

**E-COMMERCE ADOPTION AMONG SMALL AND MICRO
ENTERPRISES IN NAIROBI**

By

ATEMA VICTORIA

D61/65181/2013

SUPERVISOR

Dr. KATE LITONDO

**A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS
ADMINISTRATION(MBA), SCHOOL OF BUSINESS OF THE UNIVERSITY OF
NAIROBI**

OCTOBER 2014

DECLARATION

I declare that this research proposal is my original work and has never been submitted to any other university for award of a degree.

Signature.....Date

Atema Victoria

The proposal has been submitted for examination with approval as the University Supervisor.

Signature..... Date

Dr. Kate Litondo

Supervisor

DEDICATION

The research study is dedicated to my parents Mr. Benedict Atema and Mrs. Hellen Atema, my lovely sisters and brothers. May the Almighty God bless you.

ACKNOWLEDGEMENT

Firstly I am grateful to the Almighty God for seeing me through the entire course.

I acknowledge the support and guidance of my university supervisor Dr. Litondo for her guidance, support and dedication throughout the study.

Thirdly I extend my gratitude to my family, above all my parents Mr Benedict Atema and Mrs Hellen Atema and my brothers and sisters for the continued support and patience they have extended to me.

I am deeply grateful for my friends Isaac Chege, Eunice Fibi and Mwirigi Brenda for always encouraging me on the value of education. Through this support I was able to surpass with confidence.

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ABBREVIATIONS

1. SMEs - Small and Micro Enterprises.
2. ICT – Information and Communication Technology
3. EDI – Electronic Data Interchange
4. TAM – Technology Acceptance Model

ABSTRACT

Driven by the steady growth of internet users around the world, e-commerce has become a competitive strategy for most businesses. A study was conducted to determine the adoption of e-commerce among small and micro enterprises in Nairobi. The Specific Objectives of the study were: To establish the extent to which SMEs in Nairobi CBD is using E-commerce, to establish the benefits of e-commerce adoption by the SMEs, to determine the challenges affecting adoption of e-commerce by SMEs in Nairobi CBD and to establish the determinants of e-commerce among SMEs in Nairobi CBD.

The study adopted a descriptive research design where a sample of 60 respondents who were selected through stratified sampling. Primary data was collected from managers or owners of the SMEs by use of questionnaires. The data was analyzed and presented in tables and charts. A regression analysis was also done to establish the relationship between the determinants and the adoption of e-commerce.

The findings indicated that e-commerce has been adopted by a good number of SMEs. It was also establish that the use of e-commerce has its benefits as well as its challenges. From the findings the key benefits were the increased sales, reduced transaction cost and speeding up processes. While the key challenges being the slow internet speed, security and customer's preference to transact businesses offline.

It was established that there is a significant relationship between the determinants of e-commerce and the adoption of e-commerce. The study recommends that managers should undertake some training courses on e-commerce especially on website to enable them know how to effectively utilize all the resources to ensure the business has a competitive advantage. The study also recommends that the web developers to take concern when implementing the websites to capture other moderating factors like the age, level of education, and gender.

CHAPTER ONE: INTRODUCTION

1.1 Background

Nearly every capital city in Africa enjoys some level of internet access nowadays. However, there are still significant differences in the level of internet penetration across different regions in Africa; the growth of internet users around the world has greatly improved over the past few years. In 2013, the Communication Commission of Kenya (CCK) now the Communication Authority of Kenya, reported the number of internet users in Kenya to have grown to 21.2 million internet users. In Kenya, urban areas mobile and internet use is much higher than rural areas. The Mobile phone penetration in the country is at 72%. In urban areas, 72% are online, 95% have internet capable mobile phones and 31% have smart phones (Manyika et al., 2013) therefore proving the level of internet access.

The overwhelming popularity of the internet to a great extent can be attributed to phenomenal social media platforms such as face book, twitter, whatsapp applications amongst others. For this reason a significant number of enlightened entrepreneurs are promptly changing their business strategies in an effort to take advantage of the vast market brought about by the internet connections through the adoption of e-commerce. The number of Internet users around the world has been steadily growing and this growth has provided the thrust and the opportunities for global and regional e-commerce. While the situation has improved, with the e-commerce different characteristics of the local environment, both infrastructural and socio-economic, have created a significant level of variation in the acceptance and growth of e-commerce in different regions of the world (Lang, 2003).

1.1.1 Electronic Commerce

Electronic commerce (e-commerce) can be defined as any business transaction which includes the process of buying, selling, transferring or exchanging products, services, or information using electronic data transmission via the Internet (Grandon & Pearson, 2004). Crucial activities that are characteristic of e-commerce involve: - procurement, order entry, transaction processing, payment for goods and services, authentication, inventory control, order fulfillment, and

customer support. A good example of e-commerce in practice is when a consumer pays for online goods and services rendered using a credit card. Almost any product or service can be offered via e-commerce. These products and services range from books, music, financial services, ticketing services and entertainment services. Noteworthy is the fact that the successful adoption of electronic money (e-money) is one of the fundamental factors that has greatly revolutionized e-commerce in Kenya. Electronic money primarily involves the use of internet; computer networks and the digitally stored value to pay for online transactions hence sustain e-commerce. Examples of e-money are payment processors, digital currencies, bank deposits, direct deposits and electronic funds transfer (EFT) (Dillon, 2001).

E-commerce is categorized into four main business models. The Business to Business (B2B), Business to Consumer (B2C), Consumer to Consumer (C2C) and Consumer to Business (C2B) business models. Other business models are the Government to Customers and Customers to Government (Kalakota, 1997). Contrary to traditional consumer purchasing of goods and services which is the offsite transactions, e-commerce has some notable differences, such as the distance and impersonal nature of the online environment. E-commerce has brought ease in how information can be collected, data mined and used by multiple parties. In addition, there is a concern about the reliability of the underlying Internet and related infrastructure that Web retailers employ to interface with consumers (Salisbury et al., 2001).

E-commerce has a lot of its benefits to the developing countries. Some of which are: increase in sales, increase in customers, ability to operate in 24 hours seven days a week, instant processing of transactions, increased business reach, globalization, better price comparisons, improved delivery processes and ease of collecting recurring payments. The bottom line here is that e-commerce is beneficial not only to large and medium businesses but also to micro and small businesses. In addition, e-commerce improves small firm's ability to compete with larger companies and operate on an international scale. It is significantly easy to set up and the benefits come in almost instantly. Moving to e-commerce would be among the best decisions made in the small and macro businesses in Kenya. For this to happen, a number of factors need to be considered. These factors determine the fate and growth of the business (Turban et al., 2005).

The challenges of e-commerce to small businesses are due to the competitive pressures to invest in electronic commerce. In order to invest in it, companies need to understand how it is positioned to its competitors. There are various direct and indirect costs in expanding the small businesses, that includes the cost of realigning business processes both external and internal, training employees and partners and managing the global work force. There is still a challenge on the models of accessing the internet costs and profits; this is because there is a tendency to underestimate the associated cost and to overestimate the market size. Dealing with global customers who have widely social cultural and behavioral demographics is also a challenge to business people. To manage the global employees and managing compensation issues equitably in work forces spanning the countries boundaries (Schneider, 2011).

Nevertheless, there are various factors that influence the slow growth of e-commerce on small businesses. Some of the determinants are underdeveloped telecommunications, legal issues, technology infrastructures, economic and socio-cultural factors and public awareness which are hindering the growth of e-commerce of small businesses in developing countries (Molla & Licker, 2004). Currently the ICT policy draft is lacking in many areas and many participants concur that certain provisions need to be incorporated to support e-commerce and a proper frame work should also be put in place (Kolko et al., 2007).

E-commerce is a tool through which firms can attain competitive advantage. Therefore it is interesting to further explore how firms in particular the small and micro enterprises go about implementing e-commerce systems, and which path firms take from e-commerce idea generation up to realization of e-commerce success. Moreover, e-commerce implementation should be studied in context. In particular, the small and medium-sized enterprise context is interesting because it constitutes a major part of the economy and has been relatively unsuccessful in exploiting e-business (Eikebrokk & Olsen, 2007). Also, large firms are more likely to adopt new technology than small firms due to economies of scale. Implementing e-commerce requires different competencies in different sectors of the economy. For instance (Sadowski et al, 2002) mention that the adoption of e-business by small businesses is affected by industry characteristics and that the small businesses have been more negative to adopt Internet services and products. Moreover, firms in more information intensive industries and that operate globally

are more likely to have the need for e-commerce (Gibbs et al., 2002). This study will therefore investigate those SMEs that transact businesses online.

1.1.2 SMES in Kenya

SMEs are found in a wide array of business activities, ranging from the coffee shop at the corner, the internet café in a small town to a small sophisticated engineering or software firm selling in overseas markets. The SMEs could be in the formal or the informal economy. According to (Badrinath, 1997) the definition of SMEs varies from country to country. SMEs have been largely defined by the number of employees or the maximum revenue the business can attain. For instance, the micro enterprises have been defined as those employing less than 10 workers with annual turnovers of less than KES 500,000. Small enterprises are defined as those that employ between 10 and 50 workers with annual turnovers between KES 500,000 and KES 5 million (Ghouri et al, 2011).

SMEs contribute to employment and income generation. Nevertheless, there is need to get the potential in SMES in order to reduce poverty and develop the country. The SMEs therefore need to address some of the challenges such as having limited resources in terms of personal, finances, and knowledge pertaining to management, commercialization, or information technology. The challenges could be reduced by creating new innovative firms, graduating most informal businesses to formal and becoming competitive in the home base or location. (Conference, 2004). This can be achieved by implementing e-commerce since it may offer to them comparatively more advantages to find new customers and suppliers especially in markets they have not easily been able to reach before (Payne, 2007).

This research focuses on SMEs for two key reasons. They are important to economic development in developing countries. The second reason to focus on SME's is that they are in a very good position to adapt to new technology as compared to larger companies that can be slowed down by bureaucracy and stricter staffing hierarchies.

1.1.3 Central Business District (Nairobi)

Nairobi grew around the central business district. It takes a rectangular shape, around the Uhuru Highway, Haille Selasse Avenue, Moi Avenue and University Way. It includes many of

Nairobi's important buildings, including the City Hall and Parliament Building. The city square is also located within the perimeter. A central business district (CBD) is the commercial and often geographic heart of a city. It usually signified by a concentration of retail and office buildings.

The researcher chooses Nairobi CBD because it is part of the capital city, most of the people located in this region are literate and therefore detailed information will be provided that will enable the researcher to understand why the slow adoption of e-commerce. Also in Nairobi there are people from diverse places therefore limiting biasness.

1.2 Statement of the problem

Over the past few years e-commerce has emerged as an important component of business in various developing countries this is seen by the significant benefits it has. Many large organizations have embraced these and hence maintained a competitive advantage over the Micro and Small Enterprises (Kshertri, 2010). SMES are becoming important because they cover a large percentage of the business population in developing countries. The development of SMEs is on the program of many countries and nations across the globe this is because SMEs play a critical role in the economic development (Turban, 2006). Underlying this is the fact that most SMEs in developing countries cater for local markets and therefore rely heavily on local content and information (Badrinath, 1997).

The different challenges SMEs face are the business opportunities to be able to grow, financial support, business diversification and good business practices. Thus, the small and micro sized companies that have limited opportunities and strengths when trying to compete against the big multinational corporations may find a way to overcome the obstacles incurred by their small size through the multiple benefits that Electronic Commerce offers. The need for survival and competitiveness has pushed SMES to find ways to improve their performance in developing countries (Payne, 2007). When looking at inhibitors to e-commerce in SMEs, the ignorance about e-commerce benefits inhibits its adoption. Researchers agree with this position on e-commerce and the competitiveness of small and micro enterprises in Kenya stating that, knowledge and awareness about the benefits of e-commerce motivates small businesses to adopt increasingly e-commerce solutions (Castleman & Chin, 2002). Various changes which have occurred in many

countries including Kenya are due to the rapid developments in ICT especially the Internet (Looi, 2005). The research is therefore seeking to find out the factors that influence the SMEs to e-commerce.

According to (Mukhebi et al, 2007) , Mobile phones should be used to facilitate the transactions in order to improve efficiency and reduce high transaction costs ,since both the customers and businesses people have access to it. However, in his findings he realized that most of those who had phones majorly used the phones for communication. One of the researchers (Thatcher, 2005) focused her research only on Business to Business type of e-commerce; on her findings she stated that one aspect of Business to Business e-commerce is willingness to freely share information with other companies. On the other hand, Business to Business e-commerce systems automate processes that are traditionally done either face-to-face or between individuals who have an established relationship. Another researcher (Macharia, 2009) further indicated that there was partial efficient research into the adoption of E-commerce in small and micro enterprises and in particular SMEs in Kenya, This study, therefore, seeks to interrogate the factors affecting the adoption of e-commerce among SMEs in Nairobi CBD.

The application of theory to the understanding of SME e-commerce environments is still lacking especially in developing countries. According to (Castleman, 2009) the theory that explains e-commerce adoption in SMEs must embrace the assorted nature of SMEs and also understanding both the internal and external factors that inhibit the adoption of e-commerce. To address this gap, the study aims to advance the understanding of e-commerce adoption from the ‘inside’ of the organization, to bring to light the issues that can explain e-commerce adoption by SMEs. Ultimately, the study aims to contribute to empirical studies on the status of e-commerce adoption in the limited body of literature in the area, especially in the context of developing countries by answering the following research questions: To what extent are SMEs in the Nairobi CBD using e-commerce? What are the benefits of e-commerce adoption by SMEs? What challenges are SMEs facing in adopting e-commerce? And what are the determinants of e-commerce adoption among SMEs?

1.3 General Objective of the study

The general objective of the study was to investigate e-commerce adoption by SMEs in Nairobi CBD.

Specific Objectives of the study

- a) To establish the extent to which SMEs in Nairobi CBD are using E-commerce.
- b) To establish the benefits of e-commerce adoption by the SMEs.
- c) To determine the challenges affecting adoption of e-commerce by SMEs in Nairobi CBD.
- d) To establish the determinants of e-commerce among SMEs in Nairobi CBD.

1.4 Importance of the study

The business men will find this of importance indirectly because they will know how to effectively utilize the concept of E-commerce in order to generate better sales and increase on their market. The research will also help academicians in providing knowledge in respect to this study thus providing an understanding of the determinants of e-commerce in developing countries.

In Kenya, the government has embraced a policy on Information and Communications Technology named e-government. The study is expected to provide evidence and inputs for developing policy choices aimed at improving the governance for SMEs at the county levels as well as come up with initiatives such as funding, incentives and other initiatives that support the use and development of ecommerce and information technology.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter provides information from publications on e-commerce adoption, small and medium enterprises topics related to the research problem. It examined findings from various authors on e-commerce practices. The focus of this review has been guided by the research questions outlined in the previous chapter. The chapter begins with an understanding of e-commerce, discusses the potential benefits of e-commerce, discusses the challenges of e-commerce and reviews the e-commerce adoption factors in SMEs.

2.2 The concept of E-commerce

Online applications were first developed in early 1970s with innovations such as electronic transfer of funds whereby funds could be exchanged electronically. Nevertheless, these applications were limited to large corporations and a few brave small businesses (Turban & King, 2008). Then followed the electronic data interchange (EDI), which added other kinds of transaction processing and extended participation to many other types of businesses. In early 1990s, came the World Wide Web and more new online applications followed ranging from online direct sales to e-learning applications. The emphasis was on online application, Business to Consumer shifted to Business to Business in 1999 and later in 2000 other groups like e-government, e-learning and m-commerce. In 2005 social networks started to gain much attention too (Chan et al., 2001).

The definition of e-commerce found in literature is rather broad. Electronic Commerce refers to all value transactions involving the transfer of information, products and services or payments via electronic networks. Electronic commerce organizations redefine their products, processes and business models by using technology to change the way products are conceived, marketed and delivered (Kalakota, 1997). E-commerce relies heavily on technology such as internet marketing, electronic funds transfer, online transaction processing, supply chain management, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Electronic is generally presumed to indicate a medium or platform that incorporates the use of Information Communication Technologies (ICTs).

2.3 Categories of E-commerce

Observably, there are three core actors in this area i.e. businesses, individual consumers and governments. The three actors are used to categorize e-commerce into different categories (Turban et al, 2008).

Business to Business (B2B) essentially refers to business that is transacted between companies. According to (Turban et al, 2008) B2B is the largest form of e-commerce transaction based on the value as both the buyers and also the sellers are business organizations with the exemption of individual consumers from such transactions. Business to business models conduct e-commerce through limited electronic forms of communication called e-mail, facsimile or fax, and the emerging use of telephone calls over the Internet. Some companies attempt using e-mail and fax for unsolicited ads to consumers and other business prospects. An increasing number of business Web sites offer e-mail newsletters for subscribers (Mahadavan, 2000). Business-to-Business Buying and Selling has enabled many companies to sell products to a variety of companies and have discovered that the Web is not only an every time showcase for their products but a quick way to reach the right people in a company (Van *et al.*, 2003).

Business to Consumer (B2C) refers to businesses or transactions involving businesses and consumers in which the business sells directly to the consumer. The platform for this type of E-Commerce transactions could be for transaction purposes or relationship and brand building, with the main purpose of changing consumer attitude by getting more patronage for the products and services. An excellent example is amazon.com (Andam, 2003).

Nonetheless, *Consumer to Business* is sometimes known as Customer to Business. This e-commerce model involves individual customers offering to sell products and services to companies who are prepared to purchase them. Consumer-to-business (C2B) transactions involve reverse auctions, which empower the consumer to drive transactions (Andam, 2003).

Lastly, *Consumer to Consumer* is a business model that facilitates an environment where customers can trade with each other (Rayport, 2007). Two implementations of customer-to-customer markets are auctions and classifieds a form of advertising which is particularly common in newspapers, online and other periodicals which may be sold or distributed free of charge). Customer-to-customer marketing has soared in popularity with the arrival of the

internet, as companies such as eBay, OLX, Craigslist and other sites have fostered greater interaction between customers. The social networking sites like Facebook, Twitter, My Space not to mention but a few also fall into this category. The focus of this study will be on online transactions using the B2B, B2C and C2B models.

2.3.1 Benefits of e-commerce

Business men and customers need to be aware on the benefits of e-commerce; if people are not educated they tend to have negative perception towards change. If most SMEs are well aware of the benefits of online selling and purchasing then they will easily adapt to it and thus improve in the economy (Kalakota, 1997).

One of the benefits of e-commerce is an *International marketplace*. What used to be a single physical marketplace located in a geographical area has now become a borderless marketplace including national and international markets. By becoming e-commerce enabled, businesses now have access to people all around the world (Schneider, 2011). In effect all e-commerce businesses have become virtual multinational corporations. E-commerce creates more business Connections especially from different locations of the world. Enables people in developing countries and rural areas to enjoy and access products, services, information and other people which otherwise would not be so easily available to them.

E-commerce *increases sales and reduces the operational cost*. The cost of creating, processing, distributing, storing and retrieving paper-based information has decreased. The sales then increases due to the large market place the business will be able to cover. Furthermore electronic commerce increases purchasing opportunities for the buyer. Businesses can use electronic commerce to identify new suppliers and business partners. Electronic commerce increases the speed and accuracy with which businesses can exchange information, which reduces costs on both sides of transactions. Companies are reducing their costs of handling sales inquiries, providing price quotes, and determining product availability by using electronic commerce in their sales support and order-taking processes (Schneider, 2011).

Furthermore *digitization of products* and processes has been enabled by e-commerce. Particularly in the case of software and music/video products, which can be downloaded or e-mailed directly to customers via the internet in digital or electronically. Online purchasing offers

improved delivery processes. This can range from the immediate delivery of digitized or electronic goods such as software or audio-visual files by downloading via the Internet, to the on-line tracking of the progress of packages being delivered by mail or courier (Tasabehji, 2003).

Moreover flexible working hours and practices come with adopting to e-commerce. E-commerce businesses can be reached 24 hours 7 days a week. Businesses can be contacted by customers or suppliers at any time. E-commerce enables customers to shop or conduct other transactions 24 hours a day, all year round from almost any location for example, checking balances, making payments, obtaining travel and other information (Rayport, 2007). More flexible working practices come with adapting to E-commerce. This enhances the quality of life for many people in society thus enabling them to work from home. Not only is this more convenient and provides happier and less stressful working environments, it also potentially reduces environmental pollution as fewer people have to travel to work regularly (Kalakota, 1997).

2.3.2 Challenges of e-commerce

One of the challenges of e-commerce is the rapidly *evolving and changing technology*. This is a major challenge of e-commerce businesses, so there is always a feeling of trying to ‘catch up’ and not be left behind. Businesses are under pressure to innovate and develop business models to exploit the new opportunities which sometimes leads to strategies detrimental to the organization. The ease with which business models can be copied and emulated over the Internet increases that pressure and curtails longer-term competitive advantage (Rayport, 2007).

According to (Schneider, 2011) there are problems with *compatibility of older and ‘newer’ technology*. There are problems where older business systems cannot communicate with web based and Internet infrastructures, leading to some organizations running almost two independent systems where data cannot be shared. This often leads to having to invest in new systems or an infrastructure, which bridges the different systems. In both cases this is both financially costly as well as disruptive to the efficient running of organizations.

Additionally, Physical contact and *relationships are replaced by electronic processes*. Customers are unable to touch and feel goods being sold on-line or gauge voices and reactions of human beings. There is a potential danger that there will be an increasing the social divide between technical haves and have-nots – so people who do not have technical skills become unable to

secure better-paid jobs and could form an underclass with potentially dangerous implications for social stability (Jarvenpaa, 1997).

Finally, some businesses view this as a great *resistance from the labor*, those who see IT as something that will increase unemployment and as such, they are not willing to embrace it. They never understood the fact that while IT could eliminate some Jobs, it invariably creates some new ones. Therefore the businesses men need to be impacted with knowledge to enable them see how e-commerce will be beneficial to them. The reality of the fact is that the world has become digital and any business that does not embrace it might lose out ultimately (Payne, 2007).

2.3.3 Determinants of e commerce Adoption

The factors leading to the slow growth of e-commerce is categorized into four main groups as follows: The economic, technical, social and legal (Grandon, 2004). He argues that those who perceive e-commerce as adding strategic value to the firm have a positive attitude toward its adoption

Economic Dimension: This is the considerations in E-commerce that justify the cost of project, number of buyers and sellers and their access to the internet and issues of upgrading. Cost justification: cost of developing is high. Mistakes due to inadequate experience, increases the cost. Intangible factors like improved customer service are hard to quantify thus a challenge to give an analysis on its benefits. These cost differences increases uncertainty and reduces consumer perception of control over their online transaction thus imposes an obstacle in adoption of e-commerce. The low costs of goods online was attributed to the fact that e-commerce makes the cost of doing business a lot cheaper by driving down overhead and inventory costs, through increased automation and reduced processing time. Additionally, labor costs of creating, processing, distributing, storing, and retrieval of paper based information, identification and negotiation with potential customers reduced significantly (Tasabehji, 2003).

Telecommunication infrastructure is also part of the economic dimension. Infrastructure to support potential electronic commerce is an important factor that would affect the adoption of e-commerce. Kenya will need to revamp its infrastructure in order to support potential electronic commerce. Since e-commerce depends on electronic mediated connection it is therefore a major impediment to its growth. E-commerce success relies heavily on a number of technology

infrastructures. Firstly, telecommunication infrastructures are required to connect various regions and parties within a country and across countries (Molla, 2005). The cost of accessing the infrastructures also influences the growth of e-commerce. E-commerce also relies on efficient logistic infrastructures within a country. Its growth further requires the establishment of reliable and secure payment infrastructures to avoid frauds and other illegal actions. The overall technology infrastructure development of a country relies heavily on the economic and geographical conditions of the country.

The Technical dimension considers security as a major concern in the adoption of e-commerce. Customers need to feel that the information they provide to the web is secure. Hackers and crackers lower the confidence of customers. Unfortunately the security is rarely taken to consideration while implementing e-commerce. Customers hesitate to disclose confidential data for example that are secure like credit cards number. The customers continue to question if e-commerce offers sufficient safe guard to protect their privacy or money from being stolen like having companies who use cookies to collect information about an individual. And also less resources is dedicated to people working on cyber-crimes (Grandon, 2004). Reliability is another factor under technical dimension where by the network infrastructure of systems has to be continuously upgraded and fine-tuned. It helps in vulnerability of sites to denial of service attacks. This will help in the gaining of confidence of e-commerce Systems.

Social Dimension is another dimension that needs to be considered (Grandon, 2004). Cultural diversity is customers' needs that are to be considered in designing electronic commerce sites (Schneider, 2011). Implementing this has not been an easy task whereby different customers' cultural preferences are met. The few that are met require additional costs involve, for example translation of language. In traditional environment trust is generated quickly from either previous experience, from referrals, through transparent infrastructures. National culture refers to the idea that a group of people will feel, think and react similarly in a given context.(R. Harris, 1999), Anxiety and involvement: considered culture to play an important role in determining not only whether organizations in a particular country adopt a certain technology but the degree to which it is accepted and the ways in which it is used.

A lack of awareness is another factor under the social dimension. Inadequate information of the use and potential benefits of ICT can hinder the growth of e-commerce (Molla, 2005). In some developing countries, many people are only aware of limited e-commerce applications such as chat, email and browsing websites. As a result, many organizations have not implemented e-commerce in their organization because they have not been sensitized on the application that fits to their business. Knowledge would fasten the adoption of e-commerce and hence economic development. A higher level of appreciation of ICT and e-commerce principles by the business men and women will directly influence considerations for further e-commerce uptake in the business. Developed countries have a better knowledge of ICT than those in developing countries (Eriksson et al., 2008). In most cases, especially the developing countries complained about the cost of technology for e-commerce set-up yet they have not explored other inexpensive ways of accessing global markets, such as open source software, short message service (SMS) facilities and other new generations of ICT (Scupola, 2010).

Legal Dimension involves cybercrime and Intellectual property. Unlike the traditional media, it is easier to replicate, transmit or alter a document this is because no one controls or owns the World Wide Web and, given the global infrastructure, it is difficult to police the content (Tasabehji, 2003). Laws are necessary to protect an individual and the SMEs market. There are specific issues regarding the intellectual property and right to privacy and security. The legal frame work deals with the regulation of e-Commerce as it relates to trading practices in many diverse communities and practices that have long existed before the advent of e-Commerce. Taxation is of importance for most developing countries because domestic taxes, import and export duties are major revenue sources for the government. However, this could be very contentious when all aspects of the transaction have taken place in a digitalized format and there is no physical movement of goods that will pass through recognized customs and domestic tax point.

2.4 E-commerce Adoption Theories and SMEs

In addition, the technology acceptance model (TAM) developed by (R. Harris, 1999), postulates that the potential user of e-commerce must not only be convinced of the relevant advantages of e-commerce but also have a positive attitude towards it. from a regional perspective, (Dzidonu,

2010) fronted that Africa should incorporate the use of ICTs and other new technologies for there to be a speedy realization of its developmental agenda.

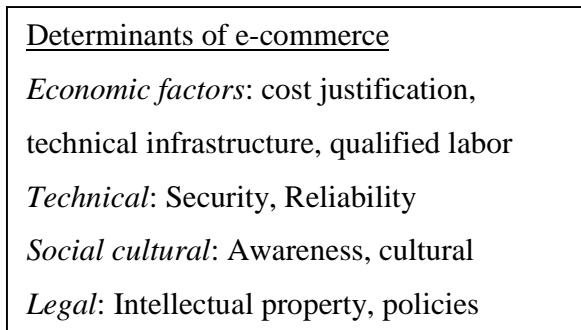
Inspired by earlier studies in diffusion research, the Diffusion of Innovation Theory (DIT), proposed by (Rogers, 2003), is often cited as one of the key proponents of adoption and diffusion in literature. Diffusion is ‘the process by which an innovation is communicated through various channels over time among the members of the social system’ while Adoption is ‘a decision to make full use of an innovation as the best course of action.’ He also categorized the individual innovativeness from earliest adopters to laggards which therefore will help the researcher to know the rate of adoption of most SMEs.

According to studies done by (Wamuyu & Maharaj, 2011) most technology adoptions are based on individual and not organizations since the SMEs are managed by their owners. (Mureithi, 2000) found that Internet access was majorly distributed in urban areas thus limiting the growth of the online businesses to expand nationally, low awareness and lack of distribution infrastructure was also discussed in his study. A majority of SMEs would decide to implement e-commerce if the level of adoption in the industry was high enough (Castleman & Chin, 2002). E-commerce adopters do so to keep up with the times and with shifts in industry practices. This is consistent with the theory of critical mass, which states that adoption in an industry would be self-sustaining once a certain level of adoption is reached (Markus, 1987). Another reason to adopt e-commerce is for SMEs to gain a strategic edge over competitors.

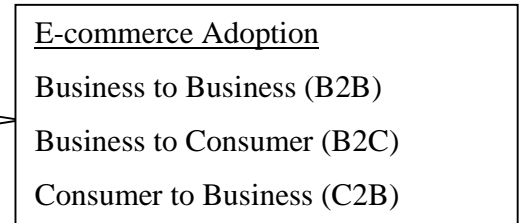
2.5 Conceptual framework

The conceptual framework below has illustrated the relationship between independent variables on one hand and the dependent variables on the other hand. The adoption of electronic commerce by the small and micro enterprises is the dependent variable while the values of the independent variable are technical, socio-cultural, economical and legal factors.

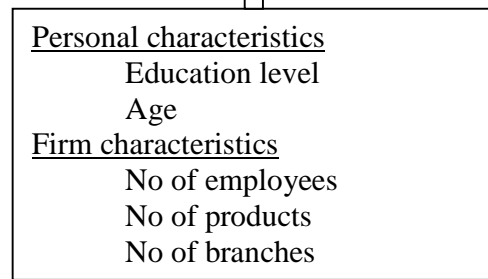
Independent Variable



Dependent Variable



Moderating Variable



2.6 Summary of the Literature Review

E-commerce constitutes a very important ICT tool that has the potential of improving the SMEs across the country. The literature has shown the benefits accrued from adoption of e-commerce. The literature has expounded in detail the challenges and determinants that limit the adoption of e-commerce. The literature reviewed has acknowledged the few studies carried out by different researchers on the factors that affect the growth of e-commerce. The conceptual view then summarizes the relationship among the variables that is, the dependent, independent and moderating variable. Since the studies done were few and basing on the research gaps discussed there was need therefore to conduct a study to establish the factors that affect the growth of e-commerce among SMEs in Nairobi CBD.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The purpose of the study was to analyze the slow growth of E-commerce especially in the business to consumer model. The chapter focused on the research methods to use. It included the research design, target population, sampling design, Data collection methods and techniques for data analysis.

3.2 Research Design

In view of the nature of study, descriptive research design was selected as the most suitable approach. The researcher came up with descriptive statistics that assisted in explaining the relationship that existed among the variables (Cooper, 2008).

3.3 The Population

The researcher only considered the formal micro and small enterprises in Nairobi CBD. That is to say, SMEs that are registered with the government ministries or other registration bodies. The population of this study comprised of 600 SMEs operating in Nairobi Central District as per (Survey, 1999).

3.4 Study Sample

The researcher conducted sampling among the SMEs in Nairobi Central Business District. This is because the population was divided into strata which include manufacturing, retail, technologies, services and wholesale. According to (Mugenda, 2003) a sample size of between 10% and 30% is a good representative of the target population. Therefore, the researcher selected a sample size of 10% which resulted to a sample size of 60 SMEs.

TYPE OF SMEs	TARGET POPULATION	SAMPLE SIZE (10%)
Wholesale	110	11
Retail	170	17
Services	240	24
Light Manufacturing	80	8

Author (2009)

3.4 Data Collection

Primary data was gathered by the researcher. The primary data was collected through questionnaires that were administered by drop and pick later method. The questionnaires were directed to the owner or manager of the business. It contained 2 parts, the first section had the bio data of the respondents, and the second section contained the questions on the benefits, challenges and determinants of e-commerce.

3.5 Data Analysis

The Data collected was sorted and analyzed using statistical analysis. The researcher proposes to use the statistical package for social sciences (SPSS) software to analyze the efficiency and effectiveness of the data in details.

Descriptive statistics was used which include mean and standard deviation for objective a, b and c and the findings will be summarized in tables and charts. Frequencies and percentages were used to analyze the extent to which SMEs in Nairobi CBD were using e-commerce. Objective d will apply inferential statistics: The following regression model was used.

$$Y=a_0+X_1a_1+X_2a_2+X_3a_3 +e$$

Whereby:

Y= E-commerce Adoption

X₁=Drivers of E-commerce

X₂=Personal Characteristics

X₃= Firm Characteristics

a₀=constant

a₁,a₂ and a₃ are parameter for estimation

e = error term

CHAPTER FOUR: DATA ANALYSIS FINDINGS AND INTERPRETATIONS

4.1 Data Analysis and Discussion

The data collected from this study was edited for completeness and consistency, coded and keyed into statistical tools for analysis. The data was then analyzed using statistical techniques of analysis such as the mean, frequencies, and percentages to determine the proportion of respondents for each of the strategic value indicators. The findings were presented through summarized figures and tables. The results of the study were based on general objective which was to investigate e-commerce adoption by SMEs in Nairobi Central Business District.

4.2 Response rate

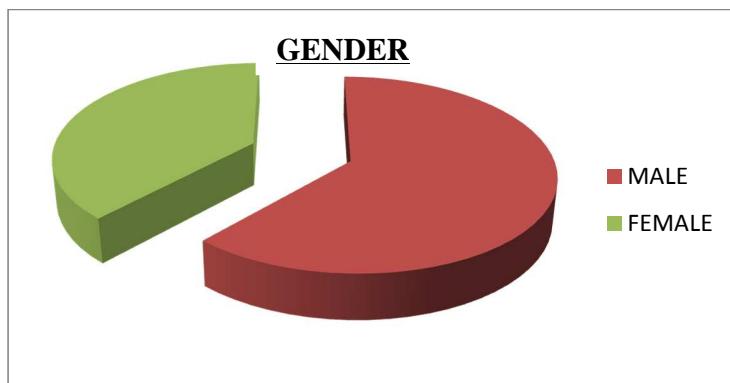
The study targeted to sample 60 respondents in collecting data from the different small and micro enterprises. From the study 55 out of 60 sampled respondents filled in and the questionnaires making it 91.7% response rate (table 4.1) which is above the response rate threshold (Mugenda and Mugenda, 2003) hence the sample was sufficient.

4.3 Bio Data

4.3.1 Gender of Respondents

The study sought to find out the gender of each respondent. 61.8% of the respondents were male and the remaining 38.2% of them were female. This implies that majority of the SMEs in Nairobi are owned and managed by men.

Figure 4.1: Gender of Respondents



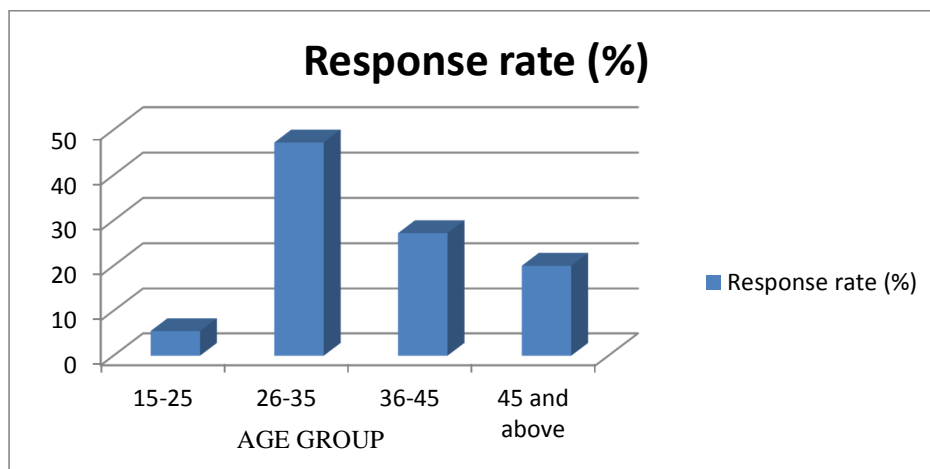
4.3.2 Age Distribution

According to the results of the study 47.2% of the respondents were aged between 26-35 years. These might be perceived by the varied tolerance levels for risk across the age groups; the youth tend to take more risk in terms of starting businesses and taking debts and being innovative.

Table 4.1: Age of Respondents

AGE	Response	Response rate (%)
15-25	3	5.5
26-35	26	47.2
36-45	15	27.2
45 and above	11	20

Figure 4.2: Age of Respondents



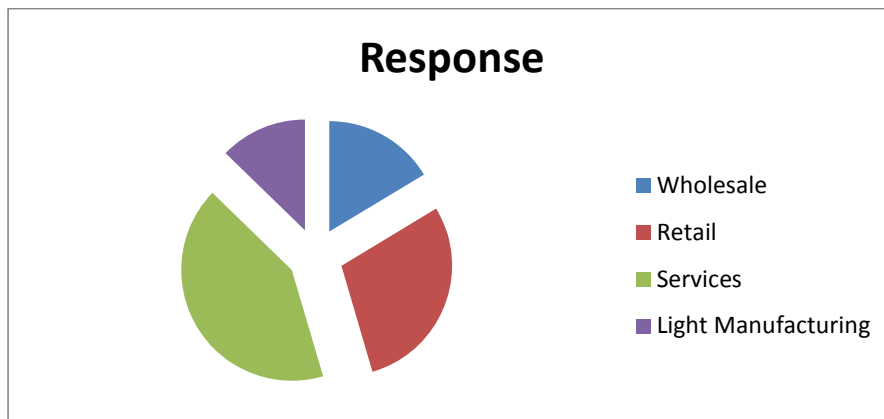
Nature of SMEs

Table 4.2: Nature of the firm

Firm Size	Sample	Response	Response rate (%)
Wholesale	11	9	81.8
Retail	17	16	94.1
Services	24	23	95.8
Light Manufacturing	8	7	87.5

On the categories done by the researcher that is the manufacturing, wholesale, retail and services, the response rate from the service sector was 95.1% this could be because it is easier to start up business in the service sector as compared to other areas.

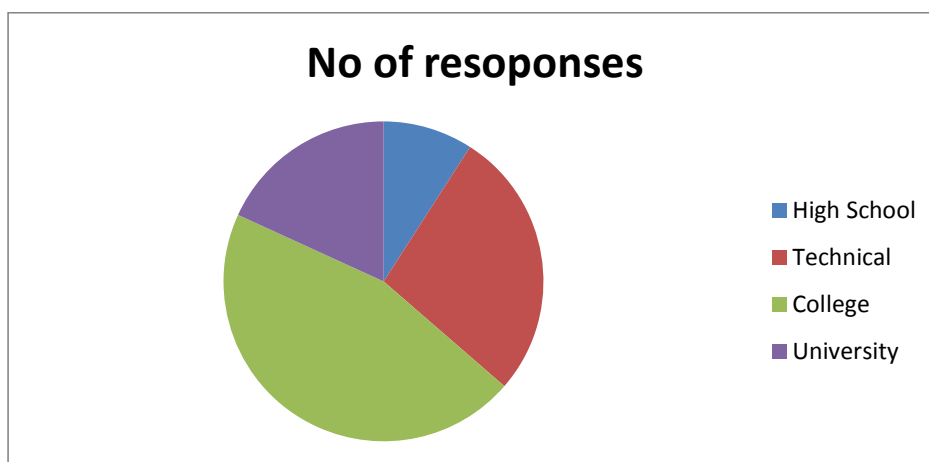
Figure 4.3: Nature of the firm



4.3.4. Level of Education.

Data was collected to determine the level of education attained. 58% of them had reached college level. This indicated that the importance of the owner/ manager's level of education in conducting business.

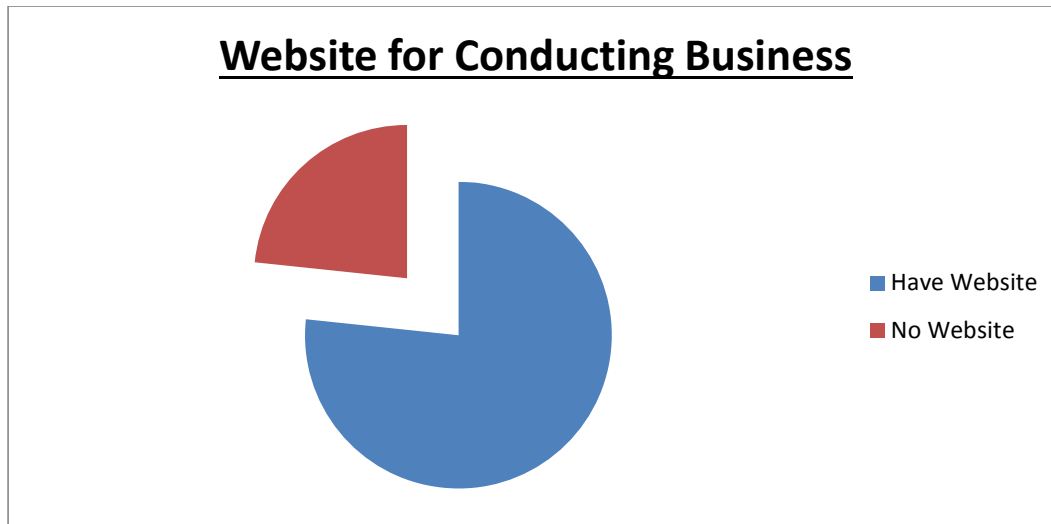
Figure 4.4: Level of Education



4.3.5 Use of website

The respondents further indicated whether they used website in their business. 68.3% stated that they do have a website, 21.7% did not have.

Figure 4.5: Number of SMEs who have websites



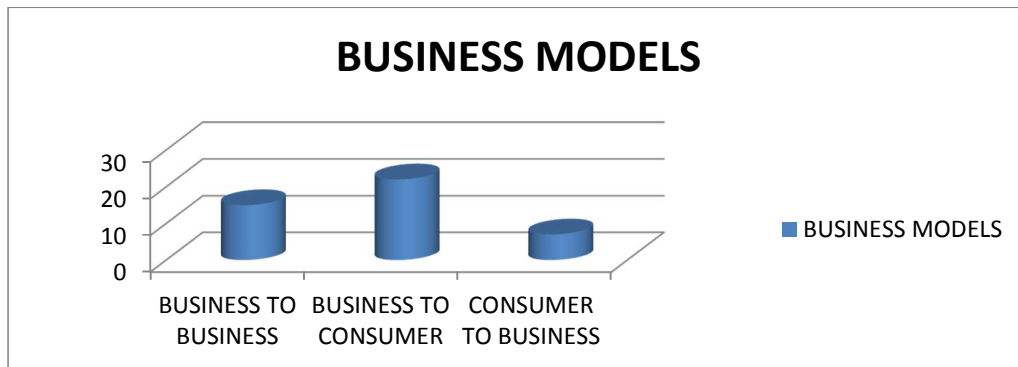
4.3.6 Website usage

Table 4.3: Different business models

Business Transaction Models	Frequency
Business to Business	15
Business to Consumer	22
Consumer to Business	7

From the 38 respondents that had websites the researcher also found out that majority of them used the Business to Consumer type of model followed by Business to Business and lastly Consumer to Business type of business. The Business to Consumer was largely used because most SMEs target the end users who are the customers and therefore business to consumer would enable them reach a larger market.

Figure 4.6: Number of SMEs conducting E-commerce

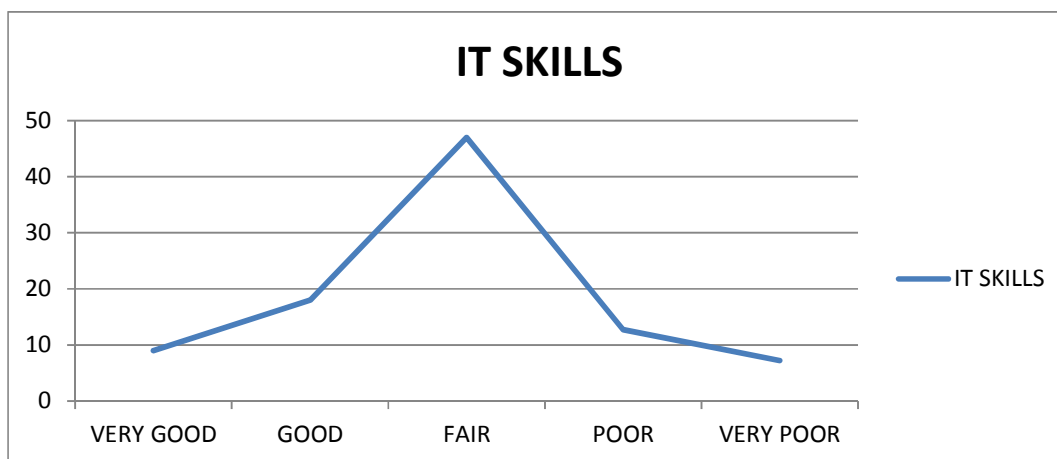


4.4 E-commerce Adoption

4.4.1 Level of IT skills

IT Level	Frequency	Percentage
Very Good	5	9.1
Good	12	21.8
Fair	26	47.3
Poor	7	12.7
Very Poor	5	9.1

Figure 4.7: Level of IT Skills



In this section the study sought to establish whether the managers or owners of the small and micro enterprises were computer literate. The study findings stated that most of the managers'

level of information technology was fair, this is seen by the 47.3% showing direct relationship with the websites adoption indicated by Figure 4.5.

4.4.2 Benefits of E-commerce

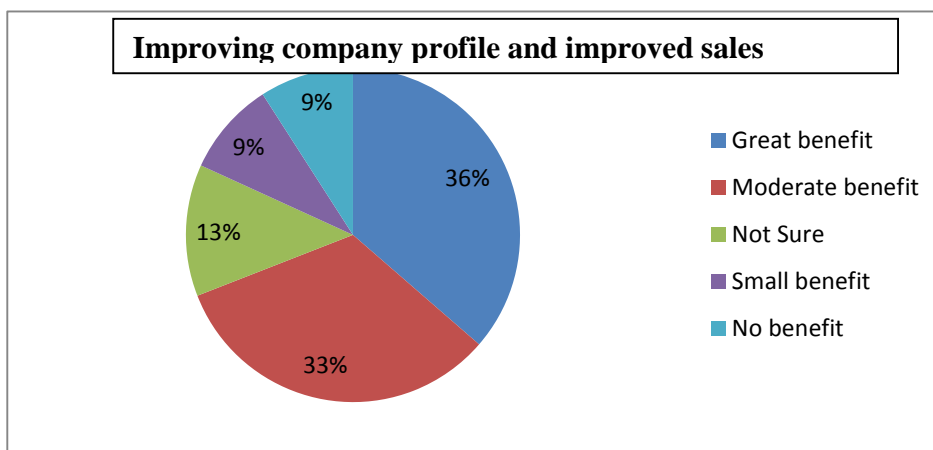
In this section the researcher sought to determine from the respondent the extent to which e-commerce was beneficial to SMEs. The respondents were required to indicate the frequency at which e-commerce was beneficial to their business based on a scale of 1-5, where by 1-great benefit, 2-Moderate benefit, 3-Not sure, 4-small benefit and 5-no benefit. The analyses done were as follows:

Table 4.5: Improving company profile and increased sales

Response	Frequency	Percentage
Great benefit	20	36.4
Moderate benefit	18	32.7
Not Sure	7	12.7
Small benefit	5	9.1
No benefit	5	9.1
Total	55	100.0

As shown in the table majority of the respondents representing 36.4% of the total number, strongly agreed that e-commerce improves the company profile as well as increases sales. Majority of the respondents stated that since more people were able to view their website their sales increased

Figure 4.8: Improving company profile



More Enquiries

The researcher also sought to determine the extent to which respondents agreed that e-commerce generated more enquiries. 34.5% reported that adoption of e-commerce brought more enquiries to their business with only 16.4% of the respondents refuting this claim. From the study findings show that despite the respondents agree to this they do not strongly agree, meaning the enquiries are not us much

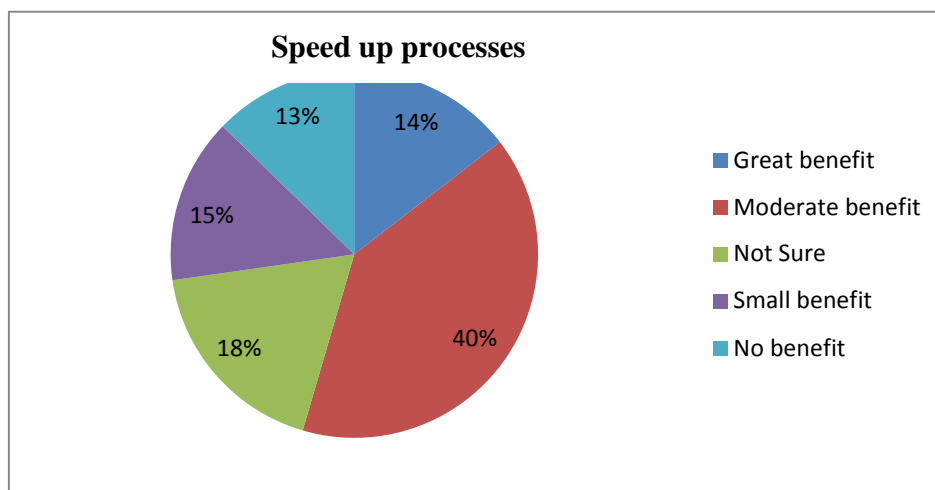
Table 4.6: More Enquiries

Response	Frequency	Percentage
Great benefit	2	3.6
Moderate benefit	19	34.5
Not Sure	15	27.3
Small benefit	10	18.2
No benefit	9	16.4
Total	55	100.0

Speeding up process

The study sought to know from the respondents whether the adoption of e-commerce lead to increased efficiency through speeding up processes and 40% of the respondents which represents the highest number of the respondents from the samples population reported that they benefited moderately. This is because the information on the business products or services can be viewed by customers via the website and they can make enquiries through the same.

Figure 4.9: Speeding up process



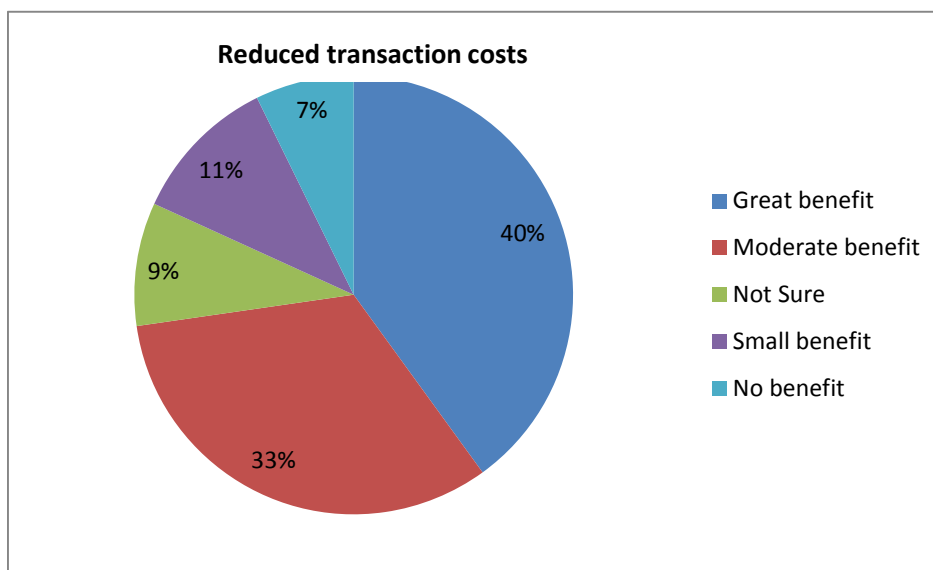
Reduced Transaction Cost

This research sought to establish from the respondents whether the significant reduction of transaction, marketing cost and operating costs are benefits derived from the adoption of e-commerce by their business. 40% of the respondents stated that e-commerce reduced the transaction cost.

Table 4.8: Reduced transaction Cost

Response	Frequency	Percentage
Great benefit	22	40.0
Moderate benefit	18	32.7
Not Sure	5	9.1
Small benefit	6	10.9
No benefit	4	7.3
Total	55	100

Figure 4.11: Reduced transaction Cost



24 hours Availability

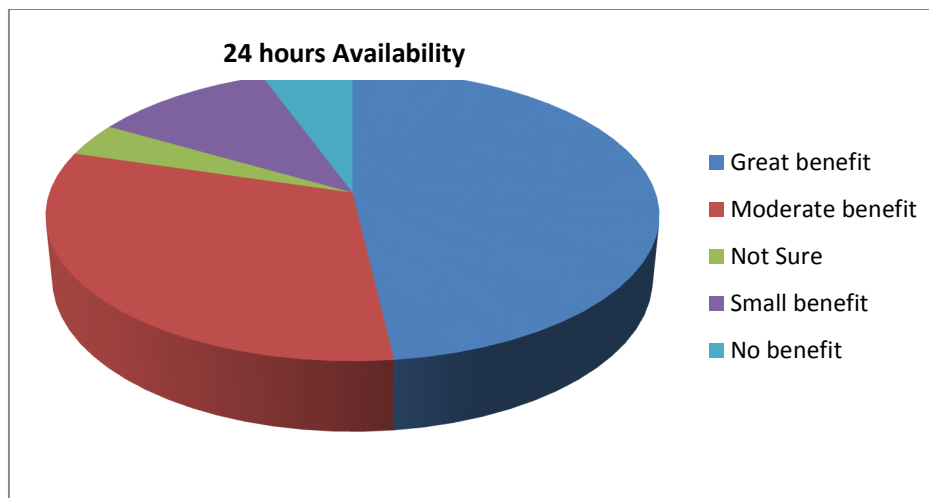
Table 4.8: 24 hours Availability

	Response	Frequency	Percentage
1	Great benefit	26	47.3
2	Moderate benefit	17	30.9
3	Not Sure	2	3.6
4	Small benefit	6	10.9
5	No benefit	3	5.5
	TOTAL	54	98.2

Table 4.8

From the study findings in figure 4.12, 30.9% of the respondents indicated that having their business available at all times online was of moderate benefit to them. This is because customers can get in touch with them any time and place at the convenience of the customer.

Figure 4.12: 24 hours Availability

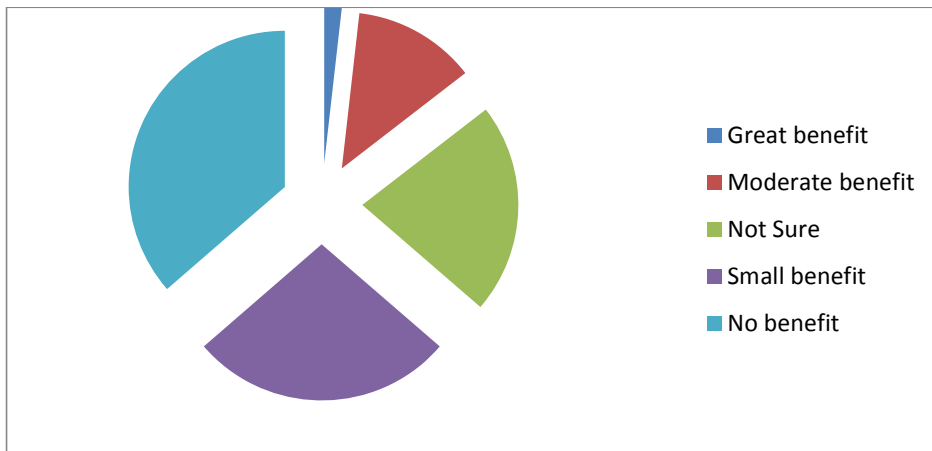


Better and Reduced Market Costs

Table 4.9: Better and Reduced Market Costs

	Response	Frequency	Percentage
1	Great benefit	1	1.8
2	Moderate benefit	7	12.7
3	Not Sure	12	21.8
4	Small benefit	15	27.3
5	No benefit	20	36.4
	TOTAL	55	100.0

Figure 4.13: Better and Reduced Market Costs



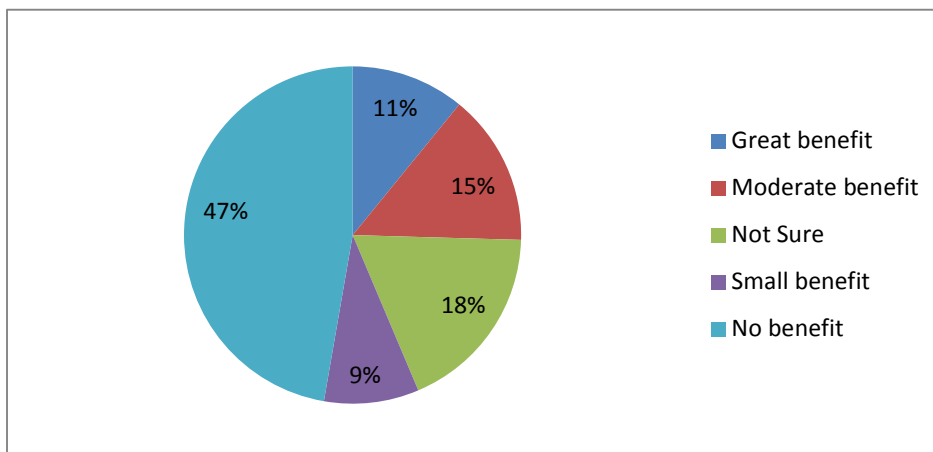
This study sought to find out whether having a website reduced the market costs. 36% of the respondents stated that e-commerce was of no benefit to reducing the marketing cost. They argued that their products were mostly for the locals therefore marketing would still require them to involve to reach out to individuals.

Digitization of products

Table 4.10: Digitization of products

Response	Frequency	Percentage
Great benefit	6	10.9
Moderate benefit	8	14.5
Not Sure	10	18.2
Small benefit	5	9.1
No benefit	26	47.3
Total	55	100.0

Figure 4.14: Product Digitization



From the research findings presented majority of the respondents did not find it of any benefit to have digitization of products through their products, it is also clear the 18.2% were not sure if it were of any benefit to their business and only a few found benefit on the digitization of products when using e-commerce among SMEs.

4.4.3 Challenges of E-commerce

The study aimed at investigating the challenges experienced in using e-commerce in their businesses. The respondents were required to indicate the frequency at which they face the various challenges of e-commerce based on a scale of 1-5, where by 1-Strongly Agree, 2-Agree, 3-Not sure, 4- Disagree and 5- Strongly Disagree. The results were as follows:

Slow internet speed due to poor infrastructure

Response	Frequency	Percentage
Strongly agree	27	49.1
Agree	20	36.4
Not Sure	2	3.6
Disagree	6	10.9
Strongly Disagree	0	0.0
Totals	55	100.0

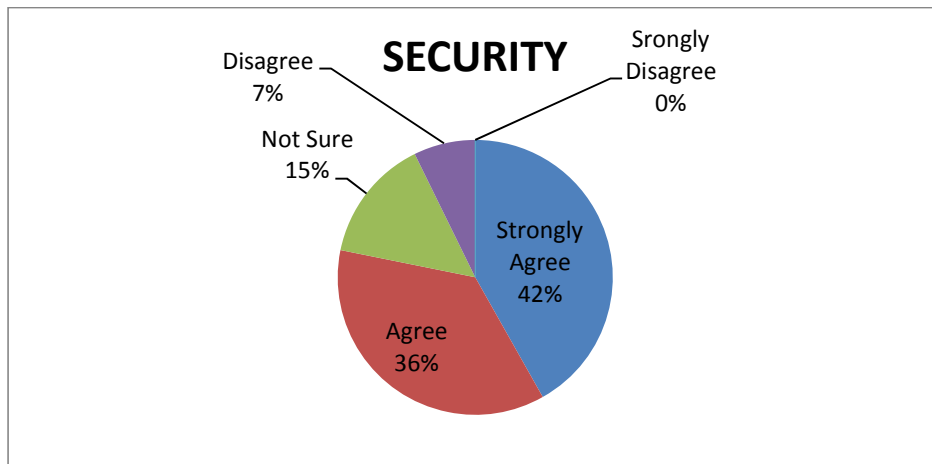
Table 4.11

The table above represents responses to slow internet speed as a challenge to SMEs that have adopted e-commerce. 49% strongly agree that slow speed of internet is a challenge to e-commerce adoption. This showed that one of the greatest challenges of e-commerce was the poor infrastructure.

Security

The researcher also sought to find out to what extent was security a challenge. Majority of the respondent strongly agreed as shown in figure 4.15. 42% of the respondents strongly agreed. This is majorly because of the insecure online payment methods which involves the use of credit cards or visa cards.

Figure 4.15: Security



Language Barrier

Table 4.12: Language Barrier

Response	Frequency	Percentage
Strongly agree	14	25.5
Agree	11	20.0
Not Sure	2	3.6
Disagree	13	23.6
Strongly Disagree	15	27.3
Totals	55	100.0

The study sought to find out whether language barrier hindered e-commerce adoption by SMEs. The findings showed that. A total of 50.9% refuted this notion this could be because Nairobi CDB captures many people from different cultures and tribes and most of them at least understand the national language.

Inadequate Knowledge of E-commerce

Table 4.13: Inadequate Knowledge of E-commerce

Response	Frequency	Percentage
Strongly agree	15	27.3
Agree	17	30.9
Not Sure	12	21.8
Disagree	10	18.2
Strongly Disagree	1	1.8
Totals	55	100.0

The study sought to investigate whether inadequate knowledge of e-commerce was a key hindrance in the adoption of e-commerce by SMEs in the CBD. The findings indicated that a

majority of 31% of the respondents agreed to this, meaning that the owners did not have enough knowledge of how e-commerce would better their business.

Customer/ buyer Preference of for traditional method of transacting business

The study sought to find out whether the respondents agreed that customer/buyer preference for traditional methods of transacting business were a key challenge to adoption of e-commerce. The findings proved that a total 84% of the respondents supported the claim while only a total of 7% refuted the claim.

Table 4.14: Customer/ buyer Preference of for traditional method of transacting business

Response	Frequency	Percentage
Strongly agree	29	52.7
Agree	17	30.9
Not Sure	5	9.1
Disagree	3	5.5
Strongly Disagree	1	1.8
Totals	55	100.0

Non-Compatibility of Older to Newer Technology

In this study, the researcher sought to investigate the impact of non-compatibility of older to newer technology as a challenge facing SMEs that adopt e-commerce. 45.5% of the respondents who were the majority strongly agreed that this was a key challenge, seconded by 29% who agreed. 20% of the respondents however disagreed while 6% strongly disagreed.

Table 4.15: Non-Compatibility of Older to Newer Technology

Response	Frequency	Percentage
Strongly agree	25	45.5
Agree	16	29.1
Not Sure	0	0.0
Disagree	11	20.0
Strongly Disagree	3	5.5
Totals	55	100.0

4.4.4 Regression Analysis

Of importance to the researcher was the relationship between the adoption of e-commerce among SMEs and the factors that lead to the adoption process. The researcher therefore performed a regression analysis to establish the association between the independent and the dependent variable

Regression Analysis for the Business to Business model

The following regression model was as follows.

$$Y = a_0 + x_1 a_1 + e$$

MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.691 ^a	0.478	0.391	2.264

Predictors: (Constants) and the determinants

The coefficient of determinant, adjusted R Square is 39.1% meaning 39.1 of the variation is explained by the determinants of e-commerce that is the telecommunication infrastructure, security, reliability and e-commerce awareness.

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	28.125	28.125	5.488	0.008
Residual	6	30.750	5.125		
Total	7	58.875			

a Predictors: (Constants) telecommunication infrastructure, security, reliability ,and e-commerce awareness.

b. Dependent Variable: E-commerce Adoption

Table : Coefficients^a

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.625	0.300	0.795	0.032
Infrastructure	0.723	0.658	2.343	0.01
Security	0.277	0.429	0.558	0.029
Reliability	0.8	0.912	0.275	0.06
Awareness	-1.2	0.120	-1.412	0.045

From the results, infrastructure, security and reliability coefficient values were positive, statistically significant and strong predictors of e-commerce adoption. On the other hand awareness coefficient was negative but still statistically significant this is seen by the p values which are <0.05.

MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.889 ^a	0.790	0.633	1.758

Predictors: (Constants) and the determinants

The coefficient of determinant , adjusted R Square was 63.3% meaning 63.3 of the variation was explained by the determinants of e-commerce, that is the telecommunication infrastructure, security, reliability ,and e-commerce awareness, age, number of branches, level of education and number of products. The other percentage is for the unexplained variables not mentioned in the research.

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	46.514	15.505	5.017	0.077
Residual	4	12.361	3.090		
Total	7	58.875			

a Predictors: (Constants) telecommunication infrastructure, security, reliability ,and e-commerce awareness.

b. Dependent Variable: E-commerce Adoption

Table : Coefficients^a

<i>Model</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1.122	0.450	0.521	0.011
Infrastructure	1.836	0.645	2.845	0.047
Security	0.607	0.249	2.439	0.021
Reliability	1.050	0.151	1.777	0.001
Awareness	0.0225	0.475	0.579	0.006
Age	0.125	0.075	1.898	0.020
Number of Branches	0.268	0.321	1.523	0.019
Level of Education	0.456	0.233	1.956	0.122
Number of products	0.012	0.671	1.323	0.049

From the results the infrastructure, security, reliability, awareness, age, number of branches and number of products had a significant relationship on e-commerce adoption. However the study did not find a statistical significance between the level of education and the adoption of e-commerce.

Regression Analysis for the Business to Consumer model

MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.728 ^a	0.529	0.471	2.203

Predictors: (Constants) and the determinants

The coefficient of determinant, R² is 52.9% meaning 52.9 of the variation is explained by the determinants of e-commerce that is the telecommunication infrastructure, security, reliability, and e-commerce awareness.

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	43.682	43.682	9.002	0.017
Residual	8	38.818	4.852		
Total	9	82.5			

a Predictors: (Constants) telecommunication infrastructure, security, reliability ,and e-commerce awareness.

Table : Coefficients^a

<i>Model</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.125	0.250	1.102	0.049
Infrastructure	2.610	0.097	2.112	0.550
Security	2.110	0.045	2.001	0.035
Reliability	2.108	0.110	1.777	0.001
Awareness	1.547	0.312	1.264	0.004

From the results the security, reliability and awareness had a significant relationship on e-commerce adoption. However the study did not find a statistical significance between the infrastructure and the level adoption of e-commerce.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.800 ^a	0.641	0.461	2.223

The coefficient of determinant , R2 is 79.0 % meaning 79.0 of the variation is explained by the determinants of e-commerce, that is the telecommunication infrastructure, security, reliability ,and e-commerce awareness, age, number of branches, level of education and nature or type of SMEs. The other percentage is for the unexplained variables not mentioned in the research.

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	52.849	17.616	3.565	0.087
Residual	6	29.651	4.942		
Total	9	82.5			

a Predictors: (Constants) telecommunication infrastructure, security, reliability ,and e-commerce awareness.

b. Dependent Variable: E-commerce Adoption

Table : Coefficients^a

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1.314	2.478	0.530	0.015
Infrastructure	1.438	0.474	3.031	0.023
Security	0.226	0.316	0.715	0.031
Reliability	0.093	0.312	0.297	0.615
Awareness	1.122	0.450	0.521	0.011
Age	0.286	2.080	1.201	0.020
Number of Branches	0.368	0.110	1.101	0.030
Level of Education	0.141	0.433	2.101	0.04
Number of products	-0.285	0.022	1.212	0.011

From the results the infrastructure, security, reliability, awareness, age, number of branches and number of products had a significant relationship on e-commerce adoption.

Regression Analysis for the Consumer to Business model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.577 ^a	0.333	0.111	1.491

The coefficient of the determinant, Adjusted R square is 11.1% meaning 11.1 of the variation is explained by the determinants of e-commerce that is the telecommunication infrastructure, security, reliability and e-commerce awareness.

Table : Coefficients^a

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.036	2.575	1.481	0.046
Infrastructure	0.286	0.517	3.080	0.044
Security	0.226	0.316	0.715	0.023
Reliability	0.093	0.455	2.017	0.015
Awareness	0.019	0.687	1.335	0.027

From the results the security, reliability and awareness had a significant relationship on e-commerce adoption.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.612 ^a	0.375	0.15	2.5

The coefficient of determinant , R2 is 61.2 % meaning 61.2 of the variation is explained by the determinants of e-commerce, that is the telecommunication infrastructure, security, reliability ,and e-commerce awareness, age, number of branches, level of education and nature or type of SMEs. The other percentage is for the unexplained variables not mentioned in the research.

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	3.75	1.25	0.2	0.888633
Residual	1	6.25	6.25		
Total	4	10			

a Predictors: (Constants) telecommunication infrastructure, security, reliability ,and e-commerce awareness.

b. Dependent Variable: E-commerce Adoption

Table : Coefficients^a

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1.152	1.234	0.674	0.011
Infrastructure	2.119	2.003	1.235	0.066
Security	3.215	1.767	1.452	0.019
Reliability	1.001	1.985	1.341	0.550
Awareness	0.215	2.582	1.227	0.035
Age	0.891	1.071	1.359	0.041
Number of Branches	-2.354	1.572	0.2	0.001
Level of Education	0.112	1.200	0.530	0.012
Number of products	-1.235	0.454	0.297	0.030

From the results the infrastructure, security, reliability, awareness, age, number of branches and number of products had a significant relationship on e-commerce adoption.

CHAPTER FIVE: SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of the main finding from the study, the conclusion of the study and the recommendations which are based on the conclusion of the study. The general objective was to investigate the adoption of e-commerce among SMEs in Nairobi CBD.

5.1 Summary

The researcher administered 60 questionnaires in total Majority of the questionnaires were fully filled and returned to the researcher. This study targeted sixty SMEs operating in Nairobi Central Business District, however, only 55 SMEs that responded to questionnaires and this translated to a response rate of 91.7%. The questionnaires contained questions that addressed the objectives of the study. In addition, according to the results 61.8% of the respondents were male while the rest were female. On the nature of the SMEs, the studies revealed that majority of them were in the service industry while still there were a significant number of those in the retail.

The study indicated most of the managers understood the benefits of e-commerce. This is seen by the positive response on the questionnaires, the benefits analysed include: improving company profile, businesses getting more enquiries from customers, improving supplier relationship, better marketing cost, twenty four hours availability, digitization of products and business becoming an international place. The challenges of e-commerce analysed were the slow internet speed due to poor infrastructure, non-compatibility of older and newer technology, customer/ buyer Preference of traditional method of transacting business, inadequate knowledge of E-commerce and language barrier

The research sought to investigate how e-commerce had benefited SMEs in Nairobi CBD. From the findings the key benefits were the increased sales, reduced transaction cost and speeding up processes. Reduced marketing cost was of less benefit to the most owners since they still felt the need to reach out to local customers on individual basis.

The study established that e-commerce had a number of challenges. The key challenges being slow internet speed, security and customer's preference to transact businesses offline. Language barrier on the other hand was less of a challenge due to the scope of the study. Nairobi central

business district being at the center of the city most people seemed to understand the English and Kiswahili.

5.2 Conclusion.

Most of the SMEs have adopted to e-commerce even though they have not fully implemented all the business models. In this study, benefits and challenges that influence the level of ecommerce adoption were studied.

Using the questionnaires each specific challenge or benefit respondents were asked to rate the degree of benefit or lack thereof that each specific benefit or challenge respectively brought to their SMEs due to the fact that they had incorporated ecommerce in their business entities.

Items selected by majority showed that the SMEs owners derived certain benefits from the adoption of ecommerce in their businesses. Additionally, they encountered challenges that discouraged their adoption of ecommerce in their businesses. The benefits and challenges faced by the owners were categorized into five key groups respectively.

Based on this study a number of general conclusions on the adoption of ecommerce by small and medium sized enterprises in Nairobi have been made:-The study unveiled the fact that slows internet speed and poor infrastructure ranked first in supremacy among the five challenges that undermine the adoption of ecommerce. It was also observed that some of the government's efforts to support entrepreneurship development through the adoption of e-commerce are focused on eliminating this challenge; hence, the government is on the right track in terms of prioritizing.

Customer/ buyer Preference of for traditional method of transacting business come in second with the majority of the SMEs owner agreeing that they have encounter resistance by their customers and fellow businesses colleagues including employees to adopt and incorporate ecommerce in their business. This clearly show the need to create awareness and sensitize the entire population on the efficiency , convenience, security and great benefits that adoption of ecommerce brings to a business, its customers and the country's economy as a whole.

The study findings also showed that:- extending the customer base; Reduced Transaction, marketing and operating costs and Improving company profile and improved sales brought great benefits to the SMEs. Moreover, improving efficiency through round the clock business, speeding up processes and customer feedback; global market access and digitized products also reported positive feedback as the role they played in the overall performance of most SMEs. Evidently any effort directed to enhancing e-commerce will result in the increase of these benefits to SMEs hence go a long way in encouraging the adoption of ecommerce throughout the country.

5.4 Recommendations

Based on the above conclusion, the study recommends that the SMEs managers should undertake some training courses on e-commerce especially on website to enable them get the importance of implementing e-commerce and how to effectively utilize all the resources to ensure the organization has a competitive advantage.

The government/policy makers should make policies that are enterprise friendly by reducing costs of trading using e-commerce and ensuring security is well taken care of

Because owner/manager's age, level of education, and gender are key factors for e-commerce adoption, the web developers should take concern of such factors when implementing the different website that is make it more user friendly and easy to learn.

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