

**AN ASSESSMENT OF INTERNET USAGE ON SMALL AND MEDIUM ENTERPRISES
(SMEs) IN NAKURU TOWN CONSTITUENCY**

GEORGE JAMES KARIUKI

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DECLARATION AND RECOMMENDATION

DECLARATION

I hereby declare that this project presented by me is my own original work and has not been lifted from another person's work. This work has been presented in the pursuit of my Master's Degree in Business Administration in Kabarak University.

George J. Kariuki

Adm. No. GMB/NE/0369/05/11

Signed _____

Date ____/10/2012

RECOMMENDATION

This project is the candidate's original work and has been submitted with our approval as official University Supervisors

Prof. Jason M. Githeko

Lecturer, Department of Mathematics and Computer Science.

KABARAK UNIVERSITY

Signed _____

Date ____/10/2012

Dr. Maina Waiganjo

School of Business

KABARAK UNIVERSITY

Signed _____

Date ____/10/2012

DEDICATION

To my loving parents for giving me support in my pursuit of knowledge, and for the love they have showered me.

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I would like to acknowledge the Almighty God for keeping me alive this far, for enabling me to come up with this article and for giving me this chance to present this article. I would also like to sincerely thank my supervisors Prof. Jason Githeko and Dr. Maina Waiganjo for guiding me through every step of the research process. Finally I would like to thank my fellow classmates and other students in Masters of Business Administration (MBA) class for the support they gave me.

ABSTRACT

The Internet is a useful tool that can be used by entrepreneurs and small and medium enterprises (SMEs) alike to market their products/services and considerably reduce costs of doing business. The government of Kenya has invested billions of shillings in laying of fibre optic cables in Kenya, improving Kenya's ICT sector and coming up with projects aimed at promoting the adoption of Internet among businesses and citizens alike. With all of these investments, there are challenges that hinder Internet adoption by SMEs such as high Internet access fees, underdevelopment of ICT infrastructure, and many others. The objectives of this research were to establish the level, purposes and benefits of Internet use among the small and medium enterprises in Nakuru Town Constituency. The research consisted of a descriptive survey using a structured questionnaire to collect primary data from a stratified random sample of 386 SMEs selected from the official list of 21,355 registered SMEs. The research made use of 7 out of the 8 major business categories to ensure accuracy and equal representation of the SMEs. Data collected were analyzed and processed using Ms-Excel computer software. The processed information was presented in form of pie-charts, frequency tables, and figures. The study found that 85% of SMEs in Nakuru Town Constituency have not adopted Internet. This was mainly due to lack of ICT infrastructure and low Internet speeds/ signal levels. SMEs with Internet access (15%) used Internet to gather timely and accurate business information, e-commerce, among other purposes. SMEs with Internet access benefited by having their business operating costs lowered, e-commerce, among other benefits. SMEs with Internet access saved costs mainly on marketing and communication. The researcher recommended that the study be conducted on the other constituencies and citizens to accurately describe extent of Internet usage and benefits achieved. Further recommendation was for the ISPs to lower Internet access price, engage in mass awareness programmes and increase the level of ICT infrastructure.

Keywords: Internet access, small and medium enterprise (SME), business processes, Internet usage, and Nakuru Town Constituency.

TABLE OF CONTENTS

DECLARATION AND RECOMMENDATION	ii
DECLARATION	ii
RECOMMENDATION	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT.....	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS AND ACRONYMS	x
CHAPTER ONE: INTRODUCTION	1
1.1 Background Information	1
1.2 Statement of the Problem	5
1.3 Objectives of the Study	5
1.3.1 General Objective	5
1.3.2 Specific Objectives	5
1.4 Research Questions	6
1.5 Justification	6
1.6 Limitation of the Study	6
1.7 Delimitation.....	6
1.8 Definition of Key Terms	7
CHAPTER TWO: LITERATURE REVIEW.....	9
2.1 Introduction	9
2.2 Internet and small and medium enterprise (SME)	9
2.3 Developments and Improvements in the National Internet Access	12
2.4 Challenges facing adoption of Internet by small and medium enterprises in Nakuru Town Constituency.....	14
2.5 Conceptual Framework	15
CHAPTER THREE: RESEARCH METHODOLOGY	16
3.1 Introduction	16
3.2 Research Design.....	16
3.3 Location of Study	16
3.4 Population.....	17
3.5 Sampling Procedures and Sample Size	17
3.5.1 Sampling Procedure.....	17
3.5.2 Sampling Frame.....	17
3.5.2 Sample size.....	18

3.6 Instrumentation.....	19
3.7 Validity of the Instrument	19
3.8 Reliability of the Instrument	19
3.9 Data Collection Procedures	20
3.10 Data Analysis	20
3.11 Results Presentation	20
CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION	21
4.1 Introduction	21
4.2 Demographic Characteristics of the SMEs	21
4.2.1 Extent of Internet Access by SMEs	21
4.2.2 Reasons and benefits acquired through Internet usage.....	25
4.3 Comparison of Internet access, usage and savings on business processes expenditure among the seven SME categories	37
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS.....	44
5.1 Introduction	44
5.2 Summary of Findings	44
5.3 Conclusion.....	45
5.4 Recommendations	46
5.5 Suggestions for further research.....	47
REFERENCES.....	49
APPENDICES	53
APPENDIX A:.....	53
LETTER OF INTRODUCTION.....	53
APPENDIX B:.....	54
QUESTIONNAIRE.....	54
APPENDIX C:.....	56
BUSINESS CATEGORIZATION	56
APPENDIX D:.....	61
NATIONAL AND REGIONAL FIBRE OPTICS OVERVIEW	61
APPENDIX E:.....	63
FREQUENCY TABLES.....	63

LIST OF TABLES

Table 1: Business Categorization in terms of Business Activities	11
Table 2: Breakdown of businesses in Nakuru Town Constituency in terms of population.....	11
Table 3: SME Sampling Frame.....	18
Table 4: Business Classification and Description as per the Kenya Government, 2008.....	56
Table 5: Reasons for not adopting Internet by SMEs	63
Table 6: Internet Usage by SMEs in Nakuru Town Constituency.....	64
Table 7: Internet Access Methods by SMEs in Nakuru Town Constituency	65
Table 8: SME Business Process expenditure saved.....	65
Table 9: ISP SME Market Share.....	65
Table 10: ISP Rating and Ways of improving Internet Adoption and Usage by SMEs	66
Table 11: Benefits of Internet Usage by SMEs in Nakuru Town Constituency	67

LIST OF FIGURES

Figure 1: Extent of Internet Adoption by SMEs in Nakuru Town Constituency	22
Figure 2: Reasons for not adopting Internet by SMEs.....	23
Figure 3: Internet Access methods by SMEs	25
Figure 4: Internet Usage among SMEs: Business info gathering, e-commerce, online ordering, online marketing, and customer management.	26
Figure 5: Internet Usage among SMEs: Cloud computing, interaction with government agencies, B2B, and global competitiveness.....	27
Figure 6: Benefits of the Internet for SMEs: lowering of business operating costs, e-commerce, efficient data management and saving business processes time.....	30
Figure 7: Benefits of the Internet for SMEs: Better customer and supplier management, efficient marketing and achieving global competition.....	31
Figure 8: Savings on Business processes expenditures for SMEs as result of Internet Usage.....	33
Figure 9: ISP market share in SME category.....	34
Figure 10: ISP rating by SMEs	35
Figure 11: ISP recommendation and reasons.....	36
Figure 12: Ways of increasing Internet Adoption and Usage.....	37
Figure 13: Internet Access among categories 100 and 300 SMEs respectively	38
Figure 14: Internet Access among categories 400 and 500 SMEs respectively	38
Figure 15: Internet Access among categories 600 and 700 SMEs respectively	39
Figure 16: Internet Access among category 800 SMEs.....	39
Figure 17: Savings on Business processes expenditures for category 100 SMEs as result of Internet Usage.....	40
Figure 18: Savings on Business processes expenditures for category 300 SMEs as result of Internet Usage.....	40
Figure 19: Savings on Business processes expenditures for category 500 SMEs as result of Internet Usage.....	40
Figure 20: Savings on Business processes expenditures for category 600 SMEs as result of Internet Usage.....	41
Figure 21: Savings on Business processes expenditures for category 400 SMEs as result of Internet Usage.....	41
Figure 22: Savings on Business processes expenditures for category 700 SMEs as result of Internet Usage.....	42
Figure 23: Savings on Business processes expenditures for category 800 SMEs as result of Internet Usage.....	42
Figure 24: National Optical Fibre Backbone Infrastructure (NOFBI).....	61
Figure 25: Lying of fibre optics along the African coastlines	62
Figure 26: SEACOM Overview.....	62

LIST OF ABBREVIATIONS AND ACRONYMS

ARPANET	–	Advanced Research Projects Agency Network
B2B	–	Business to Business (relationship)
B2C	–	Business to Customer (relationship)
CCK	–	Communications Commission of Kenya
CRM	–	Customer Relationship Management
DARPA	–	Defense Advanced Research Projects Agency
EASSy	–	East African Submarine System
IT	–	Information Technology
ICT	–	Information Communication Technology
ISP	–	Internet Service Provider
KENET	–	Kenya Education Network
KTCIP	–	Kenya Transparency Communication Infrastructure Project
KDN	–	Kenya Data Network
KRA	–	Kenya Revenue Authority
KShs	–	Kenya Shillings
SME	–	Small and Medium Enterprise
SRM	–	Supplier Relationship Management
TEAMS	–	The East African Marine System
USD	–	United States (of America) Dollar
WiMAX	–	Worldwide Interoperability for Microwave Access

CHAPTER ONE: INTRODUCTION

1.1 Background Information

A small and medium enterprise (SME) is a business set up by an entrepreneur for the purpose of offering services or goods to the market for profit. Many small and medium enterprises in Kenya are set up in the entrepreneur's field of expertise such as tailoring, computer programming, advocacy and many others. Most of the businesses are owned and managed by the owner–manager who personally engages himself in the everyday running of the business and makes use of ‘hands-on’ management style. These businesses market their goods and services to a small geographical area and thus, the challenges facing them tend to be lack of information on markets and finding a niche market, expanding their market base, reduction of costs of doing business associated with production of products and expansion of the business, and customer management. Traditionally the small and medium enterprises make use of paper technology for their everyday business processes which tend to be expensive and redundant (Moyi, Otieno, Mumo, and Ronge, 2006).

The Internet is an interconnection of computers and computer networks across the world which allows users to share information and other resources on a global scale through the use of Internet protocols (IP) (Ifinedo, 2009). Internet enables one to communicate and share information on a real-time and across the border basis hence making geographical and political borders seem inexistent.

Internet was an idea of a computer scientist Leonard Kleinrock from Massachusetts Institute of Technology who first published a paper on packet switching explaining on the theoretical feasibility of computer communication using packets rather than circuits. Packet switched networks such as the ARPANET were created in late 1960s and early 1970s by DARPA using protocols for networking, where multiple separate networks could be joined together into a network of networks. In 1982 the Internet Protocol Suite (TCP/IP) was standardized and the concept of a world-wide

network of fully interconnected TCP/IP networks called the Internet was introduced. Access to the ARPANET was expanded in 1981 when the National Science Foundation (NSF) developed the Computer Science Network (CSNET) and again in 1986 when NSFNET provided access to supercomputer sites in the United States from research and education organizations. Commercial internet service providers (ISPs) began to emerge in the late 1980s and 1990s. The ARPANET was decommissioned in 1990. The Internet was commercialized in 1995 when NSFNET was decommissioned, removing the last restrictions on the use of the Internet to carry commercial traffic. Since the mid-1990s the Internet has had a drastic impact on culture and commerce, including the rise of near-instant communication by electronic mail, instant messaging, Voice over Internet Protocol (VoIP) "phone calls", two-way interactive video calls, and the World Wide Web with its discussion forums, blogs, social networking, and online shopping sites (Leiner et al, 1997; Investintech.com Inc, 2007; Gromov, 2011; Internet Society, 2012).

Internet has played a major role by opening up opportunities for SMEs to market and sell their products online to a global audience, and has enabled employees and other stakeholders to work and access information anywhere in the world. This has helped SMEs to cut costs associated with traditional business processes (Lawrence, 2009). By use of an organisation's own website or through the use of social networking websites such as Facebook, one can reach millions instantly and still be able to offer personalized services and be able to engage clients and customers on a one-on-one level while marketing one's services and products (Gilmore et al, 2007).

Company websites enable SMEs to post relevant and timely information that customers can gain access to all day or night and all year round, and not be able to edit the information or post negative comments about the business as it may be the case with social media. With the availability of Internet, SMEs can grow exponentially to global status and be competitive in the global platform with the large and multinational companies. (Shi et al, 2004; Dholakia and Kshetri, 2004)

Through the use of e-commerce and online shopping websites, one can view, buy and pay for goods and services online thus reducing the costs associated with traditional methods of trade

such as paper money, cheques, receipts, physical auditing and verification of paper documents (Braun 2003). The SMEs can make use of Internet to gather timely and accurate information that can be beneficial to their businesses and help them stand out in the competition. This enables such businesses and entrepreneurs become relevant in modern informed and techno-based world. Through Internet, SMEs can source for supplies and other resources online thus reducing the need for physical travel and save costs. A SME or learning institution can also offer online education, training, or consulting services to its clients through the Internet thus overcoming the political and geographical barriers and delimiting the need for physical contacts (Lawrence, 2009; Eshun and Taylor, 2009).

The government of Kenya has made tremendous efforts and invested billions of Kenya shillings in improving the ICT sector of the economy. Some of these investments include the laying of the national backbone fiber optic cable throughout the country to promote Internet adoption and use by businesses and citizens, giving grants and promoting investments and innovations in the ICT sector (Kenya ICT Board). The government has established e-government by automating and building infrastructure within government buildings, creating websites and e-mails for various government ministries and parastatles, automating its services and procurement. (KRA online Tax Returns; KTCIP) The government has come up with a national strategy aimed at making the country a middle-income economy by the year 2030, with growth in the ICT sector as one of the key pillars (Society for International Development, 2010).

The government of Kenya has embarked on a connectivity and e-services delivery project. This project is supported by the World Bank under the Transparency Communication Infrastructure Project (TCIP). The goal of the project is to boost ICT connectivity in the country, improve government of Kenya's delivery of services to citizens, increase type and quality of information from and to citizens and increase government of Kenya's ability to ensure transparency and support anti-corruption efforts.

The Kenya TCIP project aims to generate growth and employment by leveraging ICT and Public Private Partnerships to create an IT Enabled Services industry, and contribute to improved efficiency and transparency of selected government functions through e-government applications. The project is to be supported through a standard International Development Association (IDA) credit of SDR 76,210,000 (Kenya Transparency Communication Infrastructure Project, KTCIP).

In order to increase Internet speed and connectivity with the rest of the world, the government of Kenya, in partnership with the Emirates Telecommunication Establishment (Etistat) embarked to lay its own fibre optic cable from UAE to Kenya. Five companies — Alcatel-Lucent, Tyco Telecommunication, Fujitsu Corporation, NEC Corporation and Huawei Technologies — had placed their bids for the building of the TEAMs undersea cable. On October 11, 2007, Alcatel-Lucent were awarded the \$82 million contract to lay the cable. Construction began in January 2008 on the Emirates side and it arrived at the Mombasa Port on 12th June 2009 and was launched by the President of Kenya Mwai Kibaki, the Prime Minister of Kenya Hon. Raila Odinga, and other dignitaries (Research ICT Africa, 2007).

The government of Kenya established Kenya Education Network (KENET), a National Research and Education Network that promotes the use of ICT in Teaching, Learning and Research in Higher Education Institutions in Kenya. KENET aims to interconnect all the Universities, Tertiary and Research Institutions in Kenya by setting up a cost effective and sustainable private network with high speed access to the global Internet. KENET also facilitates electronic communication among students and faculties in member institutions, share learning and teaching resources by collaboration in Research and Development of Educational content (KENET).

Furthermore, the government of Kenya, in attempting to fulfill the goals of Vision 2030, bought 5000 hectares of land in Machakos County, 64 km south of Nairobi for the sole purpose of building a BPO project known as Konza Technology City. The project is set to host business BPO ventures, a science park, a convention centre, shopping malls, hotels, international schools, health

facilities, and is estimated to cost KShs 1.2 trillion (approx. USD 14.5 billion) (Konza). The project is a major driver of the Vision 2030 and is expected to draw in foreign and local ICT investors.

1.2 Statement of the Problem

The government has invested heavily in the ICT sector and infrastructure in the laying of fiber optic cables, encouraged the use of Internet for economic and social use by the businesses, mainly the SMEs, and plans to make the ICT sector one of the key pillars for economic investment as outlined in Kenya's Vision 2030. SMEs in Nakuru Town Constituency constitute 96.78% of all registered businesses. They provide employment to a mean number of 7 employees per business and to at least 20,355 self-employed owners of the businesses. SMEs contribute a total of KSh 141,953,750 yearly in license fees and provide employment to the ISP employees and ICT skilled staff through Internet access.

Despite this huge investment, it was not clear how the Internet is used by the SMEs in Nakuru Town Constituency and the benefits they have acquire from using the internet. This research sought to fill this knowledge gap.

1.3 Objectives of the Study

1.3.1 General Objective

The overall objective of this study was to investigate the Internet usage among the small and medium enterprises and to describe the benefits of Internet usage on SMEs in Nakuru Town Constituency.

1.3.2 Specific Objectives

- i. To establish the level of Internet use among the small and medium enterprises in Nakuru Town Constituency.
- ii. To establish the purposes for which small and medium enterprises in Nakuru Town Constituency use the Internet.
- iii. To establish the benefits the small and medium enterprises gain as a consequence of using the Internet.

1.4 Research Questions

- i. What was the extent of Internet use among small and medium enterprises in Nakuru Town Constituency?
- ii. What were the purposes for using the Internet among small and medium enterprises in Nakuru Town Constituency?
- iii. What benefits do small and medium enterprises in Nakuru Town Constituency obtain from using the Internet?

1.5 Justification

The intended beneficiaries of this research study include the government, particularly the Ministry of Information and Communication and the Communications Commission of Kenya, who may make use of the results to help improve national ICT initiatives. The government can use the information to come up with policies that would encourage more businesses and people adopt Internet.

The Internet service providers can make use of the research findings to establish Internet coverage and usage. This information will be useful in establishing ways and strategies in which Internet coverage in the constituency of Nakuru can be increased, provision of Internet at favourable speeds and prices so as to encourage Internet connection in the small and medium enterprise segment of Kenyan businesses and economy of Kenya. In general all audience to this research should learn and appreciate the usage of Internet with the small and medium enterprise and benefits arising from such benefits.

1.6 Limitation of the Study

The limitation of the study was that a few of the respondents were not willing to answer questions.

1.7 Delimitation

The researcher was able to overcome the limitation of respondents' unwillingness by assuring them of the confidentiality of information gathered.

1.8 Definition of Key Terms

B2B (business-to-business), also known as **e-biz**, is the exchange of products, services, or information between businesses rather than between businesses and consumers (B2C).

The term may also describe a company that provides goods or services for another company. Support with lit

B2C (Business-to-Consumer) – A transaction that occurs between a company and a consumer, as opposed to a transaction between companies (called B2B). The term may also describe a company that provides goods or services for consumers.

Business Process – this refers to the set of logically related tasks and behaviours that organisations develop over time to produce specific business results and the unique manner in which these activities are organized and coordinated.

Challenge – this refers to the factors that hinder or slow-down the adoption of Internet by small and medium enterprises. Such factors may include access fees, lack of knowledge about Internet and its benefits, negative perception about Internet, poor Internet infrastructure, and many others.

Cloud computing is the use of computing resources (hardware and software) that are delivered as a service over a network (typically the Internet). Cloud computing entrusts remote services with a user's data, software and computation.

E-business – commonly referred to as electronic business or e-business, or an internet business, may be defined as the application of information and communication technologies (ICT) in support of all the activities of business.

E-commerce – commonly known as electronic commerce or e-comm, refers to the buying and selling of products or services over electronic systems such as the Internet and other computer networks.

Internet – The Internet is a global system of interconnected computer networks and computers that provides and allows users to share information, e-mail and other resources. It is a network of networks that connects millions of private, public, academic, business and government networks.

Internet usage – this is a measure of a county's or continent's population of people and/or businesses that have adopted and are internet literate against the total country's or world's population respectively. The statistics are used to rate the country or continent in world ranking. It is also a measure of how businesses, academic institutions, government, people and other users make use of the Internet, for example, business make use of the Internet to market their products, gather timely and relevant information for the business, customer and supplier management, gain global competitiveness among other uses.

Online – a state of being connected to another computer or network such as the Internet. **Offline** indicates a disconnected state.

SME stands for **small and medium-sized enterprises** – The main factors determining whether a company is an SME in Kenya are: Number of employees and Size of business premises. In Kenya, small enterprises have between 11-50 employees (Moyi et. al). Medium enterprises employ between 51-100 people (Nganga and Onyango, 2011). The local government Act, 2008 gives a more accurate description of businesses in terms of number of employees and premises floor space.

WiMAX – **WiMAX (Worldwide Interoperability for Microwave Access)** is a wireless communications standard designed to provide 30 to 40 megabit-per-second data rates, with the 2011 update providing up to 1 Gbit/s for fixed stations. It is a part of a “fourth generation,” or 4G, of wireless-communication technology.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter introduces the literature review. The chapter begins by introducing Internet and SME. Then it illustrates the improvements made and current state of Kenya's ICT sector. The chapter gives a detailed view of Kenya's SME categorization. The chapter details number of SMEs and their contribution in Nakuru Town Constituency. Finally the chapter illustrates the conceptual framework used in the study.

2.2 Internet and small and medium enterprise (SME)

Internet is a global interconnection of computers and computer networks that enables users and businesses alike to communicate and share information on a real-time basis by using multiple Internet protocols (IP) (Ifinedo, 2009). Internet provides a platform in which businesses can be able to communicate and share resources with one another (B2B), with their customers (B2C), and other stakeholders and establish relationships that will be beneficial to the business. Small and medium entrepreneurs can make use of the Internet to gather timely and relevant information that would be beneficial and useful to their business (Botelho and Alves, 2007; Alam and Noor, 2009).

Benefits businesses can gain as a result of adopting Internet include better marketing of the business products and services, ease of use better efficiency as opposed to paper technology, establish e-commerce and e-business, better supply and customer management, increase in sales, reduction of distance barrier, achieve global competitiveness, and many others (Passerini, et al, 2012; Ifinedo, 2009; Botelho and Alves, 2007).

E-commerce (e-comm) is the buying and selling of goods/services or information electronically over the Internet or other computer networks. With Internet and e-commerce, businesses can exchange information and resources with one another (B2B) or with their customers (B2C) and considerably reduce costs on their business processes. E-commerce supports online business transactions, business relationship management, business resource management and

electronic payment methods. A business process is logical task performed in an organisation with an aim of producing specific business results. An example of a business processes is marketing where a business aims in increasing its market share (Acheampong and Gyawu, 2011).

Internet usage can be referred to how one uses the Internet. For example SMEs can use the Internet for B2B, B2C, e-commerce e-business or gain global competitiveness. E-business or e-biz is the use of Internet and/or computer networks to support all business process of an organisation. E-biz replaces paper technology plus the benefits include reduction in time and costs of business processes (Amit and Zott, 2001). E-business can also be defined as the transformation of key business process through the use of Internet technologies (Shi, Porter, Otterson and Barclay, 2004).

Use of Internet by businesses can result in efficient data storage, management, and retrieval. This is because businesses can reduce the time taken in storing and retrieving data by use of indexes, which sort data in order of entry and arrange data in a logical manner. Moreover, through Internet usage, SMEs can remotely store data and access services anywhere in the world through cloud computing. Cloud computing is whereby clients/SMEs entrust their data to dedicated computer service provider over the Internet. The computer service provider has computing resources (hardware and software) and offers services such as data storage, software use, computation or support business processes through the Internet. Cloud computing saves SMEs the costs of setting up and maintaining their own networks plus ensures the SMEs can access resources anywhere in the world. The work of maintaining the resources and data is left solely to the computer service provider(s)' dedicated servers (Mell and Grance, 2011; Hayes, 2011).

Businesses in Kenya are classified into eight broad categories according to their business activities and each category is then subdivided into Large, Medium, Small, and other sub-categories, which are used for the purposes of planning and issuance of single business permits by the local government at a fee. The permits are issued annually for the period beginning January to December. Table 1 contains areas of all businesses classifications and contributions in terms of

permit fees in Nakuru Town Constituency (The Kenya Government, 2008; The Kenya Government, 1999; The Kenya Government, 2012).

Table 1: Business Categorization in terms of Business Activities

BUSINESS CODE	BUSINESS CATEGORY	NUMBER OF BUSINESSES	CATEGORY REVENUE	PERCENTAGE CONSTITUTION
100	General Trade, Wholesale, Retail, Stores, Personal Services.	15,653	78,127,750	74.42%
300	Transport, Storage, and Communications	389	4,859,450	1.85%
400	Agriculture, Forestry, & Exploitation Of Natural Minerals	492	4,582,350	2.34%
500	Accommodation and Catering	1690	17,913,250	8.03%
600	Professional and Technical Services	607	15,002,500	2.89%
700	Private Education, Health and Entertainment Services	495	5,695,000	2.35%
800	Industrial Plants, Factories, Workshops, Contractors	1,707	15,773,450	8.12%
TOTAL		21,033	141,953,750	100.00

Source: The Kenya Government, 2012; Municipal Council of Nakuru. A more detailed table and data can be found in Appendix C

Table 2 below gives a breakdown of the businesses in terms of the population of the large enterprises verses the SMEs.

Table 2: Breakdown of businesses in Nakuru Town Constituency in terms of population

Business Category	Number of SMEs	Number of large enterprises	Totals	Percentages
Category 100	15,349	304	15,653	74.42%
Category 300	338	51	389	1.85%
Category 400	479	13	492	2.34%
Category 500	1,530	160	1,690	8.03%
Category 600	565	42	607	2.89%
Category 700	438	57	495	2.35%
Category 800	1,656	51	1,707	8.12%
Totals	20,355	678	21,033	
Percentages	96.78%	3.22%	100%	100%

Source: The Kenya Government, 2012; Municipal Council of Nakuru. A more detailed table and data can be found in Appendix C

SMEs in Nakuru Town Constituency constitute 96.78% of all registered businesses, while large organisations constitute 3.22% of the registered businesses. SMEs in Nakuru Town

Constituency provide employment to a mean of 7 employees per SME, and self – employment to at least 20,355 owners of the enterprises. This implies that an estimated number of 142,485 people are employed in SMEs plus 20,355 business owners. This means that SMEs make significant contribution to the economy of Nakuru Town Constituency by employing more than half of the constituency’s population. Those SMEs that do have Internet access pay a mean Internet access fee of KSh 3,277.29 per month, thus providing additional employment to ISP employees and ICT skilled employees in the SMEs (The Kenya Government, 2008; The Kenya Government, 1999; The Kenya Government, 2012). Lawrence (2009) states that SMEs in the European Union represent 99% of the businesses and they provide 65 million jobs.

2.3 Developments and Improvements in the National Internet Access

The Kenya government has made significant strides in ensuring Internet access in the country and has made progresses in improving the ICT sector of the economy. Some of the strides include lowering of the license fees of providing Internet services from the initial application fee of KShs 750,000 and annual operating fee of KShs 250,000 to currently application fee of KShs 10,000 and annual operating fee of KShs 100,000 thus reflecting on the lowering of Internet access costs by ISPs to the end–users and businesses alike; particularly in the mobile Internet access (Export Processing Zone Authority, 2005).

The improvement of the ICT sector has been highlighted to be one of the four pillars of economy, as stated in Kenya’s Vision 2030 and the government has taken steps in achieving the vision by laying two high–speed fiber optic cables to ensure Internet access by business and the general public alike in the country. The laying of the fibre optic cable is illustrated below (Kariuki, 2009).

The Eastern Africa Submarine Cable System (EASSy) is an initiative by the New Partnership for Africa’s Development (NEPAD) to connect Eastern African countries via a high bandwidth fibre optic cable. This cable would run from South Africa to Port Sudan in Sudan, with landing points in six countries along the Indian Ocean coast, and provide connectivity to at least

five landlocked countries. This initiative was started in 2003 and is funded by the World Bank, Development Bank of Southern Africa and telecommunications companies in the region. In 2006, Alcatel won the tender to implement the cable system at a cost of US\$300 million (KES14 billion) (Research ICT Africa, 2007).

As a result of the frustrations in delays in the EASSy cable, the Kenya Government started another initiative, dubbed The East African Marine System (TEAMS). It signed a memorandum of understanding with a telecommunications firm in the United Arab Emirates (Etisalat) to build two fibre pairs with an initial capacity of 10 GBps upgradable to 320 GBps. This cable will be owned by the Kenya Government (40%), Etisalat (20%) and investors in the East African region (40%). It is estimated to cost KES5.7 billion and is planned to be ready by mid-2009 (Research ICT Africa, 2007).

The Kenya Data Networks (KDN), one of the telecommunications service providers, signed a contract with India's FLAG Telecom. Its undersea cable would link Mombasa at the Kenyan coast to the Yemen coast. This link is planned to be ready by the first quarter of 2008 at a cost of KES8 billion (Research ICT Africa, 2007).

SEACOM is largely a South African undersea fibre optic cable initiative targeted towards the 2010 World Cup to increase already available bandwidth from SAT-3 and SAFE undersea cables. It would link Cape Town along the East African coastline to Port Sudan. From here, there will be a shorter and direct link to Europe and Asia via South East Asia-Middle East- West Europe (SEA-ME-WE-4) undersea cables. SEACOM is owned by South Africans (50%), New York's Herakles Telecom (25%) and Aga Khan Foundation for Economic Development (AKFED) (25%) through Kenyan based Industrial Promotion Services (IPS). The four initiatives represent a significant duplication of effort and are a sign of problems in implementing the oldest initiative, EASSy" (Export Processing Zone Authority, 2005).

2.4 Challenges facing adoption of Internet by small and medium enterprises in Nakuru Town Constituency

A challenge to Internet adoption is a barrier that hinders SMEs from fully embracing and using Internet. Challenges to Internet adoption by SMEs in Kenya include poor connectivity rate, low Internet speeds, underdevelopment of ICT infrastructure, low levels of ICT literacy, lack of a wide spread skill base that would enable the society to make use of technology, and a negative perception by people towards ICT (Kariuki, 2009; Ifinedo, 2009; Kapurubandara and Lawson 2006).

The constituency of Nakuru Town suffers from poor connectivity rate where, despite the fact that there are laid down fibre optic cables mainly in Nakuru Town, a few businesses have opted to take up Internet connectivity. Many businesses, especially the small and medium enterprises have no idea of the laying of the cables, services offered by the ISPs, Internet speeds, benefits arising from adopting Internet and costs of the Internet services (Kariuki, 2009).

Internet services can be in form of wireless broadband services (WiMAX) provided in form wireless Internet connectivity and mobile Internet. Low Internet speeds have been brought about by the monopoly ISPs enjoy, poor government regulation and the unwillingness by ISPs to switch to higher Internet speed technology. Wireless Internet technology tends to be even slower than wired interconnectivity. Many of the businesses that do get connected tend to share a small bandwidth hence keeping speeds low.

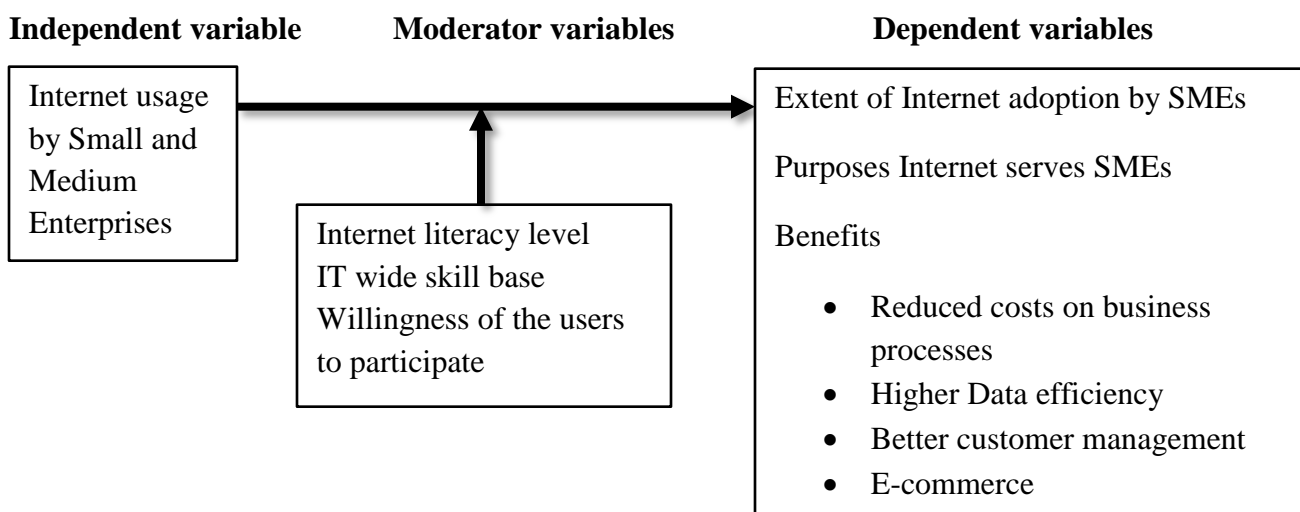
The cost of setting up ICT companies, permit fees, laying of fibre optic cables, setting up of WiMAX station, acquisition of high speed data licenses (3G and 4G) still remain high in Kenya, despite the government's efforts to bring them down. Thus, this has slowed down the development of the ICT sector as a whole, the adoption of Internet by SMEs, and achievement of Vision 2030 goals (Alam and Noor, 2009; Lawrence, 2009; Kapurubandara and Lawson 2006).

The low levels of wide spread skill base and computer & ICT literacy levels have strained the ICT sector in terms of manpower required to encourage widespread adoption of Internet, setting

up of IT and Internet enterprises, the automation of business processes and the use of Internet by the SMEs. This has seen many businesses stuck with the inefficient and redundant paper technology and remain in the dark as far as Internet is concerned (Kamga and Cishahayo, 2010; Alam and Noor, 2009; Kapurubandara and Lawson 2006).

2.5 Conceptual Framework

The conceptual framework of the study is based on the relationship between Internet and small and medium enterprises. This relationship is based on the level of Internet adoption by SMEs, the purposes and benefits SMEs gain as a result of using the Internet.



The researcher set out to investigate Internet usage by SMEs in Nakuru Town Constituency. The study focused on three independent variables: extent of Internet adoption by SMEs, purposes Internet serves SMEs and benefits acquired from adopting and using Internet. The outcomes of the study were moderated by environmental factors of the target population such as the Internet literacy level, IT wide skill base and the willingness of the SME entrepreneurs to participate in the study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology used in the study. The chapter introduces place where the study was conducted, the population surveyed and the population sample interviewed by the researcher. It states the data collection method, analysis and presentation of the results that were to be used in the study.

3.2 Research Design

The study made use of a descriptive survey to gather information about Internet usage from the small and medium enterprises (SMEs) in Nakuru Town Constituency and the benefits SMEs enjoy as a result of using the Internet. Descriptive survey was used because it is a quantitative method of research data collection that requires standardized information from the target population. It makes use of structured research instrument with predefined questions. Data collected from a sample usually represents the characteristics of the target population and therefore, can be generalized for the population. Results from descriptive survey are usually presented in terms of mode, median, mean, frequencies, and percentages. Descriptive survey is best used for Management Information Systems (MIS) research projects and journals (Pinsonneault and Kraemer, 1993).

3.3 Location of Study

The research was conducted in Nakuru Town Constituency, which is to be split into Nakuru Town East Constituency and Nakuru Town West Constituency with the forth coming general elections, in the County of Nakuru. The constituency houses the town of Nakuru, the county headquarters of Nakuru County and the regional administrative headquarters of the divisional, district and provincial administrative offices.

Nakuru Town Constituency is located 150 km west of the capital of Kenya, Nairobi. It is a municipal town placed in between two natural phenomena: the Lake Nakuru and the Menengai

Crater. It has a surface area of 119 sq. km and has a total population of 309,424 people, with a population density of 7998 people per sq. km (the Kenya Government, 2010).

3.4 Population

The population surveyed consisted of 20,355 registered small and medium enterprises, in Nakuru Town Constituency, drawn from 7 of the 8 major categories (The Kenya Government, 2012).

3.5 Sampling Procedures and Sample Size

3.5.1 Sampling Procedure

The selected small and medium enterprises demonstrated stability by having occupied their office space, whether rental or owned, for more than one year, have done business within the boundaries of the Nakuru Town Constituency within the same period of time and have employed at least 1 employee besides the owner-manager or entrepreneur of the business.

3.5.2 Sampling Frame

The sampling frame consisted of a list of registered SMEs drawn from the Municipal Council of Nakuru. The list of the SME was categorized into the following categories of activities the SME falls into in order to ensure accuracy, reliability and relevance to the research topic, findings, and conclusions to be made from the research:

1. 100 General Trade, Wholesale, Retail, Stores, Personal Services
2. 300 Transport, Storage, and Communication
3. 400 Agriculture, Forestry, and Exploitation of Natural Minerals
4. 500 Accommodation and Catering
5. 600 Professional and Technical Services
6. 700 Private Education, Health, and Entertainment Services
7. 800 Industrial Plants, Factories, Workshops, Contractors

3.5.2 Sample size

To pick up the sample, the following formula was used with the sample size n and margin of error E are given by

$$x = Z(c/100)2r(100-r)$$

$$n = N x / ((N-1)E^2 + x)$$

$$E = \sqrt{[(N - n)x / n(N-1)]}$$

Where N is the population size, r is the fraction of responses that the researcher is interested in, and $Z(c/100)$ is the critical value for the confidence level c .

$$n = N x / ((N-1)E^2 + x)$$

$$n = 20355 x / ((21033-1)E^2 + x)$$

$$n = \underline{378}$$

The researcher gathered information from sample indicated in table 3:

Table 3: SME Sampling Frame

BUSINESS CODE	BUSINESS CATEGORY	NUMBER OF SMEs	PERCENTAGE CONSTITUTION	SEGMENT SAMPLE (s)
100	General Trade, Wholesale, Retail, Stores, Personal Services.	15,349	75.41%	282
300	Transport, Storage, and Communications	338	1.66%	12
400	Agriculture, Forestry, & Exploitation Of Natural Minerals	479	2.35%	9
500	Accommodation and Catering	1,530	7.52%	26
600	Professional And Technical Services	565	2.78%	16
700	Private Education, Health and Entertainment Services	438	2.15%	10
800	Industrial Plants, Factories, Workshops, Contractors	1,656	8.14%	31
TOTAL		20,355	100.00	386

3.6 Instrumentation

A structured questionnaire was used to collect quantitative data on the Internet access and usage by small and medium enterprises in Nakuru Town Constituency. It was also used to gather further information on how Internet has benefited SMEs, how the ISPs in the constituency are rated in terms of services and Internet speed, reasons why a SME has not adopted Internet, and rate of Internet usage by the SMEs.

3.7 Validity of the Instrument

Validity is the extent to which an instrument measures what it is supposed to. Validity is established by correlating the scores with a similar instrument. Construct Validity involves the extent to which certain explanatory concepts or qualities account for performance. For example a performance test can be carried out to see how utilization of the Internet benefits the SMEs. To establish construct validity of the instrument, the researcher sought expert opinion from the university supervisors.

3.8 Reliability of the Instrument

The questionnaire was created by the researcher and to test its reliability, a sample size of 18 SMEs was used in the pilot study. During the pilot study, the researcher noted that the respondents felt that the questionnaire was too long and the respondents had a difficulty in answering question 3 of section A. to correct this, the researcher together with Dr. Jason Githeko, reduced the size of the questionnaire from 4 pages to 2 pages by reducing spaces between lines to single space. The researcher then combined questions 3a and 3b into question 3a to collect reliable data. Then the researcher provided an extra table detailing SME categorization to assist in answering question 3 of section A. Question 6 was added to the questionnaire to gather information on how SMEs accessed the Internet.

To increase reliability of the instrument, questions in section B part A were written in statement form so that the respondents would either agree or disagree with the statements. This checked the reliability and accuracy of the questionnaire in gathering relevant information for the

research and once the necessary adjustments were made, the researcher went on and conducted a full research.

3.9 Data Collection Procedures

The researcher hand delivered the questionnaires to the selected SMEs, and after introductions and stating the reason for the visit, handed over the questionnaires to the owner-manager who filled in the questionnaires. This method ensured that the researcher collected relevant and accurate data for the research in a timely manner.

3.10 Data Analysis

Data collected was analyzed by use of Ms-Excel computer software which was also used to derive the frequency, mean, mode and median of the data. Data was analyzed through descriptive statistics and summarized using frequencies and percentages.

3.11 Results Presentation

Results obtained from the analysis of data were presented and summarized in form of pie charts, frequency tables, and bar graphs. From the presentations, the researcher was able to draw conclusions and make recommendations for further studies.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the research findings, their analysis, interpretation and discussion on the extent of Internet usage and adoption by the SMEs, the benefits acquired by the businesses as a result of using the Internet, and reasons why some SMEs may not have Internet access. Further information gathered and analyzed were the ISP rating by the SMEs, business process expenditure saved by use of Internet, how businesses accessed the Internet and ways of increasing Internet adoption by the SMEs. Data was collected from a sample of registered businesses in the constituency of Nakuru Town. Analysis of the data was done through the use of Ms-Excel software used to derive the frequency, mean, mode and median of the data. Presentation of the results was in form of pie charts, bar graphs and frequency tables.

4.2 Demographic Characteristics of the SMEs

SMEs in the constituency of Nakuru Town are stratified into seven major categories, that is category 100 General Trade, Wholesale, Retail, Stores, Personal Services, category 300 Transport, Storage, and Communication, category 400 Agriculture, category 500 Accommodation and Catering, category 600 Professional and Technical Services, category 700 Private Education, and category 800 Industrial Plants, Factories, Workshops, Contractors. The businesses surveyed had operated in the Nakuru Town Constituency for a mean period of 5 years and 8 months and had employed a mean of 7 employees per business in that period of time. A sample of 386 SMEs was obtained by stratified random sampling.

4.2.1 Extent of Internet Access by SMEs

A descriptive analysis was done to describe the extent of Internet usage by the businesses, the benefits acquired from Internet usage and the purposes of Internet to the businesses. The results were summarized in figure 1 and figure 2 below. The frequency tables for the results are provided in Appendix E

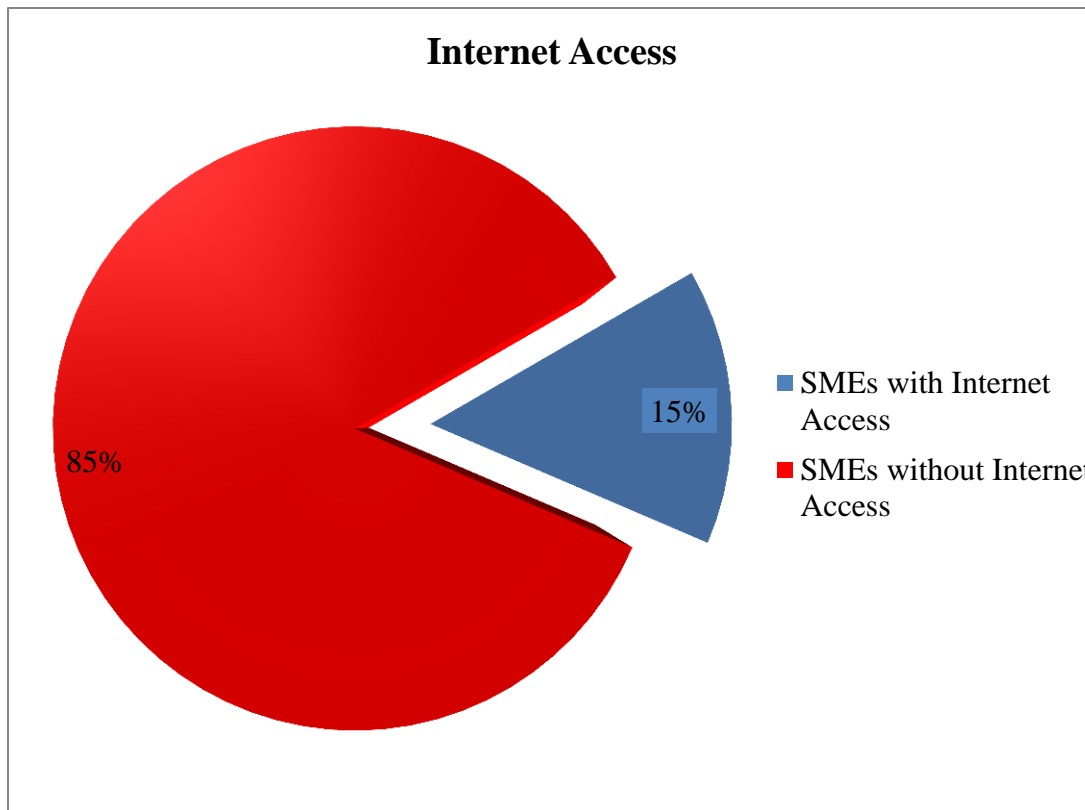


Figure 1: Extent of Internet Adoption by SMEs in Nakuru Town Constituency

Majority of the respondents (85%) had not adopted Internet in their businesses, while the remaining small portion (15%) of the respondents had Internet access. The reasons were summarized in the tables and bar graphs below. Figure 1 below summarizes reasons why majority of the respondents do not have Internet access.

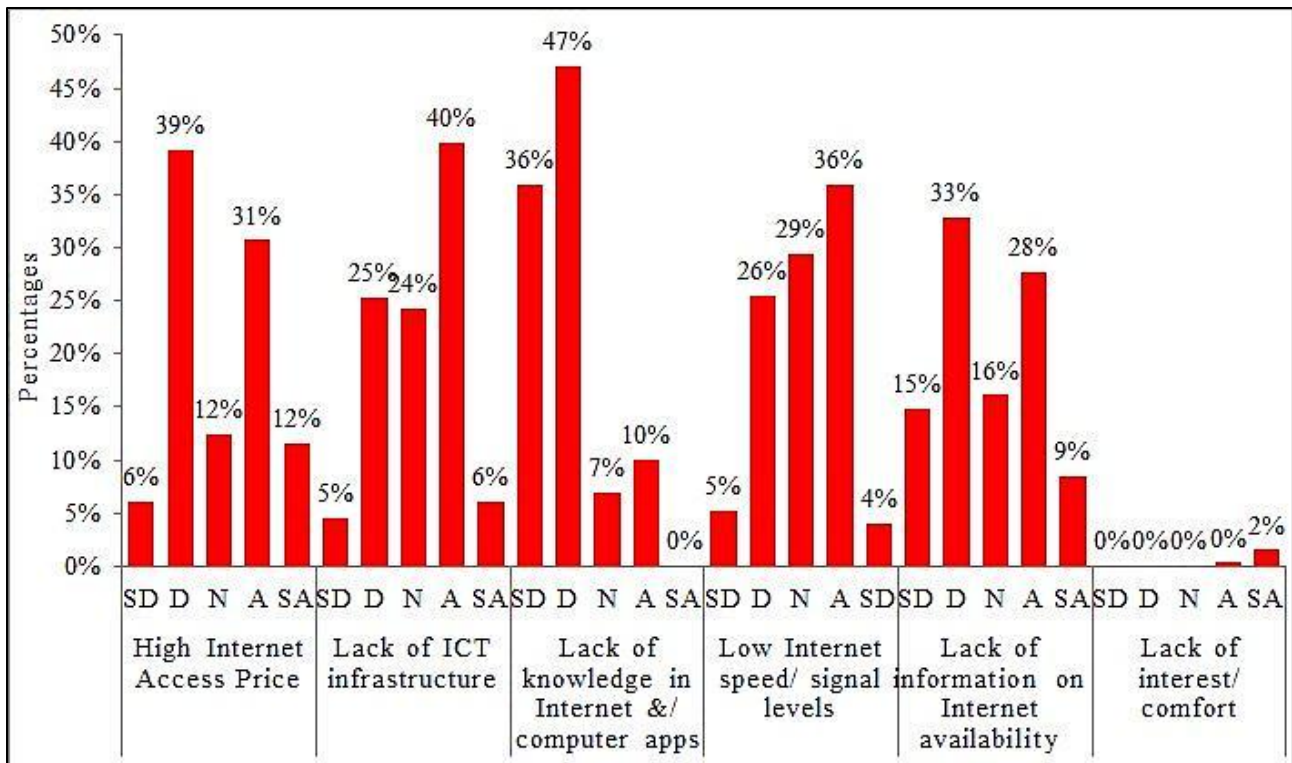


Figure 2: Reasons for not adopting Internet by SMEs

The respondents were asked five questions to state reasons why they had not adopted Internet on a five point likert scale. The respondents were to agree or disagree with the statements provided in section B part A. According to figure 2, when asked whether the Internet access fee was too high, 6% of the respondents strongly disagreed (SD), 39% of the respondents disagreed, 12% of the respondents neither agreed nor disagreed (N), 31% of the respondents were in agreement (A) and 12% strongly agreed. Overall, majority(45%) of the respondents were not hindered by Internet access fees, while 42% of the respondents found Internet access fee too high for them to adopt Internet. This means that even though price of Internet access is a major challenge to Internet adoption by SMEs, reduction of price would see a significant number of SMEs embracing Internet. Alam and Noor (2009) state that price is an important factor in Internet/ICT adoption and that the higher the price, the slower the pace of adoption.

When the respondents were asked if there was lack of ICT infrastructure, 5% of the respondents strongly disagreed (SD), 25% of the respondents disagreed (D), 24% of the respondents neither agreed nor disagreed (N), 40% of the respondents agreed (A), and 6% of the

respondents strongly agreed (SA). This implied that low levels of ICT infrastructure in Nakuru Town Constituency prevented SMEs from adopting Internet in their business processes. Kapurubandara and Lawson (2006) observed that lack of ICT infrastructure was one of the main barriers to adoption of Internet and ICT by SMEs in developing countries. Due to low levels of ICT infrastructure, wireless signal levels and Internet speeds tend to be low thus hindering adoption of Internet by SMEs. The ICT infrastructure is not sufficient enough to serve the SME demand. The same ICT infrastructure is also used to provide citizens with Internet.

When asked whether or not SME entrepreneurs lacked knowledge in Internet and/or computer applications (apps), 36% of the respondents strongly disagreed (SD), 47% of the respondents disagreed (D), 7% the respondents were neither agreed nor disagreed (N), and 10% of the respondents agreed (A). This implied that most of the SME entrepreneurs and/or employees had knowledge in Internet and/or computer applications, but had not taken the relevant steps to adopt Internet. This could have been brought about by other challenges facing Internet adoption by SMEs, or the environment in which they operated in. Alam and Noor (2009) stated that SMEs were unlikely to adopt sophisticated technologies if they were unfamiliar with basic technology. Furthermore, SME owners/entrepreneurs are unlikely to adopt Internet if their employees lack skills in Internet/computer apps or if they perceived that Internet and computer technology could be used by specialist staff.

When asked if the Internet speeds/ signal levels were low, 5% of the respondents strongly disagreed (SD), 26% of the respondents disagreed (D), 29% of the respondent neither agreed nor disagreed, 36% of the respondents agreed (A), and 4% of the respondents strongly agreed (SA). This implied that low Internet speeds and/or signal levels for wireless connectivity hindered many SMEs from adopting Internet.

When asked whether they lacked information on the availability of Internet, 15% of the respondents strongly disagreed (SD), 33% of the respondents disagreed (D), 16% neither disagreed nor agreed, 28% of the respondents agreed (A) and 9% of the respondents strongly agreed (SA).

This implied that a majority of the respondents (48%) were aware of Internet availability but factors such as low Internet speeds and lack of ICT infrastructure hindered them from adopting Internet. A sizeable number (36%) were not aware of Internet availability and thus hindered them from adopting Internet in their businesses.

Furthermore, there was a small group of SMEs (2%) that expressed lack of lack of interest in adopting Internet or were comfortable in their current state. This implied that they were reluctant to adopting Internet.

4.2.2 Reasons and benefits acquired through Internet usage.

Among SMEs that have adopted Internet, the researcher conducted a descriptive analysis to describe how Internet was used in business processes and how SMEs benefited from Internet usage. Figures3, 4 and 5 summarize Internet access and usage by the SMEs that have Internet access. SMEs that have adopted Internet Access spend a mean Internet access fee of KShs 3,277.29 per month.

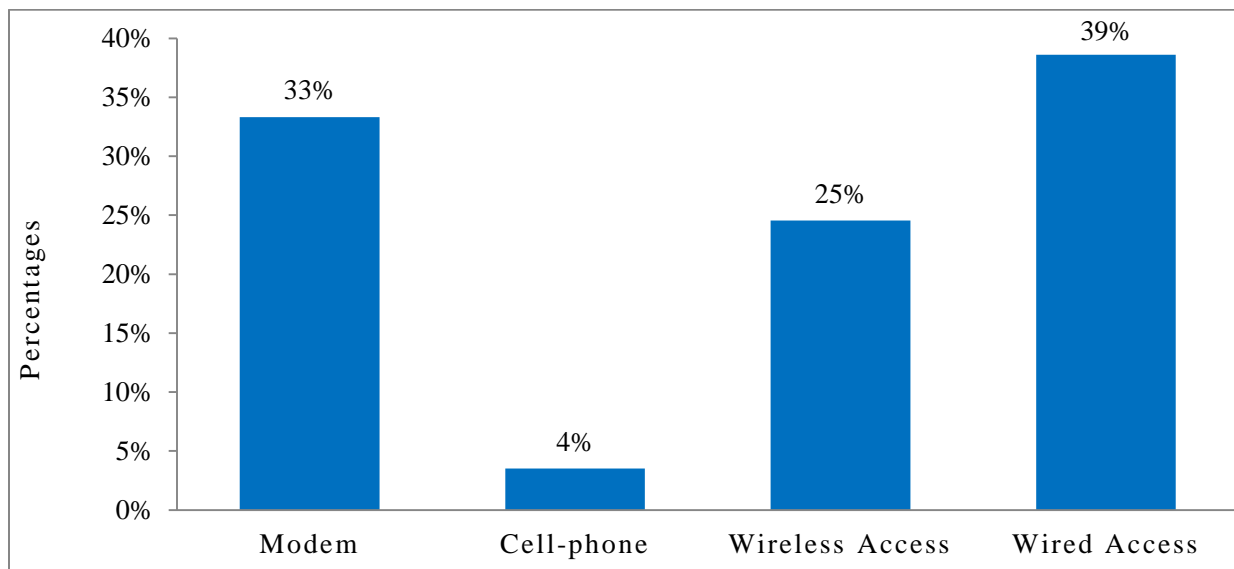


Figure 3: Internet Access methods by SMEs

SMEs that have adopted Internet form 15% of the total number of SMEs in this Nakuru Town Constituency. According to figure 3, majority (39%) of the SMEs access Internet through wired access – that is fibre optic or coaxial cable, 33% access Internet through modems, 25%of the SMEs access Internet through wireless connectivity (WiMAX) and 4% of the SMEs access Internet

through mobile connectivity (cellphone). This implied that many of the SMEs were familiar and had adopted modern technology in terms of Internet access that is fibre optic.

Figures 4 and 5 below summarize reasons why SMEs use Internet. Wireless Internet access works by the ISP Company, such as ZUKU, setting up WiMAX radio station on high altitude level – usually on top of a tall building or hillside – to ensure there is line of sight between the tower and the customers WiMAX receiver. The WiMAX radio station transmits high frequency, high bandwidth microwave signals which are picked by the customer's WiMAX receiver. Through WiMAX wireless networks, a WiMAX tower station can cover a range up to 50 km radius and transmit up to 70 megabits per second Internet speeds. WiMAX receivers look like a small white box with an Ethernet cable running from the receiver to the customer receiving computer for Internet connectivity. WiMAX networks are cheaper to deploy, configure and maintain than fibre optic networks hence WiMAX Internet access fee tend to be cheaper.

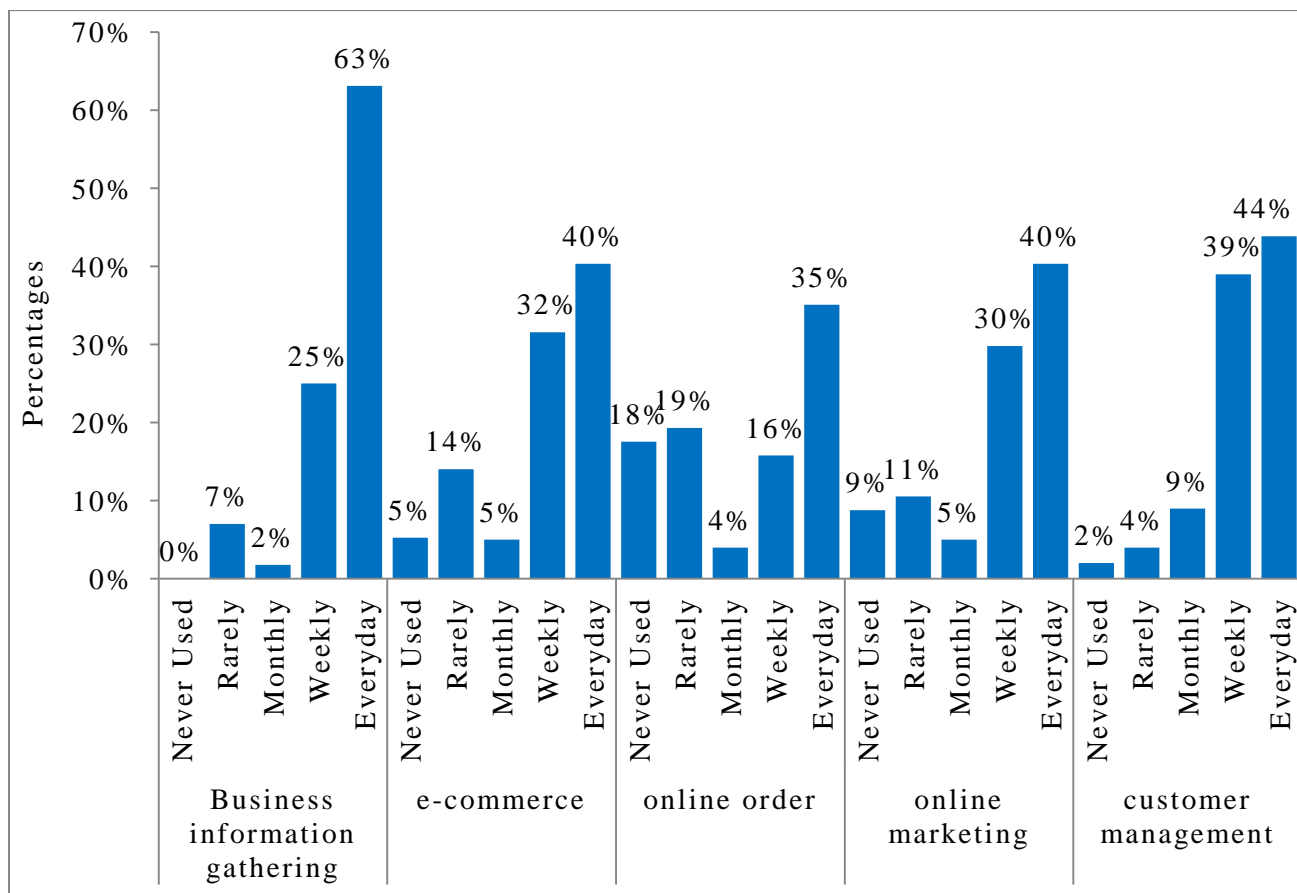


Figure 4: Internet Usage among SMEs: Business info gathering, e-commerce, online ordering, online marketing, and customer management.

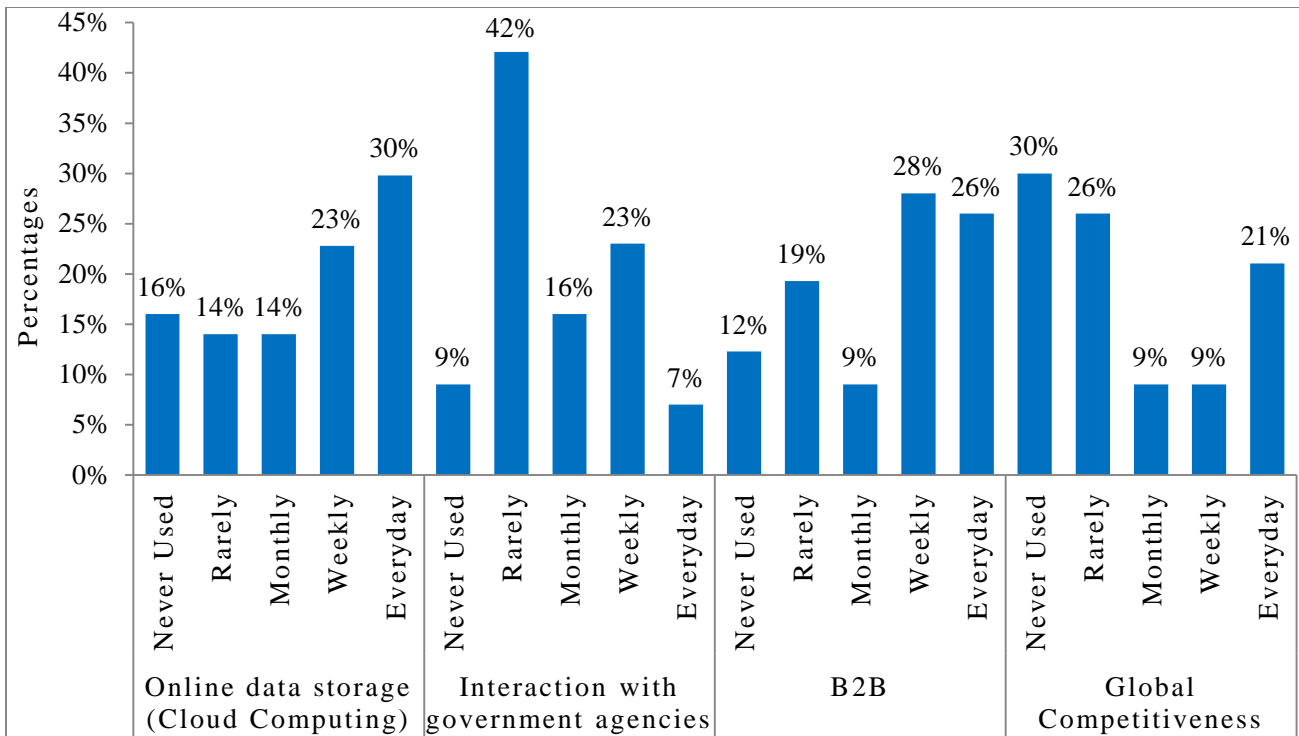


Figure 5: Internet Usage among SMEs: Cloud computing, interaction with government agencies, B2B, and global competitiveness

According to figures 4 and 5 when asked the rate of usage in terms of gathering timely and accurate information, none (0%) of the respondents said they have never used it, 7% of the respondents said they rarely used for information gathering, 2% of the respondents said they use the Internet on a monthly basis for information gathering, 25% of the respondents said they use Internet on a weekly basis for information gathering, and 63% used Internet to gather information daily. This implied that Internet is extensively used by SMEs to gather timely and accurate information for the enterprises.

When asked the rate at which they used the Internet for e-commerce, 5% of the respondents said that they have never used the Internet for e-commerce, 14% of the respondents said that they rarely used the Internet for e-commerce, 5% of the respondents said that they used the Internet for e-commerce on a monthly basis, 32% of the respondents said they use the Internet for e-commerce on a weekly basis, and 40% of the respondents said that they used the Internet daily for e-commerce. This implied that majority (72%) of the SMEs used the Internet for e-commerce frequently thus requiring efficient and fast Internet speeds.

When asked the rate of Internet usage in ordering of business' goods and/or services, 18% of the respondents said they have never ordered for products online, 19% of the respondents said that they rarely ordered for products over the Internet, 4% of the respondents said that they order for products online on a monthly basis, 16% of the respondents said that they order for products on a weekly basis, and 35% of the respondents said that they order for products online daily. This implied that majority of the respondents (51%) used the Internet for product ordering, suggesting that most manufactures/wholesalers have established an online presence.

When asked the rate at which they marketed their finished goods and/or services online, 9% of the respondents said that have never market their products online, another 11% said that they rarely marketed their products online, 5% of the respondents market their products online on a monthly basis, 30% of the respondents market their products online weekly and 40% of the respondents market their products daily. This implied that majority (70%) of the SMEs used the Internet to market their products online frequently, thus understanding the role Internet plays and cost reduction in marketing one's products.

When asked the rate of Internet usage on managing and communicating with their customers, 2% of the respondents said that they never used the Internet to manage their customers, 4% of the respondents rarely used the Internet for customer management, 9% of the respondents manage their customers on a monthly basis, 39% of the respondents manage their customers on a weekly basis, and 44% of the respondents manage their customers daily. This implied that majority of the SMEs (83%) used the Internet for customer management.

When asked if they used the Internet for cloud computing, 23% of the respondents said they have never used the Internet for cloud computing, 16% of the respondents said they rarely stored their data online, 14% of the respondents said they store their data online on a monthly basis, 14% of the respondents store their data online on a monthly basis, 23% of the respondents said they store their data online weekly and 30% of the respondents store their data online daily. This implied that majority (53%) of the respondents were knowledgeable and used the Internet for cloud computing.

In the area of SME interaction with government agencies such as KRA, 9% of the respondents have never interacted with government agencies online, 42% of the respondents rarely interacted with government agencies online, 16% of the respondents interacted with government agencies on a monthly basis, 23% of the respondents interacted on a weekly basis and 7% of the respondents interacted with government agencies daily. This implied that most of the SMEs (51%) do not interact with government agencies thus suggesting that they are not informed on the benefits of online interaction with government agencies.

When asked the rate at which they interacted with other businesses (B2B) over the Internet, 12% of the respondents said that they never interacted with other businesses, 19% of the respondents rarely interacted with other businesses online, 9% interacted with other businesses online on a monthly basis, 28% of the respondents interacted with other businesses on a weekly basis, and 26% of the respondents interacted daily with other respondents online. This implied many of the SMEs (54%) used the Internet for B2B signifying understanding the benefits associated with B2B.

On achieving global competitiveness, 30% of the respondents do not use the Internet to achieve global competitiveness, 26% of the respondents rarely use the Internet to achieve global competitiveness, 9% of the respondents use the Internet to achieve global competitiveness on a monthly basis, 9% of the respondents used the Internet weekly to achieve global competitiveness, and 21% of the respondents used the Internet daily to achieve global competitiveness. This implied that majority of the SMEs (56%) were not aware of the fact that Internet can be used to make a SME be competitive globally and offer products to a global market with large and multinational companies at a minimal cost.

Figures 6 and 7 below summarize the benefits SMEs have acquired as a result of adopting and using Internet in their business processes. The respondents were asked eight questions to state how Internet usage has benefited their enterprises on a five point likert scale. The respondents were to agree or disagree with the statements provided in question 7 of section B.

Lawrence (2009) states that Internet usage by SMEs opens up new opportunities that are beneficial to the business and can be explored with minimal costs. Such benefits include business being able to access global markets by removing political and geographical barriers. Then Internet can provide one with a platform to connect with millions of users globally. This enables a business entrepreneur to market his goods/services to a global market and establish efficient customer management system. Internet opens opportunities for business to exchange information and/or products through e-mail and e-commerce. This creates online business environments and communities.

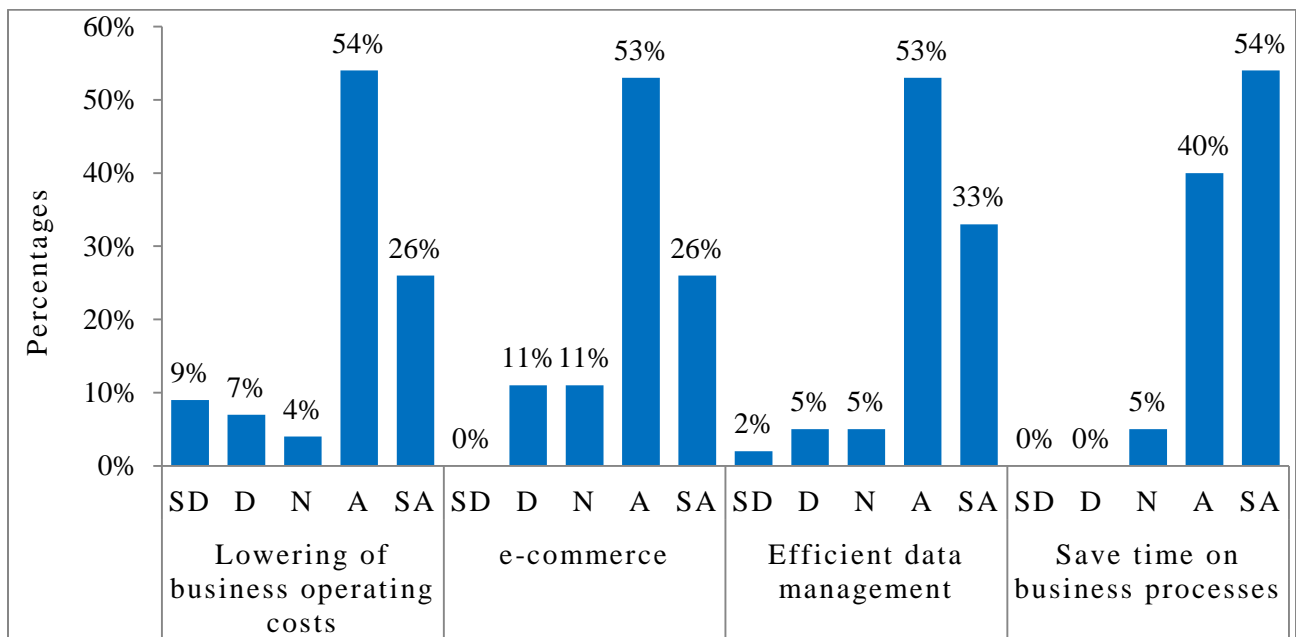


Figure 6: Benefits of the Internet for SMEs: lowering of business operating costs, e-commerce, efficient data management and saving business processes time

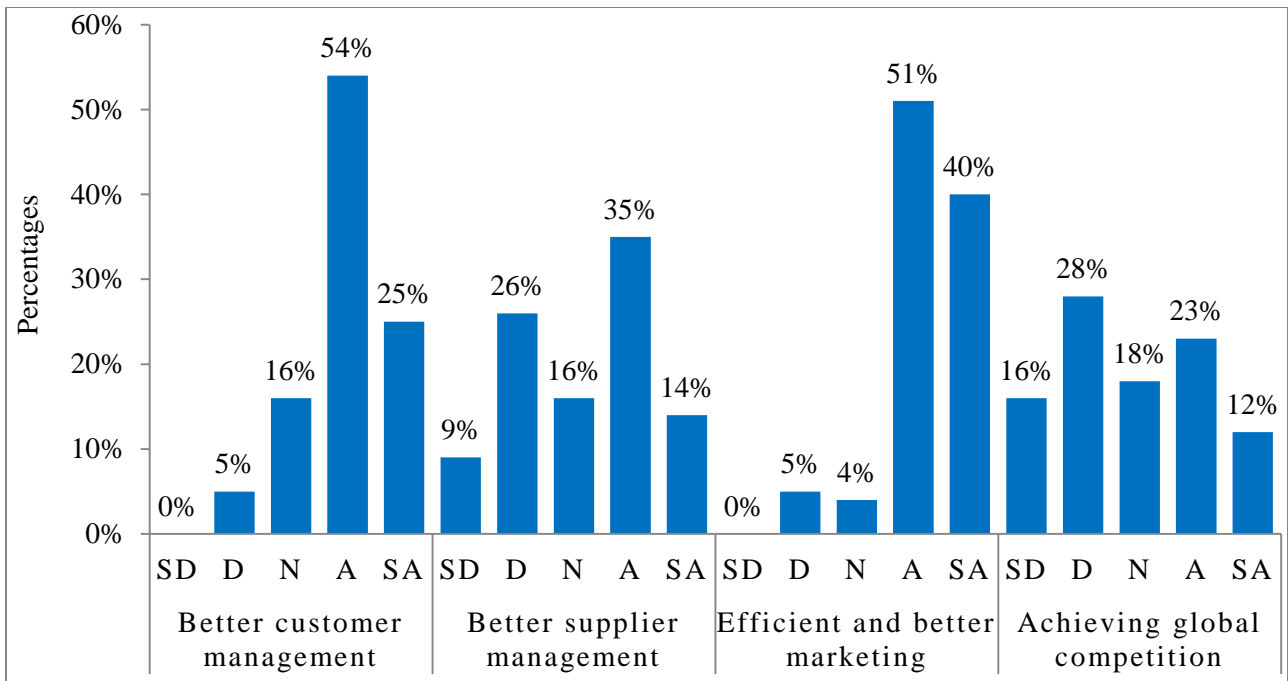


Figure 7: Benefits of the Internet for SMEs: Better customer and supplier management, efficient marketing and achieving global competition.

According to figures 6 and 7, when asked if Internet usage has helped lower business operating costs, 9% of the respondents strongly disagreed (SD), 7% of the respondents disagreed (D), 4% of the respondents neither agreed nor disagreed (N), 54% of the respondents agreed (A), and 26% of the respondents strongly agreed (SA). This implied majority of the SMEs (80%) had their business operating costs reduced as a result of Internet usage. Lawrence (2009) states that SMEs that make use of information technology/Internet tend to reduce business operating costs and improve on communication. This further improves on the overall performance of the businesses.

When asked if Internet has helped establish e-commerce for the enterprises, 11% of the respondents disagreed (D), 11% of the respondents neither agreed nor disagreed (N), 53% of the respondents agreed (A), and 26% of the respondents strongly agreed (SA). This implied as a result of Internet usage, majority of the SMEs (79%) were able to inaugurate e-commerce as part of their business processes.

When asked if the use of Internet had resulted in better and efficient business data management, 2% of the respondents strongly disagreed (SD), 5% of the respondents disagreed (D), 5% of the respondents neither agreed nor disagreed (N), 53% of the respondents agreed, and 33% of

the respondents strongly agreed (SA). This implied majority (86%) of the SMEs achieved efficient and better business data management as a result of Internet usage. When asked if Internet usage saved time in performing business processes, 5% of the respondents neither agreed nor disagreed, 40% of the respondents agreed (A), and 54% of the respondents strongly agreed (SA). This implied that majority (94%) of the respondents saved time on business processes as result of Internet usage, in mainly communication, marketing, and customer management.

When asked if Internet usage had resulted in better customer management, 5% of the respondents disagreed (D), 16% of the respondents neither agreed nor disagreed (N), 54% of the respondents agreed, and 25% of the respondents strongly agreed. This implied that majority SMEs (79%) were able to gain better customer management as a result of Internet usage.

When asked if Internet usage resulted in better supplier management, 9% of the respondents strongly disagreed (SD), 26% of the respondents disagreed (D), 16% of the respondents neither agreed nor disagreed (N), 35% of the respondents agreed (A), and 14% of the respondents strongly agreed (SA). This implied that majority of the SMEs (49%) use the Internet for supplier management. Lawrence (2009) states that use of the Internet can enable a business have an efficient means of customer and supplier management on a global scale with minimal cost.

When asked if Internet usage had resulted in better marketing of one's products/services, 5% of the respondents disagreed (D), 4% of the respondents neither agreed nor disagreed (N), 51% of the respondents agreed (A), and 40% of the respondents strongly agreed (SA). This implied that majority of the SMEs (91%) were able to realize better and efficient marketing of their business' products as a result of Internet usage.

On asked if Internet usage helped them reach global competitiveness, 16% of the respondents strongly disagreed (SD), 28% of the respondents strongly disagreed (SD), 28% of the respondents disagreed (D), 18% of the respondents neither agreed nor disagreed (N), 23% of the respondents agreed (A) and 12% of the respondents strongly agreed (SA). This implied that most of the SMEs (44%) failed to use the Internet to achieve global competitiveness.

Still on benefits, the SMEs were asked to state areas of their business processes where they were able to save on business costs and the figure 8 summarizes savings on business process expenditures. Shi et al (2004) states that SMEs can make use the Internet to support their business processes and establish e-business. The benefits of e-business include improved competitive position, attraction of new customers (e-marketing), improved internal knowledge sharing (communication), enhanced and efficient service (customer management), improved supply activity (supply management), and recruitment of staff online (staff and business resource management).

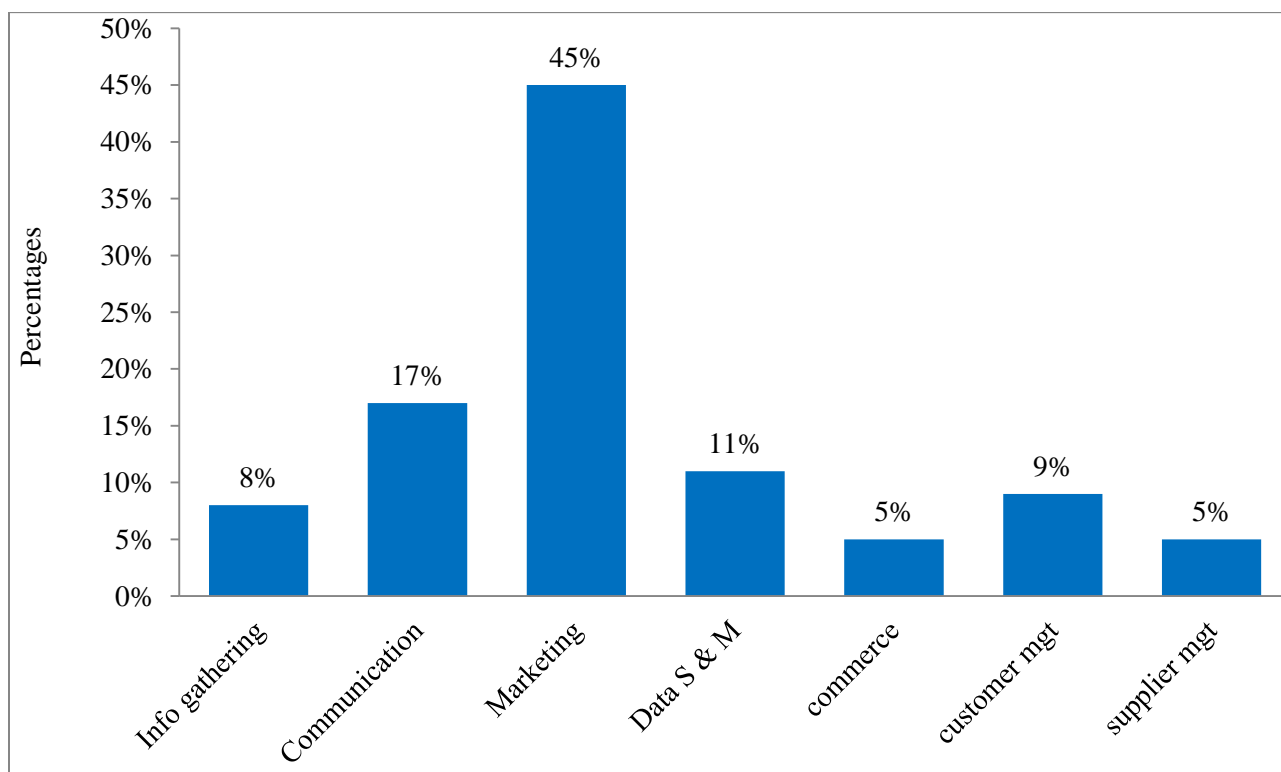


Figure 8: Savings on Business processes expenditures for SMEs as result of Internet Usage

According to figure 8, 8% of the SMEs saved expenditures on gathering timely and accurate information for their business, 17% of the SMEs saved costs on communication, 45% of the SMEs saved costs in marketing expenditure, 11% of the SMEs saved costs on data storage and manipulation (Data S & M), 5% of the SMEs saved costs commerce through the establishment of e-commerce, 9% of the SMEs saved costs on customer management, and 5% of the SMEs saved costs on supplier management due to Internet adoption and usage. This implied that majority of the SMEs, made use of the Internet for marketing purposes, followed by communication purposes and then for data storage and manipulation.

4.2.3 ISP Rating, Recommendation and ways of improving Internet adoption and usage by SMEs in Nakuru Town Constituency.

In Nakuru Town Constituency, there are six Internet service providers (ISPs) and figure 9 below summarizes their market ratio among SMEs.

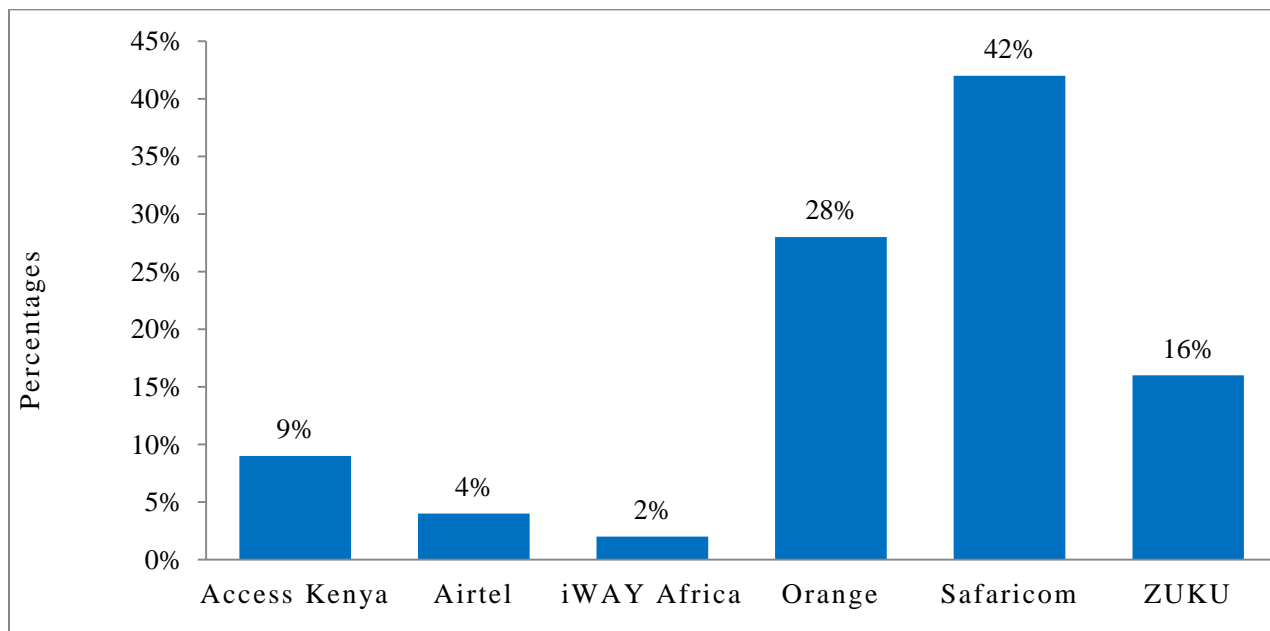


Figure 9: ISP market share in SME category

According to figure 9, Safaricom has the highest market share of 42% of the SMEs with Internet access, Orange comes second with 28% market share, ZUKU comes third with 16% market share, Access Kenya comes fourth with 9% market share, Airtel comes to the fifth position with 4% market share, and finally iWay Africa has 2% market share. This is brought about Internet access fee and ISP service delivery. Figure 10 below summarizes how the SMEs with Internet connectivity rated their ISPs.

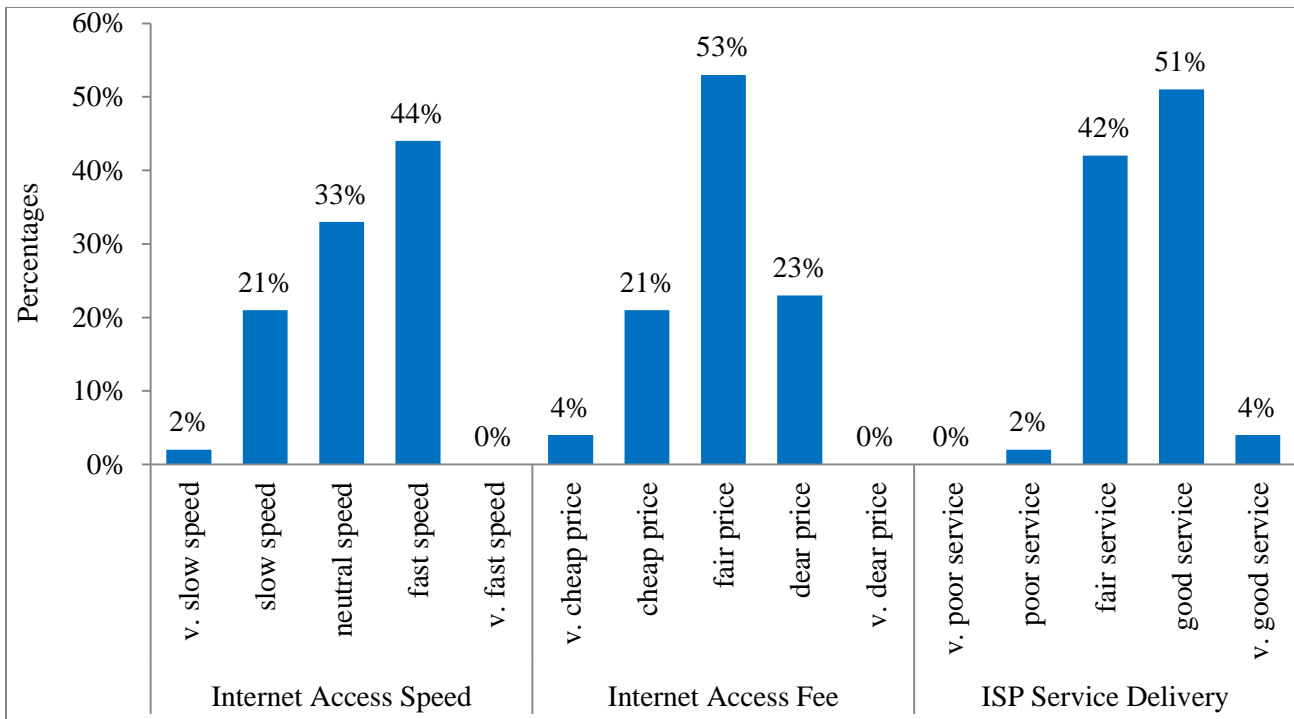


Figure 10: ISP rating by SMEs

According to figure 10, 2% of the respondents rated their ISPs' Internet speed as very slow, 21% of the respondents rated their ISPs' Internet speed as slow, 33% of the respondents rated their ISPs' Internet speed as neutral, and 44% of the respondents rated their ISPs' Internet speed as fast. This implied that ISPs needed to increase their Internet speed for more SMEs to adopt Internet. 4% of the respondents rated their ISPs' Internet access fee as very cheap, 21% of the respondents rated their ISPs' Internet access fee as cheap, 53% of the respondents rated their ISPs' Internet access fee as fair and 23% of the respondents rated their ISPs' Internet access fee as expensive. This implied that most of the SMEs found the Internet access fee as affordable. In terms of ISP service delivery, 2% of the respondents rated their ISPs' service delivery as poor, 42% of the respondents rated the services provided as fair, 51% of the respondents rated the services provided as good, and 4% of the respondents rated the services provided as very good. This implied that ISPs provided good and professional services.

The SMEs were then asked if they would recommend their respective ISPs to other SMEs and the reasons why. The reasons for recommendation were price of Internet access, service delivery of the ISP, and Internet speed. These were summarized in figure 11 below.

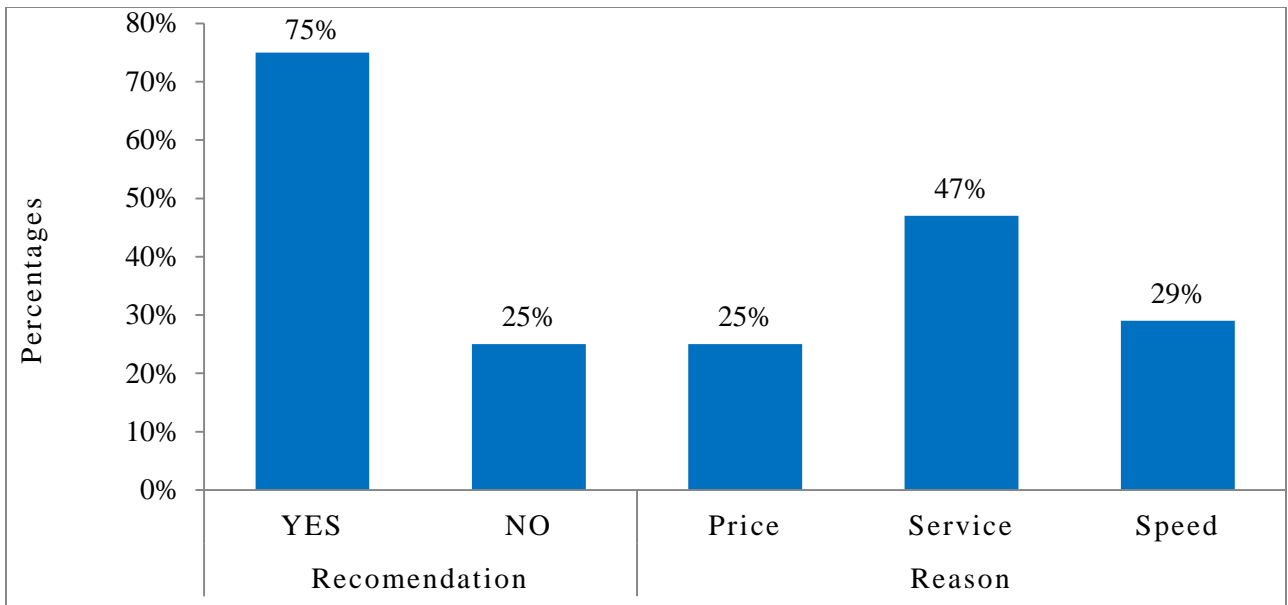


Figure 11: ISP recommendation and reasons

According to figure 11, 75% of the respondents would recommend their ISPs to other SMEs, and 25% of the respondents would not recommend their ISPs to other SMEs. This implied that majority of the SMEs with Internet access were satisfied with their ISPs. On the issues of reason for or not recommending an ISP to another SME, ISP service delivery would be a major reason at 47% followed by the Internet speed at 31%, and finally the price of Internet access at 25%. This implied that ISPs can increase their SME customer base to market them more if they increased their Internet speeds and reduced the price of Internet access.

Figure 12 below summarizes steps to be taken by the ISPs if they were to increase Internet adoption and usage by SMEs in Nakuru Town Constituency.

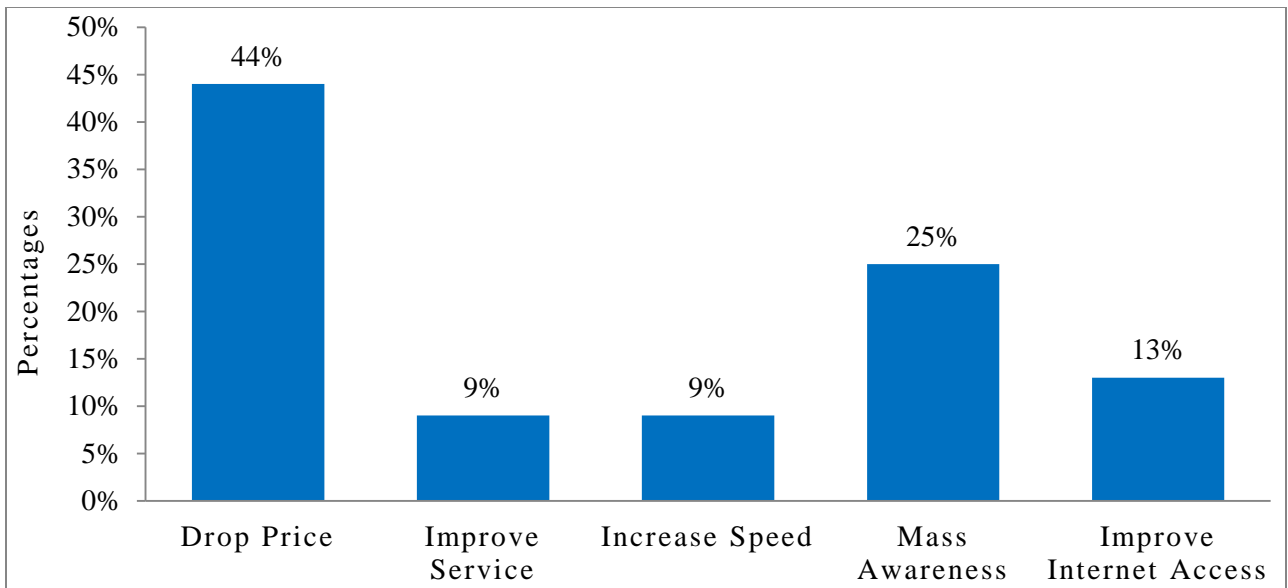


Figure 12: Ways of increasing Internet Adoption and Usage

According to figure 12, 44% of the respondents advised that Internet adoption and usage would be increased if the ISPs lowered their Internet access fee. 25% of the respondents advised that Internet adoption and usage would be increased if the ISPs got involved in mass awareness and education on Internet availability and benefits. 13% of the respondents advised that Internet adoption and usage would be increased if the ISPs improved on Internet access by having more access points in the constituency, laid down fibre optic cables and boosted signal levels. 9% of the respondents advised that Internet adoption and usage would increase if the ISPs increased their Internet speeds. 9% of the respondents advised that Internet adoption and usage would increase if the ISPs improved their service delivery. This implied that by dropping Internet access prices and engaging in mass awareness campaigns, ISPs would greatly increase the number of SMEs that would adopt and use the Internet in their business processes. They would also benefit from increased customer base and revenue.

4.3 Comparison of Internet access, usage and savings on business processes expenditure among the seven SME categories

The study results present Internet access and usage by SMEs in in each of the seven categories. Also the results compare which business processes have had their expenditure lowered

as a result of Internet usage. Finally, the results present ISP market share among the seven categories. Figures 13 to 23 below summarize the findings.

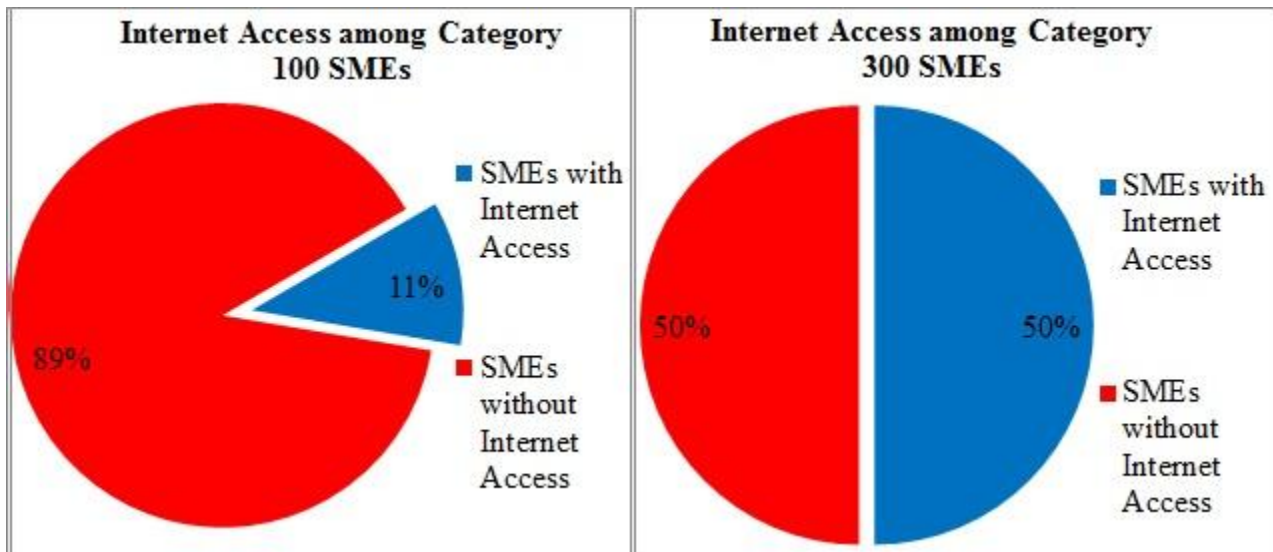


Figure 13: Internet Access among categories 100 and 300 SMEs respectively

According to figure 13, category 300 SMEs has the highest Internet adoption at 50%, while category 100 SMEs has the lowest Internet adoption in the seven categories at only 11% of the SMEs having Internet access. This implies that Internet adoption would increase if ISP companies focused on category 100 SMEs that form 74.42% of the total SMEs in Nakuru Town Constituency.

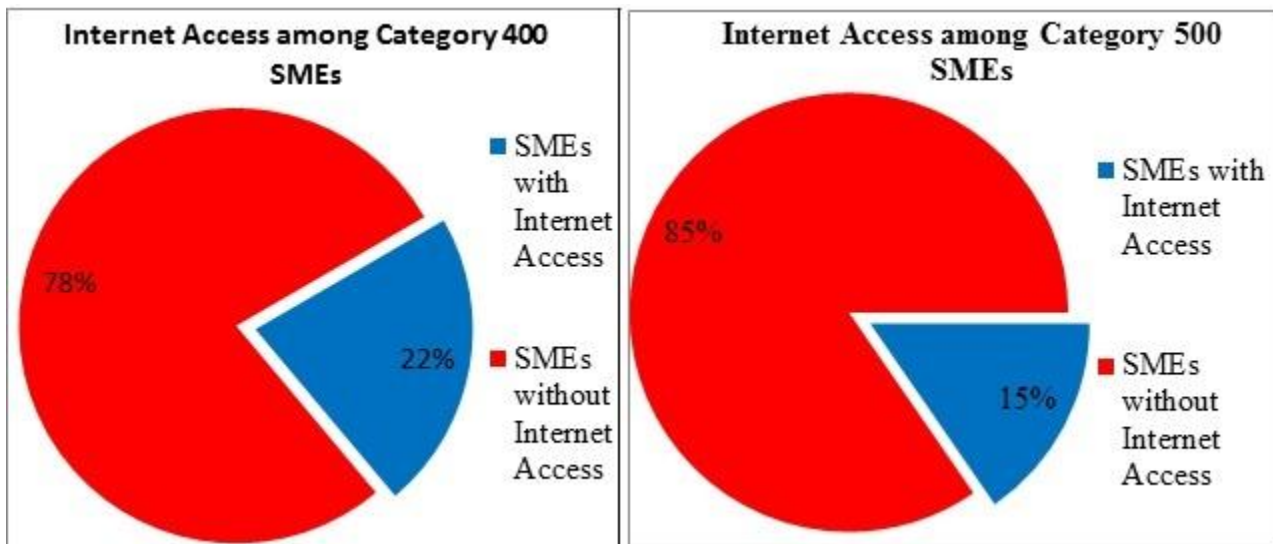


Figure 14: Internet Access among categories 400 and 500 SMEs respectively

According to figure 14, category 400 is the fourth highest in terms of Internet adoption with 22% of its SMEs adopting the Internet, while category 500 takes position 6 with 15% Internet adoption.

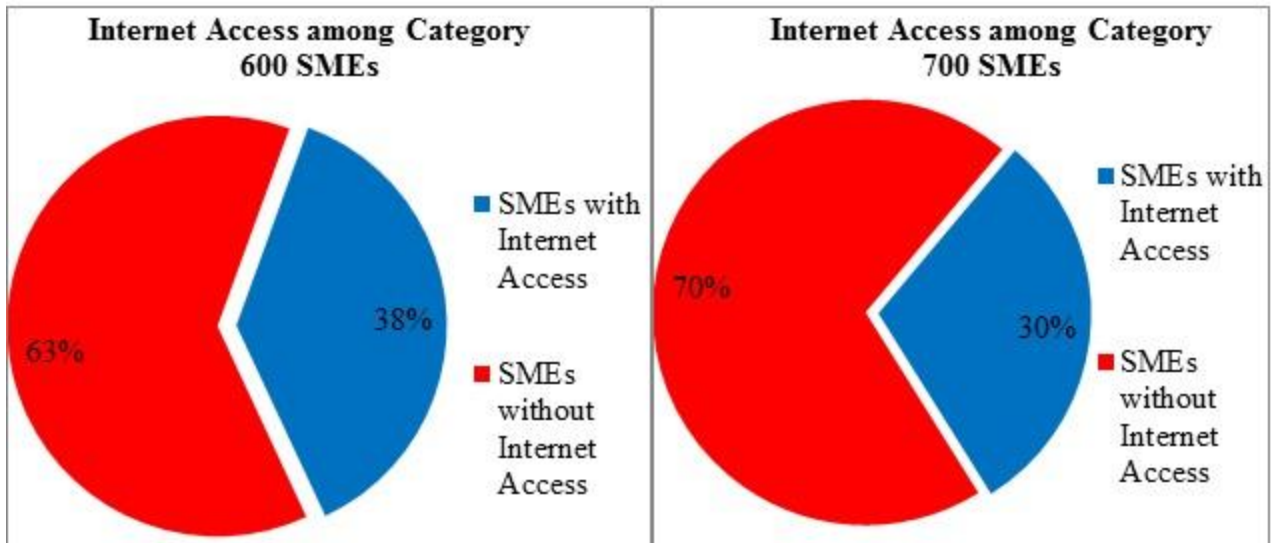


Figure 15: Internet Access among categories 600 and 700 SMEs respectively

According to figure 15, category 600 is second to category 300 in terms of Internet adoption at 38%. Category 700 comes third with 30% Internet adoption among its SMEs.

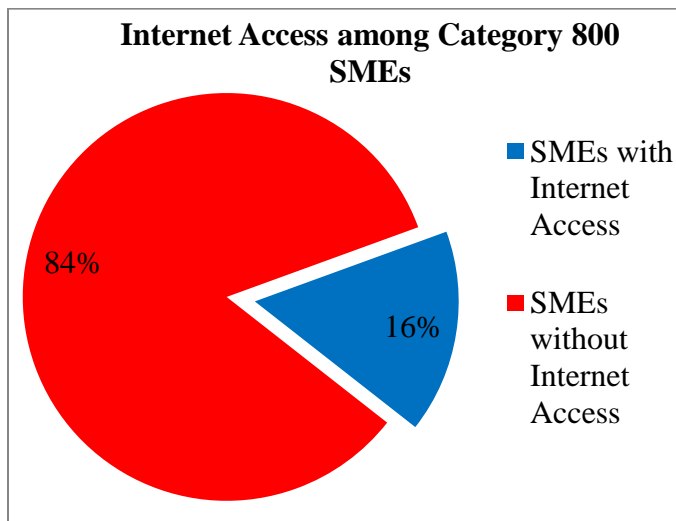


Figure 16: Internet Access among category 800 SMEs

According to figure 16, category 800 comes fifth in terms of Internet adoption with 16% of its SMEs adopting Internet. Figures 17 to 23 below summarize savings on business processes as a result of Internet adoption and usage by SMEs across the seven categories.

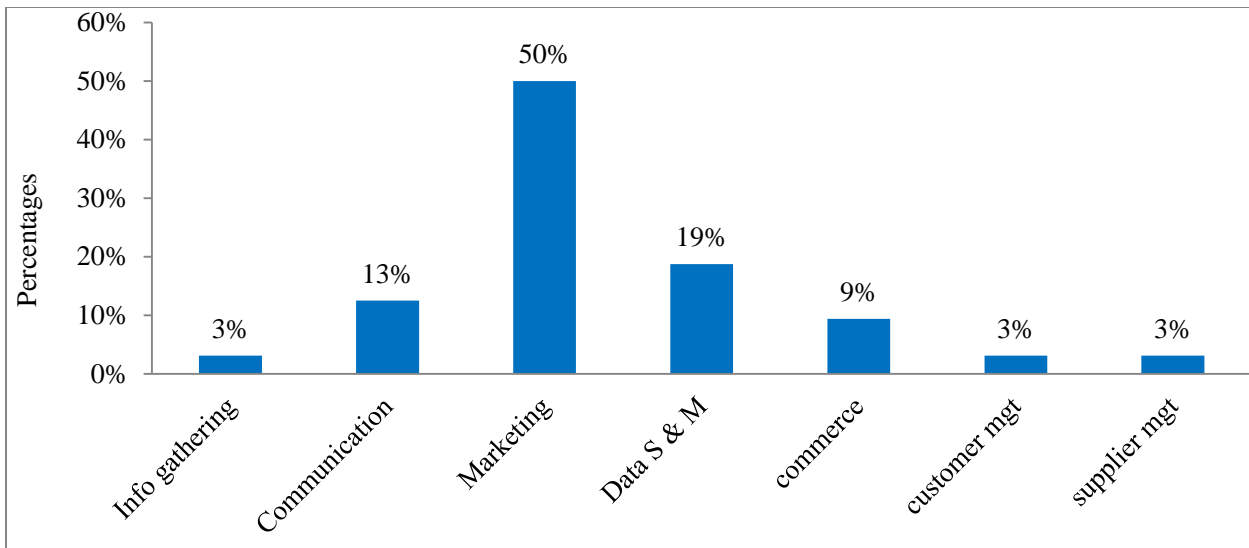


Figure 17: Savings on Business processes expenditures for category 100 SMEs as result of Internet Usage

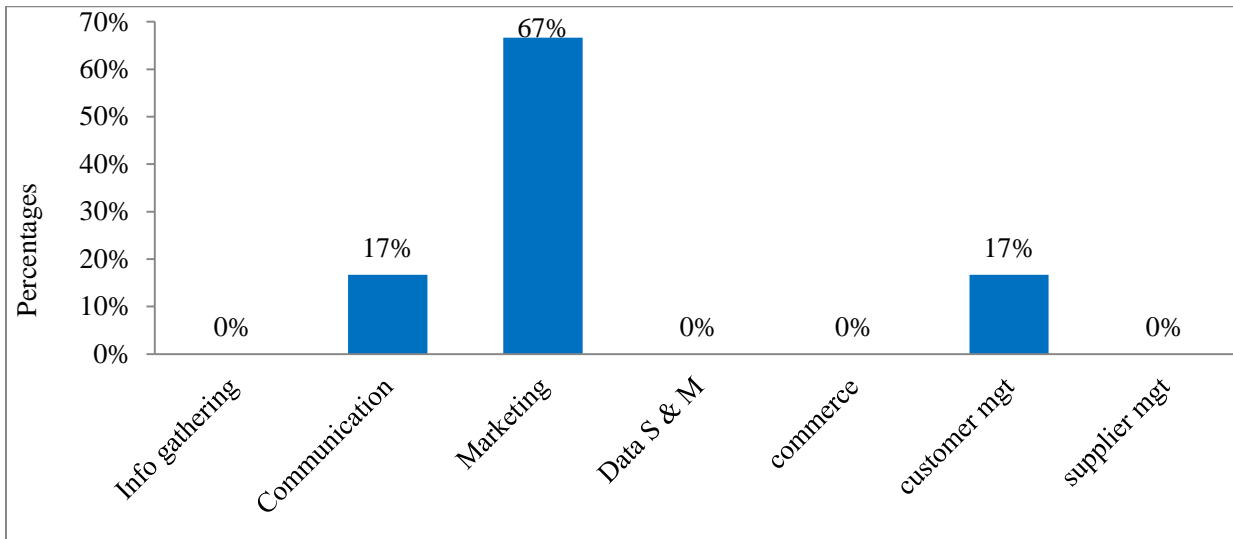


Figure 18: Savings on Business processes expenditures for category 300 SMEs as result of Internet Usage

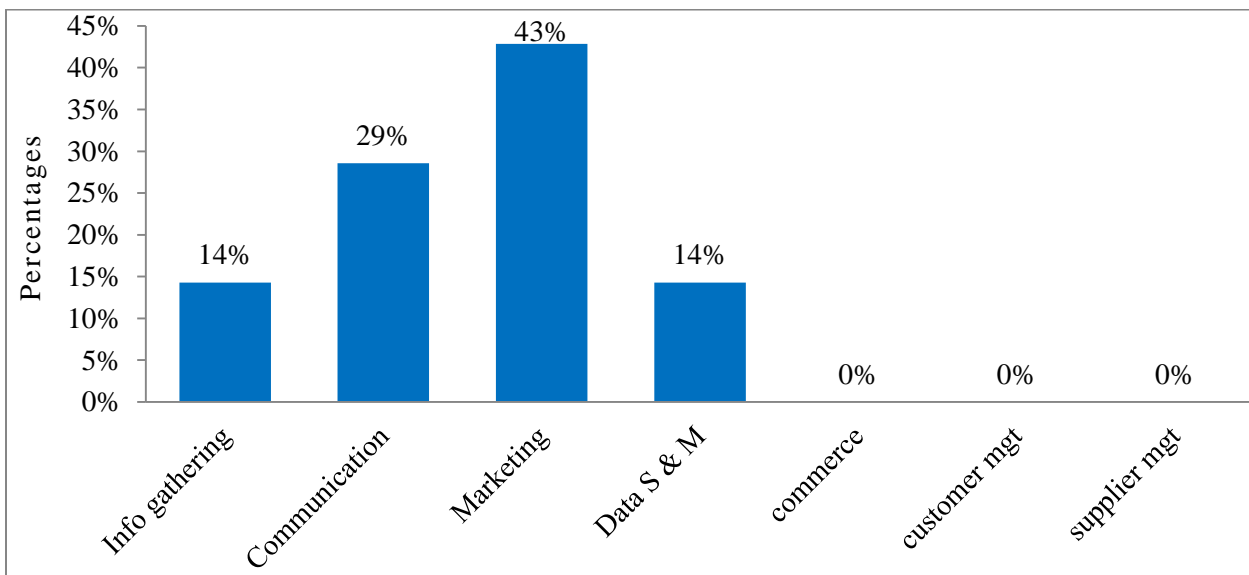


Figure 19: Savings on Business processes expenditures for category 500 SMEs as result of Internet Usage

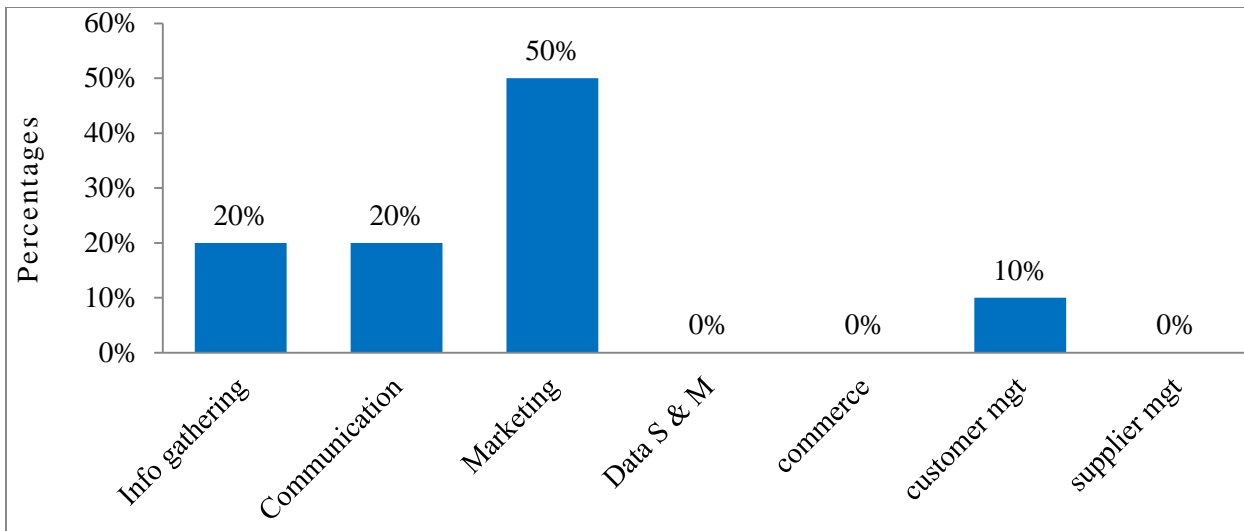


Figure 20: Savings on Business processes expenditures for category 600 SMEs as result of Internet Usage

According to figures 17 to 20, Categories 100, 300, 500 and 600 SMEs that have adopted Internet saved business processes costs mostly on marketing, followed by communication then by information gathering. This implied that these SMEs used Internet mostly in marketing their products and communication with other branches, customers or employees. It also implied that Internet was not effectively used in customer management, supplier management and e-commerce.

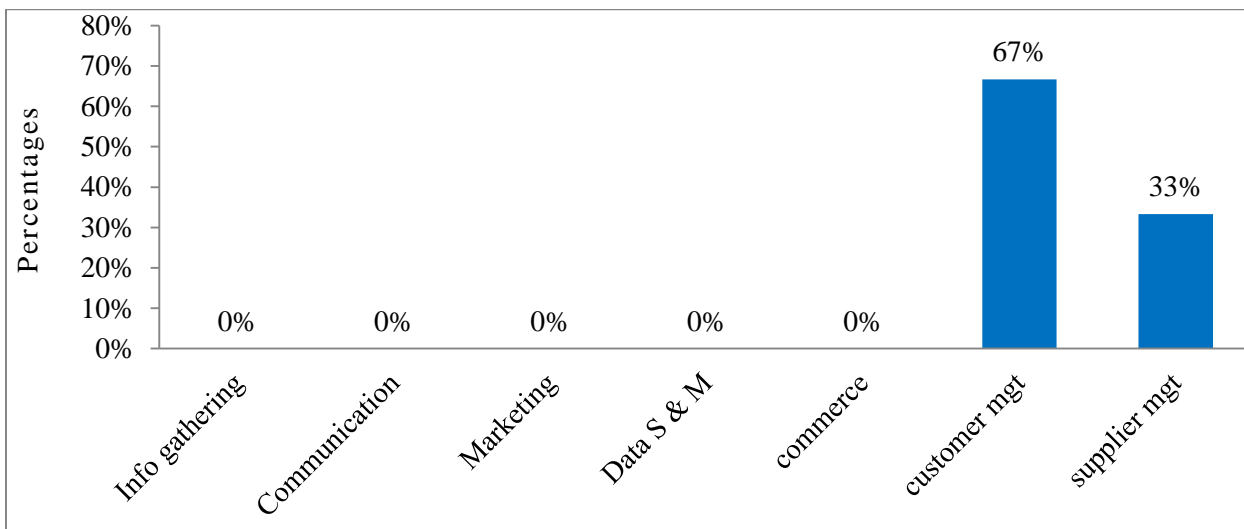


Figure 21: Savings on Business processes expenditures for category 400 SMEs as result of Internet Usage

According to figure 21, Category 400 SMEs that have adopted Internet have saved business operating costs mostly on customer management at 67% followed by supplier management at 33%. None of the respondents indicated to have saved costs on the other business processes. This implied that category 400 SMEs used Internet mostly for customer and supplier management and were not

informed of how Internet could further reduce their running cost through the use of e-commerce, marketing and business data storage and manipulation.

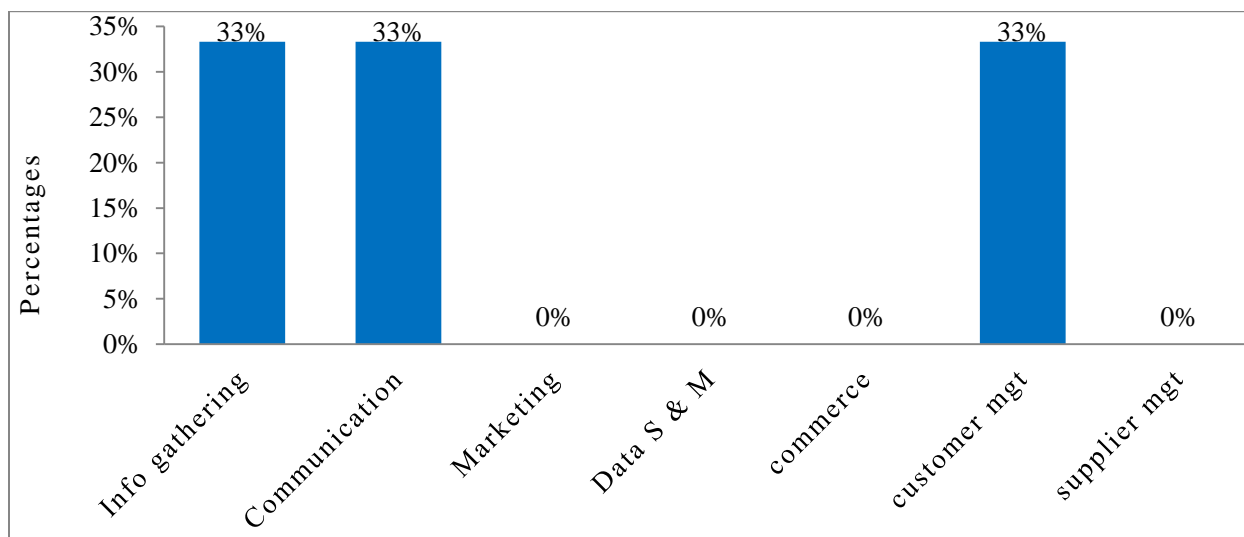


Figure 22: Savings on Business processes expenditures for category 700 SMEs as result of Internet Usage

According to figure 22, Category 700 SMEs with Internet access stated that they saved business running costs evenly on business information gathering, communication, and customer management, each at 33%. This implied that most of the SMEs in this category used Internet form business information gathering and communicating with customers.

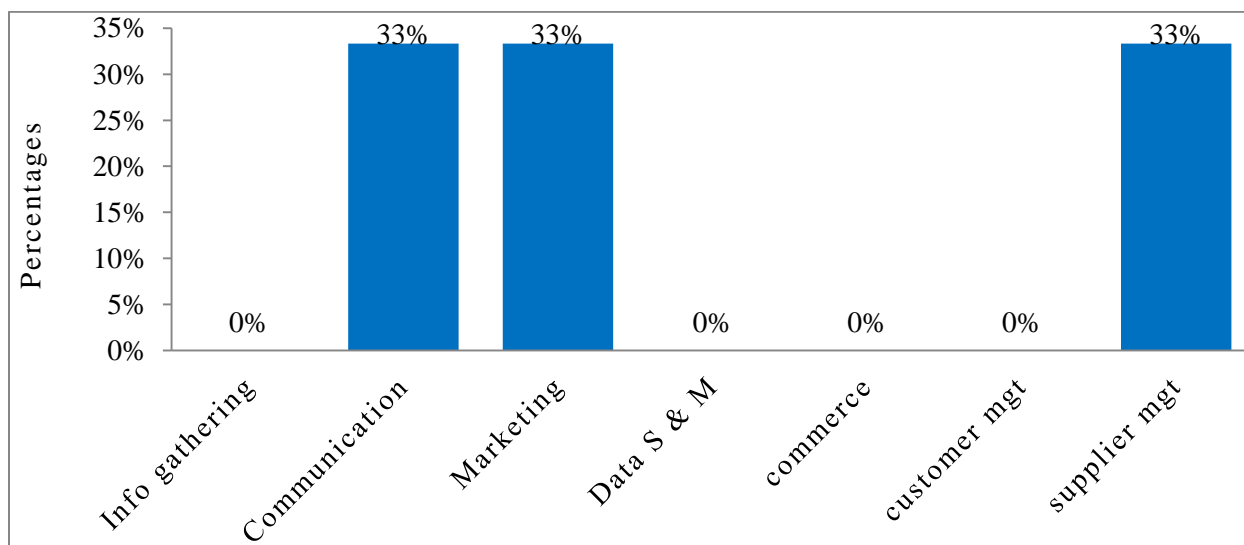


Figure 23: Savings on Business processes expenditures for category 800 SMEs as result of Internet Usage

According to figure 23, Category 800 SMEs with Internet access stated that they have saved business operating costs evenly on communication, marketing and supplier management, each at 33%. This implied that SMEs in this category used the Internet in marketing their services, and communicating with suppliers and/or customers.

Category 300 SMEs have operated in Nakuru Town Constituency for the longest time at a mean time of 7 years 2 months. This is followed by category 600 at a mean operating time of 7 years, then by category 700 SMEs at a mean time of 6 years 8 months, then by category 500 SMEs at 6 years 6 months, then by category 400 SMEs at mean operating time of 5 years 3 months, and category 800 SMEs at mean time of 4 years 1 month. The youngest and latest category of SMEs is category 100 with a mean operating time of 2 years 10 months in the constituency.

Category 700 SMEs employ the highest number of employees at a mean employee rate of 15 employees per SME, this is followed by category 500 SMEs with a mean employee rate of 11 employees, then by category 400 SMEs with a mean number of employees at 9, then by category 800 SMEs with a mean number of 6 employees, then by category 500 SMEs with a mean number of 5 employees, then category 300 SMEs with a mean number of 4 employees, and finally category 100 SMEs have the lowest number of employees at mean rate of 3 employees per SME.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to investigate the Internet usage among the small and medium enterprises and to describe the benefits of Internet usage on SMEs in Nakuru Town Constituency. This chapter therefore, presents the summary of the study, conclusions drawn from the findings of the study, and recommendations to improve Internet adoption and usage by SMEs of Nakuru town Constituency. The chapter also contains suggestions for further research.

5.2 Summary of Findings

- i. Based on the findings of the study, 85% of SMEs in Nakuru Town Constituency do not have Internet access, while 15% of the SMEs in Nakuru Town constituency have adopted Internet. Reasons for SMEs for not having Internet access were mainly lack of ICT infrastructure and low Internet speeds. This implied that most of the SMEs in areas outside the central business district (CBD) could not gain Internet access due to low ICT infrastructure and signal levels.
- ii. SMEs that have adopted Internet used Internet mostly on business information gathering, e-commerce, online ordering of goods/services, marketing and customer management. Internet was used least on interaction with government agencies and achieving global competitiveness.
- iii. SMEs that have adopted Internet benefited mostly by lowering their business operating costs, establishing e-commerce, having better and efficient business data management and saved time on business management. The SMEs were able to save costs on business processes mainly on marketing and communication. Safaricom, as an ISP, has the highest SME market share followed by Orange. This is mainly attributed to affordable Internet access fees and good service provision by the ISPs. Most of the SMEs with Internet access would recommend their respective ISPs to other SMEs due to service provided and speed of Internet, however in order to increase number of SMEs with Internet access, ISPs should

mainly lower their Internet access prices and be involved in mass awareness on benefits of Internet usage by SMEs.

5.3 Conclusion

In conclusion, the study found that 85% of SMEs in Nakuru Town Constituency have not adopted Internet. This was mainly due to low levels of ICT infrastructure and low Internet speeds/signal levels. All of the ISP companies in the constituency operated within the CBD. SMEs that have adopted Internet pay a mean Internet access fee of KShs 3,277.29 per month which most of the SMEs rated as fair. 63% of SMEs with Internet access used Internet daily to gather timely and accurate business information, 40% of the SMEs with Internet access used Internet daily for e-commerce, 35% of the SMEs with Internet access used it to order for goods/services online, 44% used it marketing, 44% used it for customer management, and 30% used it daily for cloud computing purposes. Internet was least used for communicating with government agencies with 9% of the SMEs saying they have never used it for that purpose and 42% of the SMEs rarely used it for interacting with government agencies. Most of the SMEs with Internet access (54%) used it frequently for B2B while a minority of the SMEs uses it to gain global competitiveness. SMEs with Internet access benefited by having their business operating costs lowered (80% of the SMEs), established e-commerce (79% of the SMEs), brought about efficient business data management (86% of the SMEs), saved time on their business processes (94% of the SMEs), benefited from efficient customer and supplier management and efficient form of marketing their products. SMEs with Internet access interviewed said that they saved business operating costs mainly on marketing at 45%, communication at 17% and data storage and manipulation at 11%. Other business processes whose costs were lowered as a result of Internet adoption and usage include customer management (9%), business information gathering (8%), commerce (5%) and supplier management (5%). Safaricom, as an ISP, has the largest SME market base of 42%, followed by Orange (28%), then ZUKU (16%), then Access Kenya (9%), then Airtel (4%) and finally iWay Africa at 2% market share. Most of the SMEs rated their ISPs companies to be providing them with high Internet speeds

at fair prices and provided good services. It is because of the three reasons that SMEs would recommend the ISPs. However, the SMEs advise the ISPs to mostly lower the Internet access fees and train SMEs on importance and benefits of Internet usage and adoption to increase number of SMEs with Internet access.

5.4 Recommendations

- i. ISPs should first reduce their Internet access fee then increase their Internet speeds if they are to attract SMEs to adopting and using Internet. They should then engage – together with the government and other stakeholders – in training business entrepreneurs on the importance and benefits associated with the adoption and usage of Internet in business process.
- ii. ISPs and the government should improve Internet accessibility in the constituency of Nakuru Town by having more Internet access points spread throughout the constituency, mainly outside the central business district (CBD) of Nakuru Town, so that entrepreneurs and people can easily have access to the Internet. This will go a long way in ensuring more SMEs adopt Internet. This could be done by laying of the fibre optic and increasing the number of WiMAX and Wi-Fi towers throughout the constituency.
- iii. To increase Internet speeds and signal levels, small and medium ISP companies should emerge. They would purchase Internet bandwidths from the large ISPs such as Access Kenya and operate in different zones of the constituency in of having a few ISPs competing for clients in the entire constituency. This would establish ISP zones and from the competition that would form, it will cause ISPs to offer competitive Internet speeds and increase the level of ICT infrastructure in the constituency. Also it would increase employment rate for the youth of Nakuru Town Constituency who would create awareness and provide service to the customer base.
- iv. The government of Kenya has major role to play if more SMEs are adopt Internet. The government can come up with policies aimed at reducing the license fees of providing Internet in Kenya and fully subsidizing the ICT sector of the economy. Furthermore the

government can come up with policies and laws supporting the coming up of small and medium ISP companies that will increase Internet coverage, boost signal levels and offer Internet at competitive speeds. The ISPs can be given incentives such as lower license fees, lower taxes, and subsidies on costs of computer and network equipment acquisition. ISPs that do offer the best services at competitive rates can be awarded yearly with prize recognitions, and further subsidies.

- v. Since SMEs contribute highly to the economy through their population, employment, license fees, and Internet access fees. The government and the ISPs should put maximum attention on the SME sector by encouraging Internet adoption and usage by the SMEs, training on Internet benefits and assisting the SMEs to be able to compete globally by facilitating business website creation, online marketing, online customer/supplier management and e-commerce. Entrepreneurship in the SME sector can be used to promote technological innovations and business creativity.
- vi. Education curricular and society can be encouraged to venture into entrepreneurship rather than waiting on formal employment in order to increase employment levels and reduce poverty in Kenya.
- vii. To increase interest in Internet adoption by SMEs, the entrepreneurs/owners can be trained on Internet and how it can be useful to the modern business such as e-commerce. They can be trained on how and the importance of online transactions (e-commerce), online business relationships (B2B and B2C), and resource management. This should be done with government support in order to reduce expenses and to reach maximum number of SMEs.

5.5 Suggestions for further research

- i. This study should be conducted in all the remaining 209 constituencies in Kenya in order to get an accurate description of the Internet usage, adoption and benefits among the small and medium enterprises. The study can further be conducted on county level and national level.

The study can also be conducted on the large organisations on constituency, county and national levels.

- ii. Moreover, a research can be conducted to discover the number and percentage of ICT skilled staff employed per business in the SME and large enterprises to accurately know the ICT wide skill base.
- iii. A research can be conducted on citizens to accurately describe Internet usage, adoption, benefits achieved, favourite websites visited, and purposes. This could be done on constituency, county and national levels.
- iv. A research could be done to compare Internet usage, services and speed between wired and wireless access methods. Internet access price and costs of setting up of ICT infrastructure should be done on both wired and wireless Internet connectivity to find the best method of providing Internet services to Kenyans and businesses with minimal cost but at competitive speed and price.
- v. A research could be done purely to describe factors hindering Internet adoption and usage by SMEs. The research could focus on factors such as the age of the business entrepreneur/owner, perceptions on Internet by the entrepreneurs/owners, time business has been in operation, time the manager(s) have been managing the business, whether and number of employees have knowledge/ skills in Internet and/or computer apps, and many other factors.

REFERENCES

- Acheampong R. O., and Gyawu P., (2011). *E-commerce and Internet Adoption among SMEs Non-Traditional Exporters, A Case Study of Ghanaian Fruit Exporters*. Thesis. Lulea University of Technology, Sweden.
- Alam S. S., and Noor M. K. M.(2009). ICT Adoption in Small and Medium Enterprises: an Empirical Evidence of Service Sectors in Malaysia.*International Journal of Business and Management* Vol 4, No.2: 112-125
- Amit R. and Zott C. (2001). Value Creation in E-Business. *Strategic Management Journal* 22: 493-520
- Botelho A. J., and Alves A. S. (2007). Mobile Use/ Adoption by Small and Medium Enterprises in Latin America and the Caribbean.*Creative Commons Attribution*
- Braun P. (2003). Virtual SME Networks: Pathways towards Online Collaboration.*Journal of New Business Ideas and Trends*: 1-9.
- Dholakia R. R., and Kshetri N. (2004). Factors Impacting the Adoption of the Internet among SMEs. *Small Business Economics*. Kluwer Academic Publishers: 311-322
- Eshun E. D. and Taylor T. (2009). *Internet and E-commerce adoption among SME Non-Traditional Exporters: Case studies of Ghanaian Handicraft Exporters*, Thesis. Luleå University of Technology, ISSN: 1653-0187.
- Export Processing Zones Authority. (2005). Kenya's information and communications technology sector. Downloaded from <http://www.epzkenya.com/UserFiles/File/ictKenya.pdf>
- Gilmore A., Gallagher D.and Henry S. (2007). E-marketing and SMEs: operational lessons for the future.*European Business Review*, Vol. 19 Iss: 3: 234-247
- Gromov G. (2011).*History of Internet*. Retrieved June 23, 2012 from the World Wide Web: <http://www.netvalley.com/intval1.html>.

- Hayes B., (2008). Cloud Computing. *Communications of the ACM*. Vol 51: 9-11
- Ifinedo P. (2009). The Internet and SMEs in Sub-Saharan African Countries: An Analysis in Nigeria, University of Jyväskylä, Finland.
- Internet Society (2012). *Brief history of the Internet*. Retrieved June 23, 2012 from the World Wide Web: <http://www.internetsociety.org/internet/internet-51/history-internet/brief-history-internet>.
- Investintech.com Inc (2007). *A Brief Guide to the History of the Internet*. Retrieved June 23, 2012 from the World Wide Web: <http://www.investintech.com/content/historyinternet/>.
- Kamga O., and Cishahayo F. (2010). *Information and Communication Technologies for African Development: Proportional Technologies and an Ethics of Usage*. Thesis. University of Sudbury
- Kapurubandara M., and Lawson R. (2006) Barriers to Adopting ICT and e-commerce with SMEs in Developing Countries: An Exploratory study in Sri Lanka. *COLLECTer '06, 9 December, Adelaide*.
- Kariuki, G. (2009). *Growth and Improvement of information communication technology in Kenya*. Thesis, United States International University.
- KENET, *KENET* Retrieved June 23, 2012 from the World Wide Web: <http://www.kenet.or.ke/>
- Kenya ICT Board, Retrieved June 23, 2012 from the World Wide Web: <http://www.ict.org.ke>
- Konza City, Retrieved June 23, 2012 from the World Wide Web: <http://www.konzacity.co.ke/>
- KTCIP, *KTCIP*. Retrieved June 23, 2012 from the World Wide Web: http://www.ict.go.ke/index.php?option=com_content&view=article&id=180&Itemid=287.
- Lawrence J. E. (2009). The Internet and Small to Medium-sized Enterprises: Research Notes. *Information, Society and Justice*, Vol 2 No. 2 ISSN 1756-1078: 221-235

- Leiner B. M., Cerf V. G., Clark D. D., Kahn R. E, Kleinrock L., Lynch D. C., Postel J., Roberts L. G., and Wolff S. S. (1997). The Past and Future History of the Internet. *Communications of the ACM* February 1997/Vol. 40, No. 2: 102 - 108
- Mell P., and Grance T., (2011). The NIST Definition of Cloud Computing (Draft). National Institute of Standards and Technology (NIST). Special Publication 800-145 (Draft)
- Moyi E., Otieno G., Mumo I. and Ronge E. (2006). Developing a Marketing Framework for Micro and Small Enterprises in Kenya. *Kenya Institute for Public Policy and Research Analysis*.
- Mutua J. M., and Wilson S. K. (2009). ICT adoption and performance of small-medium-sized enterprises in Kenya, *African Economic Research Consortium*
- Nganga S. I. and Onyango G. M. (2011). Collective Efficiency and Its Effects on Infrastructure Planning and Development for Small Manufacturing Enterprises in Kenya. School of Business and Public Management, Mount Kenya University Vol. 1, No. 1; *April 2011 International Journal of Business and Public Management*: 168-193
- Passerini, K., Tarabishy A. E., and Patten K. (2012). *Information Technology for Small Business*: 19-35
- Pinsonneault A., and Kraemer K. L., (1993). Survey Research Methodology in Management Information Systems: An Assessment. M.E. Sharpe, Inc. Vol 10 No 2; *Journal of Management Information Systems*: 75-105
- Raosoft Inc (2004). *Sample Size Calculator*. Retrieved June 23, 2012 from the World Wide Web: <http://www.raosoft.com/samplesize.html>.
- Research ICT Africa (2007). Kenya Telecommunications Sector Performance Review. A supply side analysis of policy outcomes Retrieved June 23, 2012 from the World Wide Web: www.researchICTafrica.net

- Shi J., Porter K., Otterson P., and Barclay I. (2004). E-Business implementation in SMEs: a success framework. *IADIS International Conference e-Commerce 2004* ISDN: 972-98947-8-7: 79-86
- Society for International Development (2010). Kenya's Vision 2030: An audit from income and gender inequalities perspective. *Society for International Development*. ISBN: 9966-7026-9-5
- The Kenya Government (2008). The Local Government Act Legislative Supplement No. 53, Kenya Gazette Supplement No. 79. The Government Printer.
- The Kenya Government, 2009 (August 2010). *Kenya Population and Housing Census, Volume 1 A, Population Distribution by Administrative Units*. Kenya National Bureau of Statistics.
- The Kenya Government, 2009 (August 2010). *Kenya Population and Housing Census, Volume 1 B, Population Distribution by Political Units*. Kenya National Bureau of Statistics.
- The Kenya Government. (1999). *Business Classification Dictionary (Working Draft)*. Ministry of Local Authorities. Kenya Local Government Reform Programme.
- The Kenya Government. (2012). *Local Authority Integrated Financial Operations Management Systems: Business Register Municipal Council of Nakuru*. LA Name: - 576

APPENDICES

APPENDIX A:

LETTER OF INTRODUCTION

May 15, 2012

TO WHOM IT MAY CONCERN

Dear Sir/Madam

RE: REQUEST FOR YOUR PARTICIPATION IN MY RESEARCH

My names are George J. Kariuki, a bona fide Master of Business Administration (MBA) student at Kabarak University, majoring in Management Information Systems (MIS). I am conducting a research on ‘An Assessment of Internet Usage among Small and Medium Enterprises (SMEs) in Nakuru Town Constituency’ and I would greatly appreciate your participation in my research. Please answer truthfully and objectively to the questions provided in the questionnaire. Please note that data provided will be confidentially treated and will only be used for research purposes only.

Please note that provision of your name is optional, however the name of your enterprise will be helpful in the statistics of this research.

Any assistance accorded to me will be highly appreciated.

Best regards,

George J. Kariuki

APPENDIX B:

QUESTIONNAIRE

SECTION A:

1. Location of your business _____ (building and storey level)
In _____ street/road.
2. How many employees does your business have? _____
3. Please state your:
 - a. Business Activity Code & Category _____
 - b. Accurate Business Description _____
4. How long have you been operating in Nakuru Town Constituency? _____

SECTION B:

5. Do you have Internet access in your business? YES [] NO []
If **NO**, answer **Part A** only, and if **YES** answer **Part B** and the remaining questions

Part A

With a scale of 1 Strongly Disagree (SD) , 2 Disagree (D) , 3 Neutral (N) , 4 Agree (A) , 5 Strongly Agree (SA) , please tick appropriately to state why you have not adopted Internet in your business.					
REASON	SD	D	N	A	SA
The price of Internet access is too high	[]	[]	[]	[]	[]
There is no ICT infrastructure, for example fiber optic	[]	[]	[]	[]	[]
I lack of knowledge on Internet and/or computer applications	[]	[]	[]	[]	[]
Signal levels/ Internet speed are low	[]	[]	[]	[]	[]
There is lack of information on the availability of Internet	[]	[]	[]	[]	[]
Other (please specify)	[]	[]	[]	[]	[]

Part B

With a scale of 1 Never Used , 2 Rarely , 3 Monthly , 4 Weekly , 5 Everyday , please tick appropriately to state why you use the Internet in your business.					
REASON	Never Used	Rarely	Monthly	Weekly	Everyday
I use the Internet to gather timely and accurate information beneficial to my business	[]	[]	[]	[]	[]
I use the Internet to sell my products and services	[]	[]	[]	[]	[]
I use the Internet to order for products/services.	[]	[]	[]	[]	[]
I use the Internet to market my business' products	[]	[]	[]	[]	[]
I use the Internet to manage and communicate with my customers	[]	[]	[]	[]	[]
I use the Internet to store business data online	[]	[]	[]	[]	[]
I use the Internet to interact with government agencies, for example KRA, NEMA, e.t.c	[]	[]	[]	[]	[]
I use the Internet to interact with other businesses	[]	[]	[]	[]	[]
I use the Internet to gain global competitiveness	[]	[]	[]	[]	[]
Other (please specify)	[]	[]	[]	[]	[]

6. How do you access the Internet?

Modem [] Cell phone Internet [] Full-time connection using wireless []

Full-time connection using cable (Ethernet/fibre-optic) []

7. Please state how the Internet impacted your business

With a scale of 1 **Strongly Disagree (SD)**, 2 **Disagree (D)**, 3 **Neutral (N)**, 4 **Agree (A)**, 5 **Strongly Agree (SA)**, please tick appropriately to state how Internet has benefited your business.

REASON	SD	D	N	A	SA
Use of the Internet has resulted in lower business operating costs	[]	[]	[]	[]	[]
Use of the Internet has established online transactions and payments for my business	[]	[]	[]	[]	[]
Use of the Internet has resulted in better and efficient business data management.	[]	[]	[]	[]	[]
Use of Internet has helped save time on business processes	[]	[]	[]	[]	[]
Use of the Internet has resulted in better customer management	[]	[]	[]	[]	[]
Use of the Internet has resulted in better supplier management	[]	[]	[]	[]	[]
Use of the Internet has resulted in better and more efficient marketing of my products/services	[]	[]	[]	[]	[]
Use of the Internet has enabled my business reach global competitiveness	[]	[]	[]	[]	[]
Other(s) (please specify)	[]	[]	[]	[]	[]

8. How much do you spend on Internet access per month?

KShs _____

9. In which areas of business processes has Internet saved your business expenditure?

SECTION C:

10. Who is your current Internet Service Provider (ISP) _____

11. Where is the Internet Service Provider(ISP) located? _____

12. Please rate the services of your Internet Service Provider (ISP):

a. Internet access speed:

Very slow [] slow [] neutral [] fast [] very fast []

b. Internet access price:

Very cheap [] cheap [] fair [] expensive [] very expensive []

c. Services offered by your ISP (general and technical)

Very poor [] poor [] fair [] good [] very good []

d. Would you recommend your ISP to another business and/or person?

YES [] NO []

e. Please explain why _____

f. In your own opinion, what can be done to improve Internet access and adoption by businesses and Kenyans alike? _____

Thank you for your cooperation and May the Almighty God richly bless you and your business.

APPENDIX C:

BUSINESS CATEGORIZATION

Table 4: Business Classification and Description as per the Kenya Government, 2008

BUSINESS CODE	BUSINESS CATEGORY	CATEGORY SPECIFICATIONS	PERMIT FEE	NUMBER OF BUSINESSES	CATEGORY REVENUE	PERCENTAGE CONSTITUTION
100	GENERAL TRADE, WHOLESALE, RETAIL, STORES, PERSONAL SERVICES.	Distributors, Traders, Wholesalers, Department Stores, Supermarkets, Retailers, Shops, Boutiques, Chemists, Personal Service Providers, Kiosks, e.t.c				MAJOR CATEGORY
103	Mega Store, Hypermarket Large, Multi-Department Store,	Hypermarket with over 100 employees and/ or premises over 3,000 m ² . Fair Location.	51,000	34	1,734,000	0.17%
105	Large Trader, Shop, Retail Store, or Personal Service	Employees from 21 to 100; and/or premises from 300m ² to 3000m ² . Fair location.	17,000	270	4,590,000	1.37%
110	Medium Trader, Shop, Retail Store, or Personal Service	Employees from 5 to 20; and/ or premises from 50m ² to 300m ² . Fair location	8,500	1,546	13,141,000	7.87%
115	Small Trader, Shop, Retail Store, or Personal Service.	Employees up-to 4; and/ or premises less than 50m ² . Far away location.	4,250	13,803	58,662,750	70.23%
300	TRANSPORT, STORAGE, AND COMMUNICATIONS	Maritime & Air Lines, International Carriers, Transportation Companies operating taxis-matatus-buses-lorries-planes-boats. Driving Schools, Tour/ Safari Operators, Petrol Stations, Storage Facilities, Cold Storage Facilities. Publishing Co-Newspapers, Books, and Texts. Telephone Company, Radio/TV Broadcaster, ISP.				MAJOR CATEGORY
305	Large Transportation Company	Over 30 vehicles	68,000	2	136,000	0.01%
310	Medium Transportation Company	From 6 to 30 vehicles	25,500	5	127,500	0.03%
315	Small Transportation Company	From 2 to 5 vehicles	8,500	124	1,054,000	0.63%
325	Large Petrol Filling Station	Over 6 pumps or with garage-workshop and retail shop.	17,000	35	595,000	0.18%

330	Medium Petrol Filling Station	From 4 to 6 pumps or with garage-workshop or retail shop.	8,500	36	306,000	0.18%
335	Small Petrol Filling Station	Up-to 3 pumps and without garage-workshop or retail shop.	5,950	51	303,450	0.26%
340	Large Cold Storage Facility	Over 1000 m ² , insulated walls, cold production equipment.	46,750	1	46,750	0.01%
345	Medium Cold Facility	Between 100m ² to 1000m ² .	21,250	6	127,500	0.03%
350	Small Cold Facility	Up-to 100m ² .	0	0	0	0.00%
355	Large Storage Facility. Godown, Warehouse, Liquid Storage Tanks Complex.	Over 5000m ² .	42,500	11	467,500	0.05%
360	Medium Storage Facility	From 1000m ² to 5000m ² .	17,000	37	629,000	0.18%
365	Small Storage Facility	Up-to 1000m ² .	8,500	66	561,000	0.31%
370	Large Communications Company	Over 100 employees and/ or premises over 5000m ² .	76,500	2	153,000	0.01%
375	Medium communications Company	From 16 to 100 employees and/ or premises from 1500m ² to 5000m ² .	46,750	1	46,750	0.01%
380	Small Communications Company	Up-to 15 employees and/ or premises up-to 1500m ² .	25,500	12	306,000	0.06%
400	AGRICULTURE, FORESTRY, & EXPLOITATION OF NATURAL MINERALS	Production of Coffee, Tea, Fruits, Flowers, Cereals, Vegetables and horticultural products. Grain Storage and Processing, Mills & Posho Mills. Bakeries, Forestry, and Timber Production, Sawmills, and Coal Production. Animal Breeding, Dairy Products Processing, and Slaughter Houses. Mining and other Natural Resources Extraction Activities.				MAJOR CATEGORY
405	Large Agricultural Producer, Processor, Dealer, or Exporter.	Over 50 employees.	55,250	13	718,250	0.07%
410	Medium Agricultural Producer, Processor, Dealer, or Exporter.	From 11 to 50 employees.	21,250	42	892,500	0.21%
415	Small Agricultural Producer, Processor, Dealer, or Exporter.	Up-to 10 employees	6,800	437	2,971,600	2.22%
500	ACCOMODATION AND CATERING.	International Hotels, Tourists Camps, Lodging Houses, Restaurants, Bars, Eating Houses, Tea & Coffee Houses, Butcheries with Meat Roasting and/ or Soup				MAJOR CATEGORY

		Kitchen Facilities, Membership Clubs, Night Clubs & Casinos.				
503	Large High Standard Lodging House/Hotel D Class	Over 100 rooms	85,000	10	850,000	0.05%
506	Medium High Standard Lodging House/Hotel D Class	From 41 to 100 rooms	59,500	8	476,000	0.04%
509	Small High Standard Lodging House/Hotel D Class	Up-to 40 rooms	42,500	14	595,000	0.07%
512	Large Lodging House with Restaurant and/ or Bar B/ C Class. Basic Standard	Over 15 rooms	34,000	21	714,000	0.11%
515	Medium Lodging House with Restaurant and/ or Bar B/ C Class. Basic Standard	From 6 to 15 rooms	21,250	78	1,657,500	0.40%
518	Small Lodging House with Restaurant and/ or Bar B/ C Class. Basic Standard	Up-to 5 rooms	12,750	84	1,071,000	0.43%
521	Large Lodging House B/ C Class. Basic Standard	Over 15 rooms	38,250	25	956,250	0.13%
524	Medium Lodging House B/ C Class. Basic Standard	From 6 to 15 rooms	29,750	35	1,041,250	0.18%
527	Small Lodging House B/ C Class. Basic Standard	Up-to 5 rooms	21,250	16	340,000	0.08%
540	Large Restaurant with Bar/ Membership Club	Over 30 customers/ members	25,000	29	739,000	0.15%
543	Medium Restaurant with Bar/ Membership Club	From 11 to 30 customers/ members	12,750	47	599,250	0.24%
546	Small Restaurant with Bar/ Membership Club	Up-to 10 customers/ members.	8,500	57	484,500	0.29%
549	Large Eating House, Snack Bar, Tea House "Hotel", no lodging, no alcohol served	Over 20 customers	12,750	75	956,250	0.36%
552	Medium Eating House, Snack Bar, Tea House "Hotel", no lodging, no alcohol served	From 6 to 20 customers	8,500	136	1,156,000	0.65%

555	Small Eating House, Snack Bar, Tea House “Hotel”, no lodging, no alcohol served	Up-to 6 customers	5,950	1,055	6,277,250	5.02%
600	PROFESSIONAL AND TECHNICAL SERVICES	Firms and/ or Individual offering Services on Legal Issues, Financial, Management, Engineering, Architecture, Valuing, Surveying, Accountancy, Secretarial Support, Data Processing, e.t.c; Stock & Insurance Brokering, Security-Protection, Clearing-Forwarding, Goods, Book Marking, Kenya Sweepstakes, Charity. Banks, Forex Bureau, Money Lenders; Hire-Purchase Company; Insurance Company; Real Estate Company Developing-Financing Company.				MAJOR CATEGORY
605	Large Professional Services Firm	Over 10 practitioners and/ or international affiliation	76,500	4	76,500	0.02%
610	Medium Professional Services Firm	From 3 to 10 practitioners	38,250	33	1,262,250	0.17%
615	Small Professional Services Firm	Up-to 2 practitioners	17,000	471	8,007,000	2.40%
625	Large Financial Services	Over 25 employees or premises over 300m ² .	80,750	38	3,068,500	0.19%
630	Medium Financial Services	From 6 to 25 employees	55,250	15	828,750	0.08%
635	Small Financial Services	Up-to 5 employees	38,250	46	1,759,500	0.23%
700	PRIVATE EDUCATION, HEALTH AND ENTERTAINMENT SERVICES	Private Education Institutions; Health Clinics & Doctor Surgery, Doctor Consulting Offices, Dentists, Physiotherapists, Psychologists; Herbalists and Traditional Medicine Practitioners; Funeral Homes; Entertainment Facilities				MAJOR CATEGORY
710	Large Private Education Institution	Over 100 pupils or fees over KShs 50,000 per year	25,500	57	1,453,500	0.29%
715	Medium Private Education Institution	From 31 to 100 pupils or fees from KShs 30,001 to KShs 50,000 per year	12,750	122	1,555,500	0.62%
720	Small Private Education Institution	Up-to 30 pupils or fees up-to KShs 30,000 per year.	8,500	316	2,686,000	1.61%
800	INDUSTRIAL PLANTS, FACTORIES, WORKSHOPS, CONTRACTORS	Manufacture, Process and Assembly, Workshops Servicing and Repairing Products; Contractors of New Building Construction and Old Building Restoration, and Service Repair.				MAJOR CATEGORY
805	Large Industrial Plant	Over 75 employees or premises	85,000	24	2,040,000	0.12%

		over 2,500 m ²				
810	Medium Industrial Plant	From 16 to 75 employees or premises from 100m ² to 2,500m ²	59,500	10	595,000	0.05%
815	Small Industrial Plant	Up-to 15 employees or premises up to 100m ²	34,000	9	306,000	0.05%
820	Large Workshop, Service-Repair, Contractor	Over 20 employees or premises over 500m ²	42,000	27	1,147,500	0.14%
825	Medium Workshop, Service-Repair, Contractor	From 6 to 20 employees or premises from 25m ² to 25 m ²	17,000	176	2,992,000	0.90%
830	Small Workshop, Service-Repair, Contractor	Up-to 5 employees or premises up-to 25m ²	5,950	1,461	8,692,950	7.43%
TOTAL			3,192,300	21,033	141,953,750	100.00%

Note:

- i. Major Category not included: 200 INFORMAL SECTOR.
- ii. Minor category 705: Private Higher Education Institutions, that is Colleges and Universities, were not involved in the statistics of this research.
- iii. Other sub-categories of all the above Major Categories were not included in this research.
- iv. Private medical facility, clinic, nursing home, herbalist entertainment facilities such as discos, night clubs, cinemas, gyms, casinos, e.t.c were not be included in this research.

APPENDIX D:

NATIONAL AND REGIONAL FIBRE OPTICS OVERVIEW

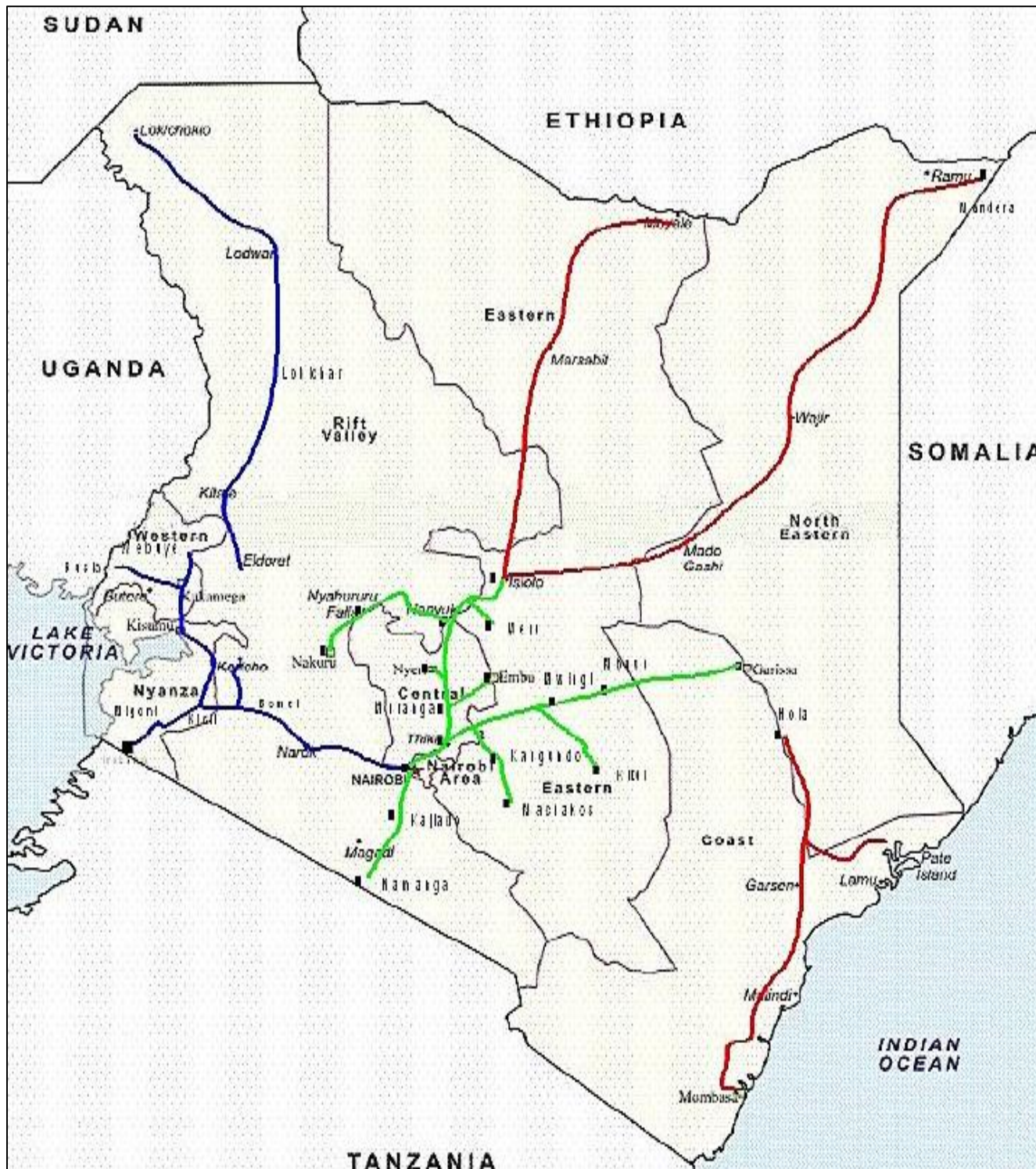


Figure 24: National Optical Fibre Backbone Infrastructure (NOFBI)

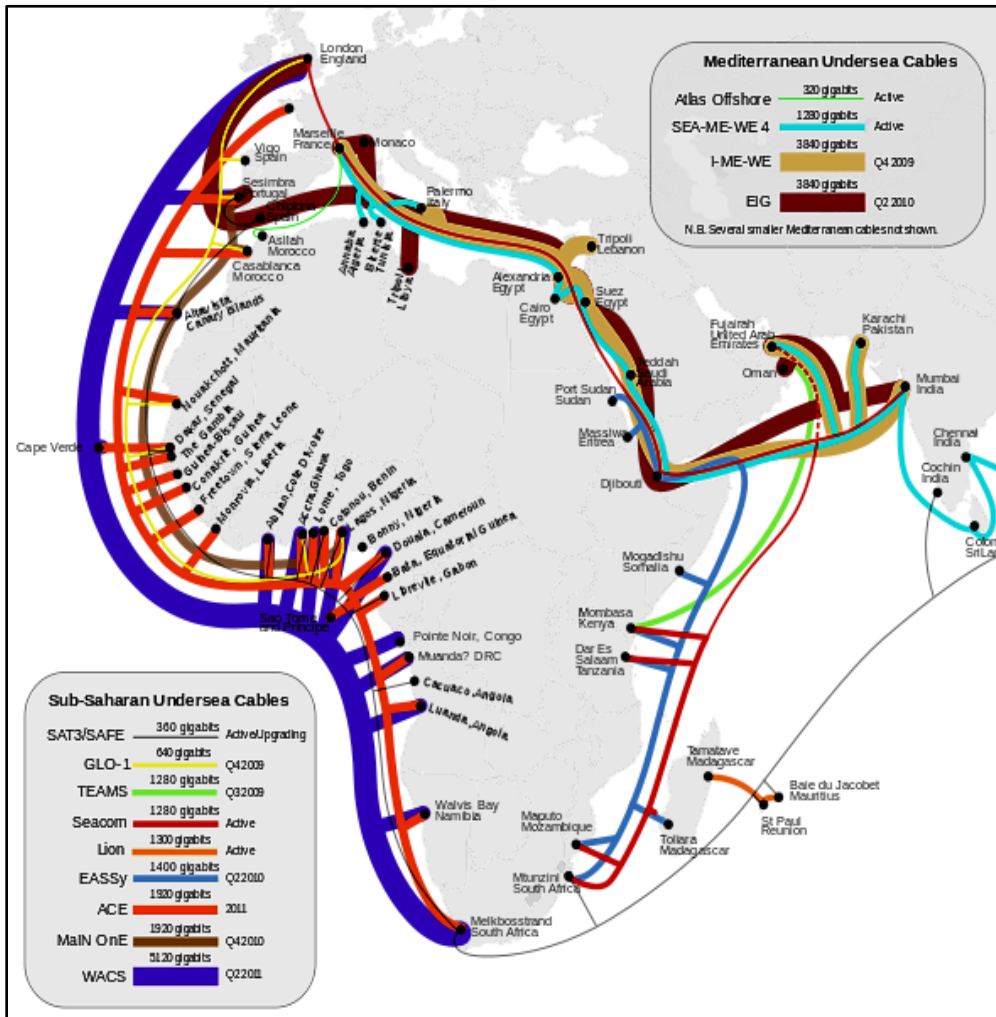


Figure 25: Lying of fibre optics along the African coastlines

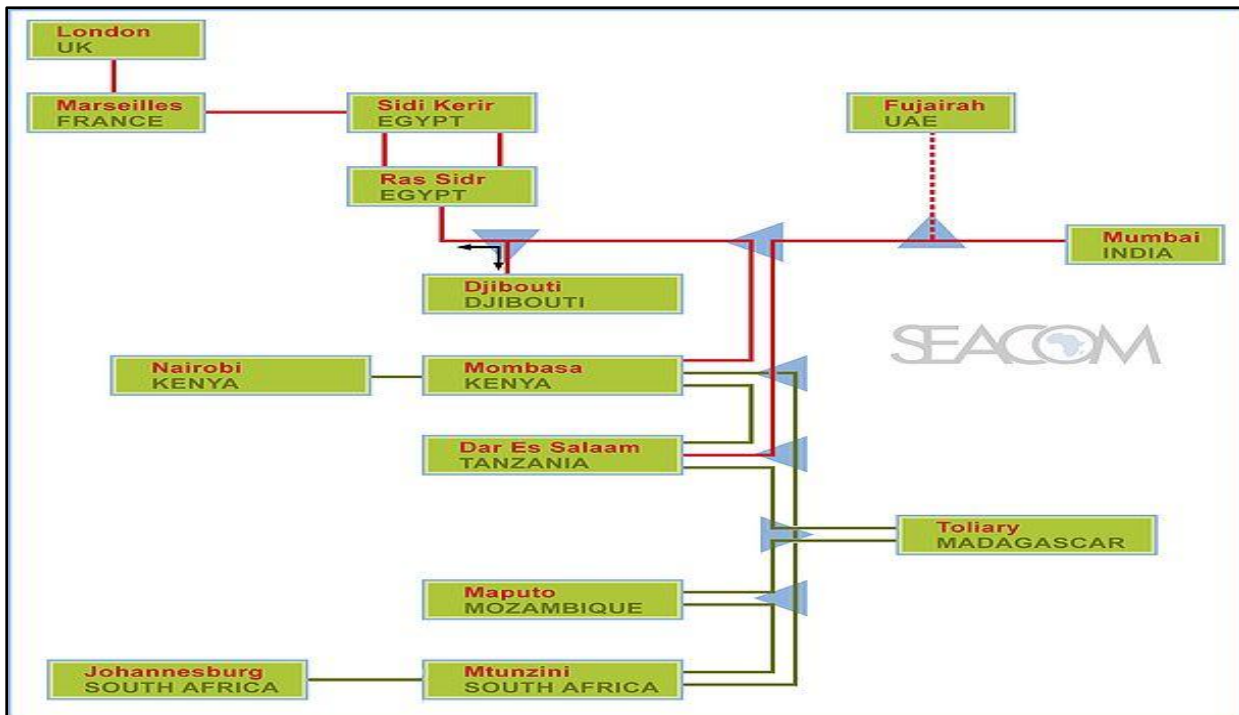


Figure 26: SEACOM Overview

APPENDIX E:

FREQUENCY TABLES

Below are frequency tables containing analyzed data for the figures in chapter 4:

Table 5: Reasons for not adopting Internet by SMEs

Reason	Response	Frequency	Percentage
High Internet Access Price	SD	20	6%
	D	129	39%
	N	41	12%
	A	101	31%
	SA	38	12%
Lack of ICT infrastructure	SD	15	5%
	D	83	25%
	N	80	24%
	A	131	40%
	SA	20	6%
Lack of knowledge in Internet &/ computer apps	SD	118	36%
	D	155	47%
	N	23	7%
	A	33	10%
	SA	0	0%
Low Internet speed/ signal levels	SD	17	5%
	D	84	26%
	N	97	29%
	A	118	36%
	SD	13	4%
Lack of information on Internet availability	SD	49	15%
	D	108	33%
	N	53	16%
	A	91	28%
	SA	28	9%
Lack of interest/ comfort	SD	0	0%
	D	0	0%
	N	0	0%
	A	1	0%
	SA	5	2%

Table 6: Internet Usage by SMEs in Nakuru Town Constituency

REASON	Response	Frequency	Percentage
Business information gathering	Never Used	0	0%
	Rarely	4	7%
	Monthly	1	2%
	Weekly	14	25%
	Everyday	36	63%
e-commerce	Never Used	3	5%
	Rarely	8	14%
	Monthly	3	5%
	Weekly	18	32%
	Everyday	23	40%
online order	Never Used	10	18%
	Rarely	11	19%
	Monthly	2	4%
	Weekly	9	16%
	Everyday	20	35%
online marketing	Never Used	5	9%
	Rarely	6	11%
	Monthly	3	5%
	Weekly	17	30%
	Everyday	23	40%
customer management	Never Used	1	2%
	Rarely	2	4%
	Monthly	5	9%
	Weekly	22	39%
	Everyday	25	44%
Online data storage (Cloud Computing)	Never Used	9	16%
	Rarely	8	14%
	Monthly	8	14%
	Weekly	13	23%
	Everyday	17	30%
Interaction with government agencies	Never Used	5	9%
	Rarely	24	42%
	Monthly	9	16%
	Weekly	13	23%
	Everyday	4	7%
B2B	Never Used	7	12%
	Rarely	11	19%
	Monthly	5	9%
	Weekly	16	28%
	Everyday	15	26%
Global Competitiveness	Never Used	17	30%
	Rarely	15	26%

	Monthly	5	9%
	Weekly	5	9%
	Everyday	12	21%

Table 7: Internet Access Methods by SMEs in Nakuru Town Constituency

Internet Access method	Frequency	Percentage
Modem	19	33%
Cell-phone	2	4%
Wireless Access	14	25%
Wired Access	22	39%

Table 8: SME Business Process expenditure saved

Business process expenditure saved	Response	Frequency	Percentage
	Info gathering	5	8%
	Communication	11	17%
	Marketing	29	45%
	Data S & M	7	11%
	commerce	3	5%
	customer mgt	6	9%
	supplier mgt	3	5%

Table 9: ISP SME Market Share

ISP Company	Frequency	Percentage
Access Kenya	5	9%
Airtel	2	4%
iWay Africa	1	2%
Orange	16	28%
Safaricom	24	42%
ZUKU	9	16%

Table 10: ISP Rating and Ways of improving Internet Adoption and Usage by SMEs

ISP Rating	Response	Frequency	Percentage
Internet Access Speed	v. slow speed	1	2%
	slow speed	12	21%
	neutral speed	19	33%
	fast speed	25	44%
	v. fast speed	0	0%
Internet Access Fee	v. cheap price	2	4%
	cheap price	12	21%
	fair price	30	53%
	dear price	13	23%
	v. dear price	0	0%
ISP Service Delivery	v. poor service	0	0%
	poor service	1	2%
	fair service	24	42%
	good service	29	51%
	v. good service	2	4%
Recommendation	YES	43	75%
	NO	14	25%
Reason	Price	18	25%
	Service	34	47%
	Speed	21	29%
Ways of increasing Internet Adoption & Usage by SMEs			
Ways of improving Internet Adoption & Usage	Drop Price	24	44%
	Improve Service	5	9%
	Increase Speed	5	9%
	Mass Awareness	14	25%
	Improve Internet Access	7	13%

Table 11: Benefits of Internet Usage by SMEs in Nakuru Town Constituency

Benefits Of Internet Usage			
REASON	Response	Frequency	Percentage
Lowering of business operating costs	SD	5	9%
	D	4	7%
	N	2	4%
	A	31	54%
	SA	15	26%
e-commerce	SD	0	0%
	D	6	11%
	N	6	11%
	A	30	53%
	SA	15	26%
Efficient data management	SD	1	2%
	D	3	5%
	N	3	5%
	A	30	53%
	SA	19	33%
Save time on business processes	SD	0	0%
	D	0	0%
	N	3	5%
	A	23	40%
	SA	31	54%
Better customer management	SD	0	0%
	D	3	5%
	N	9	16%
	A	31	54%
	SA	14	25%
Better supplier management	SD	5	9%
	D	15	26%
	N	9	16%
	A	20	35%
	SA	8	14%
Efficient and better marketing	SD	0	0%
	D	3	5%
	N	2	4%
	A	29	51%
	SA	23	40%
Achieving global competition	SD	9	16%
	D	16	28%
	N	10	18%
	A	13	23%
	SA	7	12%