha is the most common measure of internal consistency ("reliability"). In this research, Cronbach's alpha was considered as the best to determine if the questions in the questionnaire is reliable.

3.8. Validity

Cook and Campbell (1979) define validity as the “best available approximation to the truth or falsity of a given inference, proposition or conclusion”. Ahire et al. (1996) believe that if the measurement items in the survey “adequately cover the content domains or aspects of the concept being measured”, an instrument has content validity. Gotzamani and Tsiotras (2001), Wong and Aspinwall (2005) also have clarified that “it is not assessed numerically, but can only be subjectively judged by the researchers”.

Thus, to ensure validity of the test scores, before its release, the questionnaire was subjected to peer review from colleagues and the supervisor. This was aimed to red flag any potential errors in the research instruments thus ensuring the results validity.

CHAPTER FOUR

DATA ANALYSIS PRESENTATION DISCUSSIONS AND INTERPRETATION

4.0 Introduction

This chapter contains results and discussion of the major research finding. The purpose of the study was to investigate the factors influencing adoption of electronic commerce by exhibition stalls business in Nairobi's central business district (CBD). The chapter is divided into five (5) sections with the first section covering the demographic data of the respondents that is age of the respondents, gender and academic qualification and the kind of business. The other four sections are arranged as per the four research objectives used in the research. Both descriptive data analysis and inferential data analysis were used to analyze the data.

4.1 Demographic data of respondents

Data was collected from a sample of 300 exhibition stall owners/entrepreneurs. The sample consisted of 73(51%) male students and 72(49%) female students. The respondents age and academic qualification was presented in reference to gender. The results were presented in Table 2.

Table 2: Demographic information of respondents

| | | Male | | Female | | Total | |
|-----------|----------------|------|-------|--------|-------|-------|-------|
| Variables | | f | % | F | % | f | % |
| Age | 15-20 years | 4 | 1.33 | 0 | 0.00 | 4 | 1.33 |
| | 21-25 years | 70 | 23.33 | 79 | 26.33 | 149 | 49.67 |
| | 26-30 years | 62 | 20.67 | 17 | 5.67 | 79 | 26.33 |
| | 31-35 years | 30 | 10.00 | 27 | 9.00 | 57 | 19.00 |
| | Above 35 years | 7 | 2.33 | 4 | 1.33 | 11 | 3.67 |

| | | | | | | | |
|------------------------|--------------|------------|--------------|------------|--------------|------------|---------------|
| | Total | 173 | 57.67 | 127 | 42.33 | 300 | 100.00 |
| Academic qualification | Degree | 108 | 36.00 | 72 | 24.00 | 180 | 60.00 |
| | Diploma | 41 | 13.67 | 47 | 15.67 | 88 | 29.33 |
| | Secondary | 24 | 8.00 | 8 | 2.67 | 32 | 10.67 |
| | Total | 173 | 57.67 | 127 | 42.33 | 300 | 100.00 |

Results from table 2 show that most of the respondents were aged 21-25 years, male (23.3%) and female (26.3%). Surprisingly the youngest, 15-20 years were male. Majority of the respondents (60%) were degree holders. Diploma holders were 29.33% while the smallest number (10.67%) had gone up to secondary level.

4.2 Adoption and use of E-commerce

The researcher sought to find out whether e-commerce is adopted by the entrepreneurs through the respondents. Results below show the number those who have adopted e-commerce in their business against those who have not adopted. On the same the research also wanted to know those who didn't adopt, if they were planning to adopt it in future.

Table 3: Have adopted and those planning to adopt e-commerce in future.

| | | Frequency | Percentage |
|-------------------|--------------|------------------|-------------------|
| Have adopted | Yes | 227 | 75.7 |
| | No | 73 | 24.3 |
| | Total | 300 | 100 |
| Planning to adopt | Yes | 55 | 76 |
| | No | 18 | 24 |
| | Total | 73 | 100 |

The study shows that majority (75.7%) have adopted e-commerce. Out of the 73 respondents who didn't adopt e-commerce, 76% were planning to adopt e-commerce in future while 24% are

not for the idea simple because some give reasons such like, “it is expensive to adopt e-commerce” , some didn’t trust the use of e-commerce because of the insecurity. Those who adopted were required to state ways they apply e-commerce into their business. The summary is given in the table 4.

Table 4: Use of e-commerce in business

| Uses of E-commerce | Frequency | Percentage |
|--------------------|-----------|------------|
| Marketing | 240 | 80 |
| Selling | 64 | 21.3 |
| Payment | 83 | 27.7 |
| Email | 65 | 21.6 |

The result as depicted in the table tells us that, most (80%) of the business stalls owners use internet to market their goods and services. It is followed by payments (27.7%)

4.2.1 Performance of the business and adoption of e-commerce

The researcher wanted the respondents to either agree and disagree to the statement that e-commerce improves the performance of the business. Their results are shown in the table below.

Table 5 : E-commerce improves the performance of the business

| Statement | | Frequency | Percentage |
|--|-----------|-----------|------------|
| E-commerce improves the performance of the business: | Strongly | | |
| | agree | 102 | 34 |
| | Agree | 153 | 51 |
| | Undecided | 21 | 7 |
| | Disagree | 24 | 8 |
| | Total | 300 | 100 |

Table 5 shows that majority (51%) agreed that e-commerce improves the performance of the business. While 8% of the respondents disagreed with the idea. The minority (7%) were undecided. To support this the following table shows the ranking of the stated statement given the mean as per the respondents' views.

Table 4.1: Statements on the performance of the business and adoption of e-commerce

| Statements | Mean | Rank |
|---|-------------|-------------|
| Through e-commerce you get new customers | 4.213 | 1 |
| Through online, you are able to sell within and outside Nairobi | 4.027 | 2 |
| E-commerce enables you to sell outside Kenya | 3.933 | 3 |
| Product sell well over the internet | 3.857 | 4 |
| E-commerce saves the business money | 3.693 | 5 |
| Customers like to do shopping online | 3.650 | 6 |

Table 6 shows that, majority of the respondents (mean=4.213) thought that through e-commerce you get new customers. While insignificant number (mean=3.650) thought customers like to do shopping online which was ranked last. This might be attributed to the security reasons.

4.3 The influence of knowledge and skills on the adoption of e-commerce

The researcher sought to investigate the respondents' training and experience in use of ICT .

Table 7 show the results.

Table 7: Training and experience in the use of ICT

| | | Frequency | Percentage |
|--------------------------------------|--------------------|------------------|-------------------|
| Trained in ICT | Trained in ICT | 253 | 84.0 |
| | Not trained in ICT | 48 | 16.0 |
| | Total | 300 | 100.0 |
| Level of ICT training | Degree | 33 | 11.0 |
| | Diploma | 65 | 21.7 |
| | Certificate | 154 | 51.3 |
| | No training | 48 | 16.0 |
| | Total | 300 | 100.0 |
| No. of years in the use of Computers | Over 5 years | 212 | 70.7 |
| | 3-5 years | 64 | 21.3 |
| | 1-3 years | 24 | 8.0 |
| | Total | 300 | 100.0 |

Data shows that, the majority (84%) of the respondents had training in ICT. While 16% did have training in ICT. On level of ICT training, the majority (51.1%) had trained up to certificate level. Those who trained up degree and diploma level were comprised 11% and 21.7% respectively. Surprisingly 16% of the respondent had no any form of training in ICT. Further on the skill and knowledge on the use of ICT, the respondents were asked to state whether they agreed or disagreed with the given statement as shown in the table below.

Table 8: Statement on the skills and knowledge in the use of ICT

| Statements | Agree | Reserved opinion | Disagree |
|---|--------------|-----------------------------|-----------------|
| Training in ICT enables one to use and adopt e-commerce effectively | 300(100%) | 0(0%) | 0(0%) |
| Most of the customers know how to use the computer | 227(75.6%) | 38(12.7%) | 35(11.7%) |
| Experience in ICT is vital to the adoption of E-commerce | 270(90%) | 30(10%) | 0(0%) |
| There is no need to adopt e-commerce for the business | 62(20.6%) | 0(0%) | 238(79.3%) |

Data shows that all the respondents (100%) agreed that training in ICT enables one to use and adopt e-commerce effectively. 75.6% of the respondents had a view that most of the customers know how to use the computer. While 90% were of the opinion that experience in ICT is vital to the adoption of E-commerce. Majority (79.3%) disagreed on the statement that, there is no need to adopt e-commerce for the business.

4.4 The influence of cost and access to ICT on the adoption of e-commerce

The researcher sought to find out if the respondents have access and further wanted to know the through which means to they use to access the internet. The results are shown in the table below.

Table 9: Access to the internet

| | | Frequency | Percentage |
|--------------------------|-------------------------|------------------|-------------------|
| Have access to internet: | Yes | 296 | 98.7 |
| | No | 4 | 1.3 |
| | Total | 300 | 100.0 |
| Access internet through: | Mobile phone | 189 | 63.0 |
| | Personal computer/cyber | 111 | 37.0 |
| | Total | 300 | 100.0 |

Data shows that majority of the respondent (98.7%) had access to the internet. Of those who were able to access the internet, majority (63%) used mobile phone while 37% accessed internet through personal computer or through the services of the cyber operators. On the cost and access to ICT the respondents were further required to state whether they agreed or disagreed on the statements given in the table below.

Table 10: Statements on the cost and access of ICT

| Statements | Agree | Reserved opinion | Disagree |
|--|--------------|-------------------------|-----------------|
| The cost of computers and its accessories is high | 300(100%) | 0(0%) | 0(0%) |
| The cost of internet accessibility and connectivity is high | 260(86.7%) | 7(2.3%) | 33(11.0%) |
| The cost of maintenance of the website and computers is too high | 280(93.4%) | 12(4%) | 8(2.7%) |
| The availability of internet service providers in the country has enabled business to access internet. | 288(95.7%) | 12(4.3%) | 0(0%) |

Table shows that all the respondents (100%) agreed that the cost of computers and its accessories is high. Majority (86.7%) agreed that the cost of internet accessibility and connectivity is high. 93% agreed that the cost of maintenance of the website and computers is too high. While 95.7% of the respondents agreed that the availability of internet service providers in the country has enabled businesses to access internet.

4.5 The influence of ICT infrastructure affects on adoption of e-commerce

The researcher sought to understand the nature of internet in terms of quality and the cost of internet connections. The responses are shown in the following table.

Table 11: The quality and cost of internet connection

| | | Frequency | Percentage |
|-----------------------------------|--------------|------------|--------------|
| The quality of internet | Poor | 44 | 14.7 |
| | Good | 245 | 81.7 |
| | Very good | 11 | 3.7 |
| | Total | 300 | 100.0 |
| The cost of internet connectivity | Cheap | 0 | 0.0 |
| | Fair | 207 | 69.0 |
| | Expensive | 93 | 31.0 |
| | Total | 300 | 100.0 |

Data in table 11. Shows that majority rated the quality of their internet as good (81.7%). While 14.7% rated the quality of their internet connectivity as poor. Further the majority (69%) of the respondents rated the cost of internet connectivity as fair in cost. Further the researcher requested

the respondents to either agree or disagree on the statements concerning the ICT infrastructure. The results are shown in the table12.

Table 12: Statements on ICT infrastructure

| Statements | Agree | Reserved opinion | Disagree |
|---|------------|------------------|----------|
| Availability of internet providers affects the decisions to adopt e-commerce. | 290(96.7%) | 0(0%) | 10(3.3%) |
| Efficient ICT infrastructure is a requisite for the e-commerce. | 300(100%) | 0(0%) | 0(0%) |
| Your internet connection is fast and reliable | 175(58.4%) | 47(15.7%) | 78(26%) |
| Network coverage affect the decision to adopt e-commerce | 290(96.6%) | 10(3.3%) | 0(0%) |

The results show that agreed with the statements: Availability of internet providers affects the decision to adopt e-commerce (96%), efficient ICT infrastructure is a requisite for the e-commerce (100%), internet connection is fast and reliable (58.4%) and also a significant number (96.6%)agreed that network coverage affect the decision to adopt e-commerce.

4.6 The influence of cyber insecurity on adoption of e-commerce

In this section the research sought to find out responses on the issue of cyber security. The table below shows the most common crime in ICT as identified by the respondents.

Table 13: Common crimes in ICT as identified by the respondents

| | Frequency | Percentage |
|--------------------------------|------------------|-------------------|
| Software piracy | 45 | 15.0 |
| Computer virus transmitters | 44 | 14.7 |
| Get “quick rich” Calls and SMS | 55 | 18.3 |
| Stealing of bank details | 11 | 3.7 |
| ATM frauds | 145 | 48.3 |
| Total | 300 | 100.0 |

Table 13 shows that the majority of respondents (48.3%) have experienced or heard of ATM frauds, 18.3% get “quick rick” calls and SMS, 14.7% have experienced computer virus problems. While 15% have heard of software piracy. Further the researcher requested the respondents to agree or disagree with the statements on the influence of cyber insecurity. Their responses are shown in table 14 below.

Table 14: Statement on the influence of cyber insecurity.

| Statements | Agree | Reserved opinion | Disagree |
|--|--------------|-------------------------|-----------------|
| Some people do not trust the internet | 274(91.3%) | 26(8.7%) | 0(0%) |
| Credit card details can be stolen | 270(90%) | 13(4.3%) | 17(5.7%) |
| Some customers worry about sending information on the net | 300(100%) | 0(0%) | 0(0%) |
| Some people complain of being conned on the net or through phone | 296(98.6%) | 4(1.3%) | 0(0%) |
| Cyber law have been put in place by the government | 132(44%) | 64(21.3%) | 104(34.7%) |
| The government is doing enough to curb cyber crime | 111(37%) | 3(1%) | 186(62%) |

Data shows that majority (91.3%) agreed that some people do not trust the internet. Another 90% of the respondents agreed that credit card details can be stolen on the net, unless the e-commerce is secure. Surprisingly all respondents agreed that some customers worry about sending

information on the net. While 34% disagreed that cyber law have been put in place by the government. On the other hand 62% of the respondents disagreed that the government is doing enough to curb cyber crime in the country.

4.7 Regression analysis on the factors affecting adoption of e-commerce (Model)

Regression analysis is a statistical process that aims to establish the degree of relationship between variables. It is basically it helps one to understand how a typical value of the dependent variable if any one of the independent variables changes. In this case, adoption of e-commerce was used as the dependent variable and independent variables included knowledge and skills, cost and access, ICT infrastructure and cyber security. The results of multiple regression analysis were presented and interpreted in the table 4.14 below. The table reveals that adoption of e-commerce and the variables affecting it are significantly correlated with the coefficient $R= 0.20$ with the coefficient of determination $R^2= 0.041$ at a significant level of $p=0.0001$. The results shows that the adoption of e-commerce for the exhibition stalls owners can be explained by the changes in the cost and access to ICT, knowledge and skills in ICT, ICT infrastructure and cyber crime. In addition it gives the summarized ANOVA (analysis of variance) table and F statistic, which reveals the value of F (9.134) is significant at the 0.0001 level which is less than 0.05. This indicates that all or at least one of independent variables (Cost and Access, knowledge and skills, ICT infrastructure and cyber crime) is a significant predictor of the dependent variable (adoption of ICT).

Table 15: Regression model- Adoption of e-commerce as dependent variable

Model summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
|--|----------------------|-----------------------------|-------------------|----------------------------|--------|--------------------|
| 1 | .203 ^a | .041 | .028 | .69020 | | |
| ANOVA ^b | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 23.444 | 4 | 5.861 | 9.134 | .0001 ^a |
| | Residual | 189.286 | 295 | .642 | | |
| | Total | 212.730 | 299 | | | |
| Coefficients ^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.750 | .570 | | 6.574 | .000 |
| | Knowledge and skills | -0.548 | .111 | -.319 | -4.947 | .000 |
| | Cost and access | 0.089 | .137 | .046 | .649 | .517 |
| | ICT Infrastructure | 0.242 | .146 | .140 | 1.652 | .100 |
| | Cyber security | 0.234 | .090 | .162 | 2.599 | .010 |
| a. Predictors: (Constant), Cyber security, Cost and access, Knowledge and skills, ICT Infrastructure | | | | | | |
| b. Dependent Variable: Adoption of e-commerce | | | | | | |

The evaluation of the regression equation to estimate the contribution of each independent variables in the study to the adoption of e-commerce as the dependent variable. Looking at the coefficients table, the coefficient for the constant is the value of Y-intercept. These value calculates the possible adoption of e-commerce. The equation from this output is in the form of :

$$Y = 3.750 - 0.548x_1 + 0.089x_2 + 0.242x_3 + 0.234x_4$$

Where,

Y represents Adoption of E-commerce;

X₁ is knowledge and skills;

X₂ is cost and access to ICT;

X₃ is ICT infrastructure and;

X₄ is Cyber security

The relative importance of association of each independent variable was different. This was evaluated and interpreted by the coefficients of correlation (B). **Knowledge and skills** negatively affect adoption of e-commerce with $\beta = -0.548$ at significant level 0.000. This indicates that the value of Y (adoption of e-commerce) will change if x₁ changes by 1 unit. That is 0.548, so if knowledge and skills goes up by 1, adoption of e-commerce is predicted to go down by 0.548 though significant.

Cost and access to ICT positively affect adoption of e-commerce with $\beta = 0.889$ at significant level 0.517. This indicates that the value of Y (adoption of e-commerce) will change if x_2 changes by 1 unit. That is 0.889, so if cost and access to ICT goes up by 1, adoption of e-commerce is predicted to go up by 0.889.

ICT infrastructure is positively related to the adoption of e-commerce with $\beta = 0.242$ at significant level 0.100. This means that the value of Y (adoption of e-commerce) will change if x_3 changes by 1 unit. That is 0.242, so if ICT infrastructure goes up by 1, adoption of e-commerce is predicted to go up by 0.242.

Cyber security is positively correlated to the adoption of e-commerce with $\beta = 0.234$ at significant level 0.010. This indicates that the value of Y (adoption of e-commerce) will change if x_4 changes by 1 unit. That is 0.234, so if cyber security goes up by 1, adoption of e-commerce is predicted to go up by 0.234.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS OF THE FINDINGS

5.1 Introduction

The main purpose of this study was to establish the factors that affect the adoption of electronic commerce by SME in Nairobi's CBD. In the preceding chapter, effort was made to analyze and report the results of the collected data. This chapter is divided into three sections. In the first section the summary of the findings are given, in the second section conclusions and implications of the findings are given and in the third section, suggestions for further research are made.

5.2 Summary of the study findings

Data was collected from a sample of 300 exhibition stall owners/entrepreneurs. The sample consisted of 73(51%) male and 72(49%) female. The respondent's age and academic qualification was presented in reference to gender. Most of the respondents were aged 21-25 years, male (23.3%) and female (26.3%). Surprisingly the youngest, 15-20 years were male. Majority of the respondents (60%) were degree holders. Diploma holders were 29.33% while the smallest number (10.67%) had gone up to secondary level.

On the adoption of e-commerce, the majority (75.7%) have adopted e-commerce. Out of the 73 respondents who didn't adopt e-commerce, 24% were planning to adopt e-commerce in future while 6% are not of the idea simple because some give reasons such like, "it is expensive to adopt e-commerce" "some said "they don't know how to use computers", some didn't trust the use of e-commerce because of the insecurity. Those who adopted were required to state ways

they apply e-commerce into their business. Most (80%) of the business stalls owners use internet to market their goods and services. It is followed by payments (27.7%). The majority (85%) agreed that e-commerce improves the performance of the business. While 8% of the respondents disagreed with the ideal. The minority (7%) were undecided. The results shows that, majority of the respondents (mean=4.213) thought that through e-commerce you get new customers. While insignificant number (mean=3.650) thought customers like to do shopping online which was ranked last. This might be attributed to the security reasons.

5.3 Discussion of findings

Of all of the stalls surveyed, have adopted the use of electronic commerce in their business transactions in Marketing, Payment and Email. However, it is noted from the findings that there is low use of electronic commerce in selling. This implies that there is still a lot of growth opportunities for SME's to utilize electronic commerce for marketing and selling their products. Knowledge and skills negatively affected the adoption of e-commerce. Majority of the respondents were trained in ICT but most of them at certificate level. This indicates that they are not adequately trained. This concurs with Spectrum (1997) who found out that most SME lack skills in the use of ICT. It is important for business to consider knowledge or skills of ICT which influences the adoption of ICT. The study found out that cost and access to ICT affected adoption of e-commerce by exhibition stalls. This concurs with Rachid and Al-Qirim(2010) who stated that financial, human and technology resources such as computer, telephone, cables among other play a very important role in the adoption of new technology. Although adoption of ICT is perceived to be important, the stall owners often do not have sufficient resource to adopt them as stated by Thong and Yap (1995)

The effect of infrastructure, broadband connections availability and reliability, and cost of telecommunication influence the adoption of electronic commerce. In addition, the creation of supply chains and good technological support and a sound infrastructure support the uptake of economic commerce. This concurred with Buruchara (2010) who stated that a well infrastructure is essential in the effective use of the internet for e-commerce but disagreed with him in that ICT infrastructure in Kenya is not developed. On the issue of Cyber security, there was a concern. Most people didn't trust the internet. Most of the customers worry about sending information on the net and that the government was doing very little to tackle this. This concurs with Cyber law Report of 2009 which stated that many African countries, Kenyan included lack effective cyber policies and laws. Lack of effective cyber crime laws and structures have hindered many enterprises from venturing to e-commerce.

5.4 Conclusions of the study

In conclusion the studied factors have been found to be interacting with the adoption of e-commerce by SME in Nairobi's CBD.

5.4.1 Influence of knowledge and skills on the adoption of e-commerce

Majority of the business have training in ICT. Most of them are trained up to certificate level. This shows that they are not adequately trained. It was found out that acquiring knowledge and skills plays a big role in the adoption of e-commerce by the enterprises. Training enables one to use and adopt e-commerce and that most people know how to use the computers. Regression analysis showed that the interaction between knowledge and skills and adoption of e-commerce was negative with $\beta=-0.548$ at significant level 0.000.

5.4.2 Influence of cost and access to ICT on the adoption of e-commerce

Majority of the businesses have access to internet, that they are able to access internet and use mobile phone. The challenge is that acquiring computer and access to internet is costly that is why we have other businesses who are not able to access internet. The cost of connectivity, maintenance and web design construction is too high. The coverage by internet service providers was found to be very good. Regression analysis found out that cost and access to ICT positively affect adoption of e-commerce with $\beta = 0.889$ at significant level 0.517.

5.4.3 Influence of ICT infrastructure on adoption of e-commerce

ICT infrastructure is rated to be good and the cost of internet connectivity is fair. Availability of internet providers affects the decision to adopt e-commerce. It was also found out that the connectivity speed of the internet was satisfactory. Regression model showed that ICT infrastructure is positively related to the adoption of e-commerce with $\beta = 0.242$ at significant level 0.100.

5.4.4 Influence of Cyber insecurity on adoption of e-commerce

The findings showed that the government has not put in place effective policies to fight cyber crimes. Some people do not trust the internet when it comes to transactions and giving out their details via the network. Most of the customers were worried about sending their details over the net due to criminal acts by the hackers. This has contributed to some businesses and customers not to adopt e-commerce. The regression model showed that positively correlated to the adoption

of e-commerce with $\beta = 0.234$ at significant level 0.010. The better cyber policies will lead to adoption of e-commerce.

5.7 Recommendations

5.7.1 Recommendations for policy makers

Electronic commerce plays a major role in the national and international economy. It is in this regard that the government should put in place an effective legal infrastructure and security measures. Security threats are serious issues that every one should be concerned about it. As much as most business in Kenya are aware of the cyber insecurity in the country they do not have the right legislative framework and an effective cyber crime policy to enforce it.

5.7.2 Recommendation for scholars

Scholars should come up with a theory or model that explain the interaction between other factors such as behavioural, social and organizational factors that can lead to the adoption of e-commerce. Come up with the model for the prediction of behavioural intention and attitude towards the use of ICT. Should also look at the other factors that influence business's decision on how and when to adopt e-commerce in their businesses.

5.7.3 Recommendations for SME practitioners

All enterprises need to clearly analyse and understand the contextual factors in their organisations in order to make the right decisions for e-commerce adoption in their firms. This is because different organisations have peculiar needs in relation to e-commerce and various prevailing circumstances in the SME interact differently with the industry and national factors.

Business owners need to be abreast with e-commerce developments and should not resist exploring new technological innovations for global business.

5.6 Suggestions for future research

- i. The study should be replicated in the other parts of the country to see if the results are consistent. This study was limited to SMEs in Nairobi's CBD. The findings are not generalizable, and there may be some regional differences from the respondents. Such potential differences should be explored in other cities in the country.
- ii. Further study should be carried out to investigate the role of government in curbing cyber crime through the policies put in place.
- iii. The field in e-commerce adoption is broad. As the technology continues to change and individuals and organizations become more familiar with its use, there is a need to further establish other factors that affect e-commerce adoption in other organizations.
- iv. The revelation of the socially-inclined e-commerce environment needs further investigation to reveal how social-technical features of e-commerce transactions emerge and exist in other context. Therefore, issues of culture, trust and how different regions embrace them, are other areas needing further investigation.

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APPENDICES

Appendix 1: Letter of Transmittal

Dear Respondent,

My name is Ngatia Rithari. I am a Master of Arts Candidate at the School of Continuing and Distant Education of University of Nairobi. I am undertaking a project towards a study entitled, “Factors affecting the adoption of electronic commerce by exhibition stalls businesses in Nairobi’s Central Business District.” The objective of this study is to provide an understanding of the various factors that hinder the adoption of e-commerce.

To assist in my research, I request that you spare some time to answer the questions in this questionnaire. Your responses will be treated with utmost confidentiality and used only for the intended purpose.

Sincerely,

Ngatia Rithari

P.O Box 67718-00200

Nairobi

ngats87@gmail.com

Appendix 2: Questionnaire

FACTORS AFFECTING ADOPTION OF E-COMMERCE BY EXHIBITION STALLS BUSINESSES IN NAIROBI'S CBD

INTRODUCTION

This questionnaire survey is divided into two sections, designated as Parts A and B. Part A ask for the respondents personal details Part B to E aims to establish the factors that influence the adaptation of E commerce by SMEs in Nairobi`s CBD. Please tick or fill the required information in the space provided. Your contribution will be kept confidential and only used for academic purpose.

PART A: DEMOGRAPHIC INFORMATION

1. Indicate your age in years: 15-20 [] 21-25 [] 26-30 [] 31-35[]
Above 35[]

2. Your gender: Male [] Female []

3. Your academic qualification
Degree []
Diploma []
Secondary []
Primary []

4. What do you sell in your stall
Electronics []
Clothes []
Movies/entertainment []

PART B: ADOPTION OF E-COMMERCE

1. a) Have you adopted e-commerce in your business?

Yes [] No []

b) If yes, in which ways do you use e-commerce in your business

Marketing []

Selling []

Payments []

Advertisement []

Emails []

Others (specify).....

c) If No, according to you will you adopt e-commerce in future? Yes [] No []

Give your reasons

.....

2. Adoption of E-commerce improves the performance of the business

Strong agree []

Agree []

Undecided []

Disagree []

Strongly Disagree []

3. Please tick appropriately on the given statements

| | STATEMENT | Strongly Agree | Agree | Reserved Opinion | Disagree | Strongly disagree |
|---|--------------------------------------|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| a | Products sell well over the internet | | | | | |

| | | | | | | |
|---|---|--|--|--|--|--|
| b | Customers like to do shopping online | | | | | |
| c | Through online, you are able sell within Nairobi and outside Nairobi. | | | | | |
| d | E-commerce enables you to sell outside Kenya | | | | | |
| f | Through E-commerce you get new customers | | | | | |
| g | E-commerce saves the business money | | | | | |

PART C: KNOWLEDGE AND SKILLS

1. Do you have any training in ICT
 - a. Yes
 - b. No
2. Level of ICT training
 - a. Certificate
 - b. Diploma
 - c. Degree
3. How long have you been using the internet
 - a. Over 5 years
 - b. 3-5 yrs
 - c. 1-3 yrs
4. Rank the state of e-commerce in Kenya
 - a. Very poor
 - b. Poor
 - c. Average
 - d. Good
 - e. Excellent

5. Please tick appropriately where necessary on the given statements

| | STATEMENT | Strongly Agree | Agree | Reserved Opinion | Disagree | Strongly Disagree |
|---|--|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| a | Training in ICT enable one to use and adopt e-commerce effectively | | | | | |
| b | Most of the customers know how to use the computer | | | | | |
| c | Experience in ICT is vital to the adoption of E-commerce | | | | | |
| d | There is no need to adopt e-commerce for the business. | | | | | |
| f | | | | | | |
| g | | | | | | |

PART D: COST AND ACCESS TO ICT

1. Do you have access to the internet
 - a. Yes
 - b. No
2. Do you access the internet on :
 - a. Mobile phone
 - b. Personal computer (Cyber)
3. Please tick appropriately where necessary on the given statements

| | STATEMENT | Strongly Agree | Agree | Reserved Opinion | Disagree | Strongly Disagree |
|---|---|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| a | The cost of computers and its accessories is high | | | | | |

| | | | | | | |
|---|---|--|--|--|--|--|
| b | The cost of internet accessibility and connectivity is high | | | | | |
| c | The cost of maintenance of the websites and computers is too high | | | | | |
| d | The availability of internet service providers in the country has enabled business to access internet | | | | | |

PART E: ICT INFRASTRUCTURE

1. Describe your internet as
 - a. Poor
 - b. Good
 - c. Very good
2. You would describe your internet connection as
 - a. Cheap
 - b. Fair
 - c. Expensive

3. Please tick appropriately where necessary on the given statements

| | STATEMENT | Strongly Agree | Agree | Reserved Opinion | Disagree | Strongly Agree |
|---|--|----------------|-------|------------------|----------|----------------|
| a | Availability of internet providers affects the decisions to adopt e-commerce | | | | | |
| b | Efficient ICT infrastructure is a requisite for the adoption of E-commerce | | | | | |
| c | Your internet connection is fast and reliable. | | | | | |

| | | | | | | |
|---|---|--|--|--|--|--|
| d | Network coverage affects the decision to adopt e-commerce | | | | | |
|---|---|--|--|--|--|--|

PART F: CYBER SECURITY

1. List down crime cases you have ever heard in the use of internet and phones in the country

.....

.....

.....

.....

.....

2. Please tick appropriately where necessary on the given statements

| | STATEMENT | Strongly Agree | Agree | Reserved Opinion | Disagree | Strongly Disagree |
|---|---|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| a | Some people do not trust the internet | | | | | |
| b | Credit card details can be stolen on the net, unless the E-commerce is secure | | | | | |
| c | Some customers worry about sending information on the net | | | | | |
| d | Some people complain of being conned on the net or through phone. | | | | | |
| f | Cyber law have been put in place by the government | | | | | |
| g | The government is doing enough to curb cyber crime in the country | | | | | |

3. In Your own opinion what do you think should be done to improve the state of e-commerce in Kenya?

.....

.....

.....

.....

.....

.....