

UNIVERSITY OF NAIROBI

INSTITUTE OF DIPLOMACY AND INTERNATIONAL STUDIES

EMPOWERMENT OF SMALL AND MEDIUM ENTERPRISES THROUGH E-COMMERCE AND MOBILE TECHNOLOGY IN DEVELOPING COUNTRIES: A CASE STUDY OF KENYA

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DECLARATION

I declare that this research project is my original work and has not been presented for a degree in any other university.

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DEDICATION

This study is dedicated to my late mother, her pursuits, what she stood for and what she believed. She always supported and encouraged my academic pursuits and believed in my dreams. It would have been her delight to see this through and be a part of the process. I know the completion of this paper would have made her proud.

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LIST OF ABBREVIATIONS

AGOA	Africa Growth and Opportunity Act
APIs	Application Programming Interfaces
B2B	Business to Business
B2C	Business to Consumer
C2B	Consumer to Business
CEO	Chief Executive Officer
COFTA	Cooperation for Fair Trade In Africa
E-Commerce	Electronic Commerce
EDI	Electronic Data Interchange
EPC	Export Promotion Council
EPZ	Export Processing Zones
GDP	Gross Domestic Product
IBM	International Business Machines
ICT	Information and Communication Technology
ICTA	Information Communications & Technology Authority
IDRC	International Development and Research Centre
IMF	International Monetary Fund
IT	Information Technology
ITC	International Trade Centre
JICA	Japan International Cooperation Agency
KACE	Kenya Agricultural Commodity Exchange
KEFAT	Kenya Federation For Alternative Trade
LDC	Least Developed Countries
M-Internet	Mobile Internet

M-Kesho	Mobile Kesho Banking
M-Pesa	Mobile Pesa (Mobile Money)
NCS	National Communications Secretariat
NGOs	Non-Governmental Organizations
PEV	Post-Election Violence
R&D	Research and Design
SAP	Structural Adjustment Programs
SMEs	Small and Medium Enterprises
WFTO	World Fair Trade Organization
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

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ABSTRACT

E-Commerce continues to grow daily, especially in Kenya, given its benefit of enabling young and small businesses to reach the consumer/ clients faster, simpler and in a more interactive way. There is a need however to evaluate the perceived impact that e-Commerce has on businesses as well as mobile technologies. This study seeks to investigate the ability of e-Commerce platforms in impacting the lives of the Small and Medium entrepreneurs listed/ endorsed on these sites, by looking at various e-Commerce platforms in Kenya. For the purposes of this study, Shop Soko, Bombolulu Workshops, Sasa Designs by the Deaf among others shall be used as case studies of e-Commerce platforms, geared to transforming the lives of various artisans; with specific focus on Shop Soko as a pioneer in the field of mobile technologies as an appendage to e-Commerce in Kenya. The study seeks to find out if these small scale artisans in Kenya, as part of the developing world are really enjoying and experiencing the perceived and expected benefits of e-commerce. Through the use of information from focus group interviews conducted during the research and individual interviews conducted with various stakeholders, one is able to access the degree of growth the industry has attained in impacting the lives of the traders and what still needs to be done. Through the study wholesale buyers from the west have emerged as critical in life cycle of e-commerce revenues for various SMEs in Kenya. The lack of access to technology, resources or e-commerce training continues to stand in the way of maximization of their participation globally. From this study, it is clear that the government still has a lot to do to ensure that ICT is made accessible to its citizens, training for e-commerce to transform Kenya to a first class economy and the enactment of the various policies formulated to ensure that digitization of all sectors of the economy is realized is key. Seeking partnerships (institutional and intergovernmental) to implement e-commerce in business would steer growth and ensure lasting impact.

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CHAPTER ONE: INTRODUCTION TO THE STUDY

1.0 Introduction

Kenya's small and medium scale entrepreneurs are well known globally, most especially those in the handicraft business; the artisans and makers of various handcrafted pieces of jewellery and souvenirs. Their craftsmanship can be spotted anywhere on the globe, and yet these Kenyan artisans continue to grapple with issues like marketing of their products, fair prices, keeping up with ever changing trends and tastes, while being faced by greater issues like lack of protection of their intellectual property, hence cheap and poorly produced alternatives from China and other newly industrialized states (NIS).

The complexities surrounding the handicraft industry in Kenya has resulted in value addition through quality checks and product development of products destined for both the local and international markets. Through the help of various e-Commerce platforms these artisans/ small scale enterprises, are able to market their products, produce at international standards, following ethical trade principles. These e-Commerce platforms directly connect SMEs to local and foreign consumers who are willing to pay higher prices for unique, ethically sourced, high quality products, without the middle man in the supply product chain; better profits for the SMEs for their products directly. The SMEs have been able to do this through free e-Commerce sites where the vendors/ producers are able to have a virtual shop through which their products are presented to the global consumer, as well as now through the use of simple smart phones, which have applications that enable vendors to present the products to consumers via a real-virtual shopping experience.

The growth of e-commerce has been further advanced by various web-based technologies like automation and delegation (also known as smart/intelligent agents) which have attributes like scheduling tasks, automated negotiations, resource allocation, shopping

bots, and bidding elves.¹ In addition to enabling consumers to conduct automated comparisons and sellers to access visitors' background information in real time, such software programs can make decisions for individuals, negotiate with other programs, and participate in online markets. Much of e-commerce's economic value arises from this kind of automation, which not only reduces operating costs but adds value by generating new market interactions.

Online security is a key concern for those participating in e-trade, since the agent is able to access information on the users' preferences and willingness to pay. As payments are mainly by credit cards (with the concerns on credit card fraud), more and more sites find it safer to have their platforms hosted on a central location that processes all payment options for their clients and maintains anonymity and does not save users personal details, for instance Shopify, which has various online money payment options like PesaPal and PayPal. In the case of Kenya, M-Pesa²³ has also helped to resolve this.

Selling through websites is the fastest growing method of trading worldwide and two main forms exist, one is Business to business (B2B) trading where companies trade and exchange information using the World Wide Web, the second is Business to consumer (B2C) trading where companies deal directly with customers through web pages, and ordering is carried out online. This research will be dedicated to the second form of ecommerce business which is the Business to Consumer (B2C) method and its relevance to Kenya.

¹NirVulkan, (2002). Strategic Design of Mobile Agents, *AI Magazine*, 23(3), American Association for Artificial Intelligence, pp. 101 <http://aaai.org/ojs/index.php/aimagazine/article/viewFile/1660/1558>

³ Graeber, Charles (2014). Ten Days in Kenya With No Cash, Only a Phone. *Business Week*. <http://www.businessweek.com/articles/2014-06-05/safaricom-m-pesa-turns-kenya-into-a-mobile-payment-paradis>

1.1 Background of the Research Problem

“Using new technologies in developing countries can open up trade at home and abroad for small and medium-sized enterprises – and diversify national economies.”⁴ There is and has been a great need for analysis of whether there has been empowerment of the small and medium scale entrepreneurs (SMEs) who have participated and are currently participating in international trade through e-Commerce sites and the use of various new mobile technologies, especially in developing countries.

The key reason for this analysis is to prove to the various stakeholders concerned, that there is indeed an impact, though in some cases Direct impact is absent, there are several cases where impact can be measured in terms of improvements on the business models of the various artisans or artisan groups, better standards of living, increased access to information among other factors which these stakeholders are interested in knowing.

There is also a general belief that the e-Commerce sites, though they claim to be empowering these SMEs, is the empowerment valid, and do they really bridge the gap in international trade, since many view them as being a version of middle men. For Kenya as a developing nation these SMEs seem to have benefited from the platforms as they are able to access markets (international markets) with ease and are able to directly interact. The main characteristics of the information age have been rapid technological innovations from the rise of ecommerce, and have hence become a key tool in how companies conduct their business.

Scholars have observed that though the growth of mobile commerce has taken some time to grow, the importance of mobile phones in business has today become more pronounced than ever before, and Kenya has not been left behind in this area, with great

⁴Atiya Hussain, Consultant, International Trade Centre.
<http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs/>

advances being made in M-Pesa, M-Kesho⁵, mobile banking, development of business mobile apps to enhance business and its reach to the consumer. It has also been of concern to scholars, that though the relation between ICT and business growth has been well noted in many developing countries however the effect of the business growth has been unclear. What is obvious is: the internet has opened up avenues for business which were previously unimaginable in decades gone by, it has provided for seamless business collaboration between the business and the consumers, provision of more interactive business solutions than those offered by the traditional models.

1.2 Statement of the Research Problem

Many people are interested in knowing the correlation between e-Commerce/ mobile technology and the impact it has on the lives of the artisans if any. It is emphasised that the e-tailer (online retailer) must and should have a good site that will be an advantage to him, the same way a well laid out and well positioned physical shop is an advantage. Small and medium enterprises which specialize in the sale and supply of jewellery, paintings, sculptors etc. have proved to be most successful due to the development of ecommerce. An individual working from home can now advertise and sell their produce worldwide. Are the stakeholders in trade ensuring an enabling environment for conducting business? Literature on the realities facing Kenyan SMEs and the processes they use to overcome various trade obstacles is scarce. This study hence seeks to provide an understanding of the processes and structures that enable SMEs to successfully market and sell their wares internationally by way of emerging e-commerce opportunities now accessible to them.

This is the basis and background on which this study seeks to find out, if e-Commerce and mobile technology has resulted in the empowerment of SMEs in the developing world

⁵ Equity Bank Kenya (2014). M-kesho. <http://www.equitybank.co.ke/index.php/self-service/mobile-banking/m-kesho>

with Kenya being our focus. Have the businesses of these SMEs been transformed by ecommerce and mobile technology? Are developing countries able now to participate more and effectively in international business and trade because of the effects of ecommerce and mobile technology? What relationship exists between ecommerce and mobile technology and the SMEs? SMEs in Kenya have for several years depended on the vibrant tourism sector for the growth and marketing of their products. However, present situations do not allow for tourism to thrive due to the onset on global security and the rise of terrorism, the economic meltdown, as well as after effects of Kenya's PEV. Challenges include the growing competition of cheaply produced products from abroad, creation and production of unique high quality products, product pricing (allowing the SMEs to generate wealth individually and for the state), ethical production of goods and a continued lack of access to credit and capital, yet there has been a significant rise in the demand of products which meet the aforementioned criteria.

The various ecommerce platforms which exist all seek to see SMEs transformed by equipping them with technology as a tool of development and hence empowerment. Is there any empowerment taking place, and if so, to what degree, and who can attest to this?

1.3 Objectives of the Study

The main objective of this study is to assess opportunities and challenges for artisans in developing countries hoping to access e-commerce opportunities abroad. The specific objectives can be summarized as follows:

- 1.3.1 To investigate the impact of mobile technology and e-Commerce as development tools in Kenya.
- 1.3.2 To assess the challenges faced by e-Commerce organizations in achieving empowerment of SMEs through e-Commerce and mobile technology in Kenya.

1.3.3 To analyse the structures and processes of e-Commerce platforms in Kenya which aim to empower artisans.

1.3.4 To examine role of the government in development of e-Commerce and mobile technology in Kenya.

1.4 Justification of the Research

1.4.1 Academic Justification

Micro and Small Enterprises (MSEs) are a significant component of many economies in the world due to the contribution and impact they make on the economies of their countries through job creation and facilitation of regional development and innovation.⁶SMEs in Kenya who lack access to technology based on the remoteness of their locations or slums communities which lack this opportunities (except on mobile platforms), e-commerce provides the uncanny opportunity to bring the world to their fingers or workspaces. MacDonald⁷, in her study, found less than ten per cent of the total population uses internet in Kenya, which according to her presents challenges even for SMEs hoping to capitalize on the e-commerce retail market. Through this study, it is hoped that more SMEs will be able to learn about the benefits of ecommerce and the impact it would have on their businesses, thus adding to the existing knowledge.

It is also hoped, that from this study, in Kenya, knowledge will be added for online consumers to realize the benefits of ecommerce over traditional forms of business and hence enable them to access more markets and producers globally, to grow the local economy. The study will generate new knowledge for research for academic stakeholders in the area of ecommerce, as Kenya focuses on becoming a world class economy. It will endeavour to show

⁶Mutula, S.M, and van Brakel, P. (2007) E-readiness of SMEs in the ICT sector in Botswana with respect to information access. *Electronic library* 24 (3) : 405-413

⁷MacDonald, Megan, (2012) Access to E-Commerce in the Ethical Trade Arena: A Case study of Artisans in Kenya, 5 – 6.

its effect on economies in developing states and knowing the degree of empowerment the SMEs in Kenya have achieved so far, and what needs to be done to achieve it.

1.4.2 Policy Justification

This study also aims to inform the other stakeholders in ecommerce and mobile technologies, on their policy guidelines geared towards the empowerment of various small scale businesses, the elimination of the middleman and the participation in global trade of these SMEs.

Government would benefit from the findings of this study when creating policies for the adoption of e-commerce in business and the development of initiatives and incentives such as funding. The growth of SMEs in Kenya is increasing and the Government could use findings from the study to create favourable policies, provide appropriate information and support for the growth of the SMEs Sector and increased use of technology through identification of major facilitators and inhibitors.

This study is intended to be a reference for stakeholders in the ICT sector in Kenya specifically, with the aim of providing information which will guide them on strategic technology innovations for empowerment of livelihoods.

1.5 Literature Review

Electronic commerce is a relatively new concept that crept into the business vocabulary during the 1970s. A picture of electronic commerce is emerging in which the internet became the essential dial-tone for conducting business by the year 2000. This contribution addresses definitional, theoretical and contextual issues including the nature, drivers, enablers, and the magnitude of electronic commerce. Various authors discuss the role of electronic markets, the effects of IT on e-commerce, interactivity, and the evolution of disintermediation to re-intermediation. Theoretical and conceptual approaches to electronic

commerce are based on (1) transaction cost theory, (2) marketing, (3) diffusion, (4) information retrieval, and (5) strategic networking.⁸

The history of ecommerce can be traced back to the period immediately after the end of the second world war, where the world saw the launch of an age referred to as the Information Age, which was characterized by communication technology (mainly consisting of hardware equipment, organizational structure and social values of collecting, processing and transmitting information) and information technology (which was/is regarding computer and electronic technology by way of development, installation and implementation of computer applications and systems); which evolved to become Information Communication Technology that facilitates the transfer of information via computer and electronic communication systems.⁹

Basic Theory on E- Commerce: The internet is quickly gaining ground as a platform for electronic commerce, which is simply the process of buying and selling of products or services over electronic systems.¹⁰ Although most of the commercial transactions are still taking place through conventional channels, internet use for e-commerce has been increasing rapidly to date. The total e-commerce spent by a customer and business surpassed by \$5 trillion in 2006.¹¹ The application of E-commerce in today's competitive business world has created lots of advantages. E.g. advancing and enhancing the speed at which business (buying and selling) is conducted, by eliminating the need for a physical store and reducing the customers' effort/visits. The effect of this on the business would be diminished operating costs, improved quality and increased profitability. It eliminates the time-bound nature of businesses, thus allowing for extended/ continuous business hours as well as purchase variety

⁸Zeinab Karake-Shalhoub and Sheikha Lubna Al Qasimi, (2006). The diffusion of e-commerce in developing economies: a resource based approach, Edward Elgar Publishing Lts, Cheltenham, UK., 1-4

⁹Ibid.

¹⁰Adam, Z.R., (2003), e-ASEAN Taskforce UNDP-APDIP: e-commerce and e-business, 6-8.

¹¹Laudon, Kenneth and Travis, Jeffrey, (2006). E-Commerce: Business, Technology, Society

to the consumer. It is simply an instant, hassle free information of the product and services to the consumer. This evolution in the basic approach to e-Commerce was developed by Michael Aldrich in 1979, after which Thomson Holiday developed UK's first Business to Business (B2B) ecommerce model. This prototyping of the online market place continues to date.¹²

As far back as the late 1960s, Africa has lost in world trade amounting to almost \$70 billion a year, revealing a failure of diversification into new dynamic products as well as a failing market share for traditional goods. Africa's trade reforms have mostly been negotiated with donors as part of adjustment programs. Reforms still need to be embedded in a development strategy that is export oriented, anchored on competitive and stable real exchange rates, and enables exporters to access imported inputs at world prices. Africa's – specifically Kenya's – governments need to increase consultations with business, working to develop world class service standards. There is a strong need for African countries to work together to participate in global negotiations that shape the world trading system, and unfortunately the capacity requirements for this are far too great for the small poor countries, and it is here where e-commerce steps in to simplify the entire process of Africa's global trade inclusion.¹³

Despite the obvious benefits of international trade, national governments feel inclined to impose trade barriers in order to discourage imports. Trade barriers are of two kinds: Tariff and Non-tariff, the latter being more common in Kenya – in form of Technical barriers, Procurement policies, Exchange controls; though Import duties are now more common as well, and this has affected the cost of doing business. Trade barriers are in place in different

¹²Roos, Dave (2008) "The History of E-Commerce". HowStuffWorks.com. (<http://money.howstuffworks.com/history-e-commerce.htm>) last accessed 20 May 2014

¹³ World Bank Group, (2000) "Can Africa Claim the 21st Century?" www.worldbank.org/publication, 3-30

countries not only due to a general misunderstanding regarding the benefits of international trade but also to protect various interest groups in these countries.

1.5.1 Social Enterprise, Social Impact and Ethical Trade:

Development of new technologies and emerging markets has resulted in the creation of an industry where social-environmental impacts are often overridden by financial profit and gain, resulting in states and firms to willingly exclude these social-environmental standards in their production practices to ensure operational costs remain minimal.

Hence more consumers and investors have now taken a greater interest in ethical production of the products and companies in which they invest, apart from their profit margins¹⁴; choosing to protect brand image. There is hence a bigger push for social impact oriented programs and support from the consumers and investors in such as opposed to encouraging the violation of human rights and destruction of the environment in order to produce goods. Investing in people is essential in accelerating poverty reduction, which is one of the key aims of developing countries, to enable them to attain a developed nation status. Many DCs are caught in the trap of low education levels especially of women where in rural areas less than one quarter of the girls attend primary school. The social enterprises that have been launched seek to promote and support human development through their artisan related programs to ensure growth; many promote the empowerment of the girl child and women.¹⁵

In recent years, social entrepreneurship has gained popularity in both academic¹⁶ and popular literature.¹⁷ Bill Drayton – the founder of Ashoka, a global network of social

¹⁴Roberts, Sarah (2003). “Supply Chain Specific? Understanding the Patch Success of Ethical Sourcing Initiatives. *Journal of Business Ethics*. 44: 159-170

¹⁵World Bank Group, (2000)“Can Africa Claim the 21st Century?” www.worldbank.org/publications, 103-120

¹⁶ Christie, MJ and Honig, B, (2006), “Social Entrepreneurship: New Research Findings”, *Journal of World Business*, 41(1), 1-5

¹⁷Auerswald, Philip E. (2009). *Creating Social Value*. Stanford Social Innovation Review, Spring.

entrepreneurs—first coined the term “social entrepreneurship,”¹⁸ but despite the increasing popularity of the subject, there is no single agreed upon definition for the term.¹⁹ Some researchers propose that social entrepreneurship involves profit seeking activities within the non-profit or public sectors, while others suggest that they are for-profit companies engaging in social programmes and exhibit social entrepreneurship behaviour.²⁰

Fair trade is the term often used to refer to ethical production. According to MacDonald²¹ the producers involved have already been vetted and labelled by third party organizations as ethical producers, the buying firm must ensure that each step of the supply chain for a specific product adheres to these standards. Hence through this, ethical sourcing mirrors the underlying values reflected in the Fair Trade movement, which attempts to inform consumers about their purchases while seeking to develop better trading conditions and pay the producers.²²

1.5.2 Ecommerce and Mobile Technology Opportunities in Kenya

With the internet age, and the rise of e-commerce, online shopping was almost inevitable. Be it for the convenience of it, or simply the thrill – the ‘because I can’ factor, ecommerce is on the rise in Kenya. At face value it seems like a booming industry, but it is in its true element still quite embryonic especially for business owners trying to sell their wares via an e-commerce platform.²³ I however have no doubt in my mind that this shall be the next big craze for Kenya, and Africa as a whole.

¹⁸ https://www.ashoka.org/social_entrepreneur

¹⁹Light, Paul C. (2006). Stanford Social Innovation Review Fall. 46 - 51

²⁰Thompson John, Alvy Geoff and Lees Ann (2000). “Social entrepreneurship – a new look at the people and the potential”, Management Decision, 38(5), pp. 328-338

²¹MacDonald, Megan, (2012) Access to E-Commerce in the Ethical Trade Arena: A Case study of Artisans in Kenya, 14/ 41.

²² Davies, Iain A. and Crane, Andrew (2010). “Corporate social responsibility in small-and medium-size enterprises: investigating employee engagement in fair trade companies.” *Business Ethics: A European Review* 19 (2): 126-139

²³Courtture Africa Magazine, pp. 77, Issue11 July 2014

With regard to mobile technology and mobile shoppers, it was in 2012 expected that the number of consumers who purchase from their phones shall go up by about 50% by end of 2014²⁴. As at August 2014 the global count of mobile phone shopping consumers has grown to about 580 million users, not just as a browsing tool but as a payment tool²⁵ thus increasing the importance of mobile as an e-Commerce channel which has translated to more online sales. In Kenya this is especially true for sites like OLX, Jumia and Shop Soko, all of which have mobile phone applications to enable buyers to access the products at their convenience and for the seller to be easily connected to the consumer through their products. This is very encouraging since one of the key challenges to growth of mobile e-Commerce is that many sites/ platforms lack the optimization for mobile browsing, registration or purchasing. In Kenya the concern of mobile transaction security has been resolved by M-Pesa and other phone banking solutions.

1.5.3 Artisans in the Developing world

Case studies on SMEs in developing countries reveal that there has been a high need for SMEs to access information technologies, especially the poor, who ultimately seek to improve and increase revenue and production practices. Adeya, in her paper highlights the case of small scale artisans in remote parts of the Middle East and the North African region who used traditional handcraft techniques, but unfortunately the knowledge is disappearing and hence affecting income. The study highlights a solution being found in the use of Virtual Souk an ecommerce initiative which provided producers with knowledge on how to access high income markets and market their products.²⁶

²⁴<http://www.juniperresearch.com/reports.php?id=767>

²⁵<http://www.biztechafrika.com/article/mobile-shoppers-50-two-years/4434/#.U-ogivmSy7o>

²⁶Adeya, C.Nyaki, PhD, (2003). *ICTs and Poverty: A Literature Review*, 20 - 21

One scholar, Naoto Suzuki²⁷, based her study on artisans in Asian countries. She observes that input from the government with assistance from donor agencies is of paramount importance in the success of SMEs, where with partial traditional economies carry their traditional skills into their preferred area of business, meaning the policies made need to be fair and inclusive. She identifies methods of equal opportunity provision through the avenue of government – NGO co-sponsored projects geared at promoting competitiveness among the SMEs. She observes that the way to assess empowerment is by measuring whether there was increase in sales volume, increase in profitability as well as improvement in innovative management capabilities.

Economic impact cannot be measured or analysed without considering the four key sources of economic growth, as economic growth is a key indicator for development and positive impact on SMEs in a country.

Physical Capital, a source of economic growth must be considered. In the example of Kenya, it is important to note that there is low capital investment mainly because of the high cost of doing business, which results in reduces returns, but also the lack of access to financing and market uncertainty, has made investors unwilling to make possibly irreversible investments.²⁸ Kenya's capital stock is old and of poor quality; about 80 percent of manufacturing capital is more than five years old compared to less than 70 percent in Tanzania and 60 percent in Uganda. Kenyan firms also have lower capital productivity compared to those in China and India. The low quality of capital helps explain Kenya's relatively poor productivity performance, and according to one World Bank study "Kenyan

²⁷Suzuki, Naoto (2005). project formulation and evaluation for artisan craft promotion; The Effective Promotion for Regional Development in Developing Countries: Part V

²⁸ www.worldbank.org/depweb/english/beyond/global/chapter7.html

firms are extremely slow to adopt new technologies”.²⁹ This notion is however fast changing, as is seen with the launch of Konza Techno City, which will become Africa’s Silicon Savannah, as well as the number of Technology Start –ups setting up in Kenya.

Human Capital is key, and is based on the skills found in the state’s labour force, for which Kenya has a relatively skilled labour force due to primary education being made available to most, with an enrolment ratio of 93.6%, and a secondary school enrolment ratio of 30.6%. Unfortunately, for Kenya, tertiary enrolment remains low, at 3.3%. These are factors which affect the skills available to businesses. Technology export, in the case of Kenya, is at about 10%, which is still higher than other sub Saharan countries.

Of key importance to note also is the perception of the education system especially in Kenya, of anything technology being associated with misguided connotations of ‘geek’ to identify the field have resulted in especially low female school enrolment in ICT areas and subsequently ICT related businesses, as identified at a forum held by the UN specialized agency for ICT called to create a roadmap that would help these negative attitudes and remove barriers to female enrolment in ICT related courses, which stakeholders in Kenya like Ushahidi³⁰ are involved in advocating for this change.³¹ The hope of this is that in the years to come there will be more ICT related jobs meaning it would be a global solution to unemployment for the youth, which even for Kenya is a big issue.

Kenya’s participation in the AGOA (African Growth and Opportunity Act) has been beneficial to a number of local SMEs including the jewellery and apparel industry. Liberalization of the economy has allowed for growth of the economy. Kenya became eligible to participate in AGOA in 2000, which has seen rapid growth of EPZs. The response

²⁹RPED, (2004). Enhancing The Competitiveness Of Kenya’s Manufacturing Sector: The Role of The Investment Climate, pp. 1-10

³⁰ Ushahidi (2014). <http://www.usshahidi.com/>

³¹<http://www.biztechafrica.com/article/world-leaders-draw-roadmap-women-ict/2688/#.U-oeqPmSy7o>

to the AGOA initiative shows that, given the right incentives, there is substantial private-sector capacity in Kenya to increase production and trade despite domestic constraints.

1.6 Theoretical Framework

Various theories have been looked at to understand the economics of ecommerce and the international affairs aspect of ecommerce.

1.6.1 Classical Economic Theory

Adam Smith is often regarded as the world's first free-market capitalist and the major proponent of laissez-faire economic policies³², when he documented the industrial development in Europe, this was the start of the classical economic theory.

Micro theory postulates that the market arises out of the activities of separate units- persons and firms- whose aims and efforts are directed to fulfilling internally defined interests hence resulting in constraints. Economic markets are individualistic in origin, spontaneously generated and unintended.

Laissez-faire philosophies, such as minimizing the role of government intervention and taxation in the free markets, and the idea that an "invisible hand" guides supply and demand are among the key ideas Smith's writing is responsible for promoting. According to classical economic theories economies will always move towards equilibrium when they are at full capacity and have achieved full employment.

In 1980, Kenya entered into a Structural Adjustment Program (SAP) under the tutelage of the World Bank and the International Monetary Fund (IMF) and began to implement structural reforms aimed at improving market incentives and resource allocation and macroeconomic stabilization. The reforms included liberalization of the foreign exchange market; credit market and agricultural commodities markets, as well as privatization of some

³² which was birthed by his book "The Wealth of Nations,"

parastatals; the lifting of domestic price controls; and export promotion programs. However, the implementation of reforms was slow and erratic, and at times reforms were reversed as the Government lacked commitment.³³ In its switch from an import substitution strategy to an export promotion strategy the Government gradually decontrolled domestic prices, abolished import licensing, introduced export promotion schemes, and established export processing zones (EPZs) in 1990.³⁴

1.6.2 Keynesian Theory

Government – SME - Trade relationship:

British economist John Maynard Keynes took the viewpoint that spending induces businesses to supply goods and services. If consumers become pessimistic about their futures and cut down on their spending, then business will reduce their production. He rejected the classical viewpoint that unemployment would be resolved by flexible wage rates; instead, wages are viewed as being "sticky" when downward pressures exist. Business will produce only the quantities of goods and services that government, consumers, investors and foreigners are expected to buy. If the planned expenditures are less than what would be associated with production at full employment, then output will be less than the economy's full potential.

New Keynesian economics, is founded on two major assumptions that people use today's information (interest rates, stock prices, gas prices, etc.) to form future expectations and that prices and wages adjust gradually. These impediments result in market prices not immediately adjusting to unexpected changes in economic conditions. This school of thought generally argues on the need for government to take an active role, through the use of fiscal (government spending or tax cuts) or monetary policy (lower interest rates, change in money

³³O'Brien, F.S. and T.C.I. Ryan (1999), *Aid and Reform in Africa: Kenya Case study*, Washington DC: World Bank project on Aid and Reforms in Africa

³⁴Kabubo-Mariara J. and T. Kiriti (2002) *Structural Adjustment, Poverty and Economic Growth: An Analysis for Kenya*.

supply), whenever economic conditions start to deteriorate (e.g. falling employment or rising inflation).

Most New Keynesians would agree that government action, in the form of a stimulus bill and a decision to maintain low interest rates and lend to large financial institutions in danger of failing, was critical. They would argue that these actions stimulate demand for goods and job growth and prevent a downward spiral to irreversible economic recession, something that is very essential for SMEs which in the case of Kenya constitute the bulk of the economy in terms of employment (Jua Kali Sector).

1.6.3 International Product Life Cycle Theory

This theory takes into consideration two important factors:

- a) New products are developed as a result of technological innovations
- b) Trade patterns are determined by the market structure and the phase in a new product's life.

According to this theory, capital rich nations have more scope for innovation because R&D (Research and Design) requires more capital and these countries have a stable patent protection regime and, the people of these countries have higher incomes allowing them to try out newer products. In the early stages of a product, it is produced and exported by the country that introduced innovation. In the second stage, the production may shift to another country, where factors of production are more economical. In the third and final stage, production shifts completely to the lesser-developed countries.

1.7 Hypotheses

- a) Ecommerce platforms and mobile technology empower SMEs in developing countries.
- b) Kenya does not have an enabling environment to foster the growth and development of SMEs.

c) The changing face of Kenya's ICT environment has an impact on SMEs and their business processes.

1.8 Methodology of the Study

This section is mainly about finding answers to the research questions, the target population and study site, the sampling procedure and unit of analysis, the data collection methods, instruments of data collection and the pilot study.

1.8.1 The Study Site

The study will seek to be as representative of Kenya as possible and will hence use Bombolulu workshops as a representative of the disabled community involved in global trade and as a representation of small SMEs who have come together from the coastal region.

As much as possible small SMEs in Garissa County have access to online presence and represent a marginalized community, as well as those from Nairobi, which form the bulk of intended sample unit.

1.8.2 Research Design

This study will be based mainly on a qualitative research method; I shall also seek to use a quantitative research method. The methods will allow the researcher to critically analyse, interpret and draw comparisons on data about SMEs and effect of ecommerce on their businesses, from actual ecommerce and mobile tech firms to the various SMEs. This approach will enable the researcher to produce a comprehensive research on the investigation of the extent to which ecommerce platforms and mobile Tech firms have empowered SMEs in Kenya.

The study will use both primary and secondary sources of data, as the two are complementary. Secondary data will include information from published works, scholarly research papers, books and journals as well as online resources. The libraries that will be used

include Jomo Kenyatta Memorial library, The IDS library, the IDRC (International Development and Research Centre – Nairobi Offices) library and various personal libraries. Primary data will be collected from interviews and questionnaires to be filled in by the interview candidates who will mainly be CEOs and staff of identified ecommerce sites that are representative of various SMEs in Kenya particularly artisans engaged in international trade, government and parastatal heads as well as other policy makers identified in the study like KONZA CEO, ICTA (Information Communications and Technology Authority), and former government Permanent Secretaries, members of the diplomatic community of Kenya who have represented the state at various World Trade Organization conferences, gazetted government policies and their accompanying documents.

While secondary data will assist in understanding of the degree to which empowerment and development has been sought in Kenya, primary data will provide eyewitness account from some of the experts who participated in the creation and adoption of various ICT - Trade policies in Kenya and the SMEs who are the perceived beneficiaries of the policies, and collection of data on the topic of study. The research will also utilize reports and journal articles from ICT bodies and ecommerce sites that have existed in Kenya's trade community. The gaps in these sources will be filled by a field research to be conducted by purposive sampling from various SMEs mainly jewellery and crafts artisans who are more represented in the ecommerce arena.

1.8.3 Data Collection Procedure:

I intend to use a questionnaire to interview a minimum of five artisans, four CEOs of local ecommerce platforms with a global reach of customers, and two government / parastatal heads experts by virtue of experience and know-how in this field hence their views are imperative to this study. Questions will be made available to the interviewees via email, mobile phone text applications or text messaging. A mobile survey will be conducted where

possible. A mobile phone recorder will be used to record and collect oral data for analysis and transcription. Note taking will also be used especially for phone interviews, and conference call interviews.

1.8.4 Sample Techniques and Sample Size:

The sample size will be limited to the number of people interviewed and the groups they represent. The Purposive Research method will be used to trace the knowledgeable people. I will trace a few from primary sources such as reports, journals and newspaper review articles and I will identify other relevant people.

1.8.5 Ethical Considerations:

The ethical procedures that shall be put into account while conducting this study is anonymity of the respondents especially for those providing sensitive information especially on their business practices and business trade secrets, the information sought will be exclusively for scholarly purposes and to add knowledge and in no way shall it seek to undermine or question the existence of already existing structures, where possible.

1.8.6 Data Analysis

The use of graphs, tables and charts will be the visual data analysis method. All field and interview notes will be analysed to identify norms and differences in the units of analysis. Thematic analysis will be applied to all data to identify how themes raised in data collection appear to interact with each other in relation to the project variables of technology access and market access. Data analysis will seek to identify characteristics of the theoretical framework in which the study was conducted.

Data analysis in relation to key informants will seek to identify the institutional framework in which SMEs operate. Field notes from interviews will be analysed and when

necessary, confirmation of identified themes will be sought from existing policy documents and other available literature and in regard to the interview questions.

1.9 Scope and Limitations of the Study

The study aims to research on as many Jewellery & handcraft artisans in Kenya as possible, the key focus being artisan groups as well as individual artisans who have access to the online platforms as well as those who have not had a chance to be included in e-Commerce platforms to allow them market their products. The fact that this research is limited to Kenya means that it does not provide an opportunity to other parts of the world to be included in the study, which would have been good even to inform the organizations involved areas where markets or business opportunities still remain untapped.

The study also aims to explore how many e-Commerce platforms exist, and the contributions they make to the empowerment of those they seek to promote – the Artisan.

The key limitations which I shall face during the research include the inability to travel all over Kenya in order to meet the various artisan groups who have constituted the study, due to financial and time constraints. Travel can be resolved through email correspondence with the various artisan groups that will constitute the research, as well as having video conferences which will allow for more personalized interviews with the groups, as well as reduce on the time spent to travel as well as the expense involved.

Another limitation that the study is faced with is the inability to measure some of the data provided by the subjects of the study in terms of bias, accuracy, degree of truth etc. All these are likely to be factors which may affect the findings of the research.

The final limitation will be the access to classified information pertaining to the e-Commerce and mobile platforms that shall be investigated in the study-Access to the structures and processes which facilitate the participation of various artisans in e-Commerce.

1.10 Chapter Outline

The thesis will be divided into five sections.

Chapter One is the introduction to the study. It aims to broadly introduce the key aspects of this study, the problem statement, and justification of the research, the literature review, hypothesis, theoretical framework and research methodology.

Chapter Two provides the background of the situation of SMEs in developing countries with specific focus being on Kenya, and the relations between ecommerce sites and mobile technologies with regard to the SMEs.

Chapter Three intends to look at the SMEs in Kenya mainly in urban areas of Nairobi Mombasa and Kisumu, and how they conduct business, especially international business, using primary information as well as some secondary data, and classification of the data into the key themes which have been identified.

Chapter Four seeks to analyse the empowerment of the SMEs and assess the impact that e-Commerce and mobile technology (ICTs) have had in trade in developing countries, specifically Kenya, which shall be derived from the findings of the study, collected in chapter three.

Chapter five will provide the conclusions of the study, review of the research questions, the study hypothesis and test as well as make recommendations

CHAPTER TWO: BACKGROUND OF THE SITUATION OF SMEs IN DEVELOPING COUNTRIES

2.1 The evolution of ecommerce

E-Commerce is said to have commenced when businesses initially made use of telephone, telex, fax and telegram to carry out business activities. In the 1980's, a significant attempt to regulate business information transmitted digitally was realized by use of EDI (Electronic Data interchange). In this case, connections amongst businesses were planned in advance, generally on the basis of a value additional network. This enhanced the effectiveness of doing business but had restricted commercial feasibility due to the high charge of connectivity. At the beginning of 1990's, with the internet commercialization and the initiation of direct computer technology, connectivity has ended up being within the means for both business as well as individuals. These internet connections assume the form of the World Wide Web (www). The strong search engines and the large number of websites leads the www to become a prosperous information supply, catching the attention of browser on an international scale. Business is able to access their prospective consumers by use of the internet and offer them marketing knowledge and goods catalogue online.³⁵

In the mid-1990's, www develops from simply an information supply to turn out to be an effective site for ecommerce activities, which sequentially call for a highly safe and interactive setting. The safe and interactive characteristics change ecommerce activities from a particular seller-buyer connection to a numerous sellers-buyers connection. Furthermore, websites can be modified or even personalized. Business also starts to assume wireless equipment to the internet. The more current ecommerce necessity is to allow business-to-

³⁵Adeya, Catherine Nyaki. "Sources of Training in African Clusters and Awareness of ICTs: A Study of Kenya and Ghana." Discussion Paper #2003-6. INTECH: United Nations University, 2003.

business interaction, which needs interoperability in business, and also in a business activity. As ecommerce behaviours expand across business procedures – e-business procedures.³⁶

2.2 Ecommerce and development

Ecommerce as a section of ICTs are over and over again hailed as among the highly efficient instruments for economic growth. The allocation of value additional that prospectively offers itself to ecommerce represents approximately 30% of GDP, most importantly supply, business services and finance. However, ecommerce is also prone to enhance global flow of various services considerably. The sudden increase in the utilization of ecommerce has been remarkable from its beginning only some years ago. From governments to international businesses to individual beginners, ecommerce is ever more seen as a vital future business modality.³⁷

The simplicity of transaction, broadening markets and reduced overheads are aspects that make ecommerce keys increasingly good-looking, as shown by the development of online sales. A number of studies indicate that ecommerce end up being among the instruments for “improvement enabler” since it enables developing nations leapfrog numerous stages of the growth process, cost-efficient with major transformative authority, equipping people directly with instruments for character-empowerment and the vital thing is to evade imbalanced and dishonest bureaucracies. Furthermore, other studies dealt with the development of the role of the market for the good of the poor since it can promote bigger market amalgamation in various ways. Subsequently, Crane sums up the advantages of applying ICT as a result of the direct involvement to productivity, upgrading in public sector management, education, improved delivery of private and public services, incorporating distant areas, offering enhanced communication, promoting production gains, effectiveness

³⁶ Crane, Andrew. “Unpacking the Ethical Product.” *Journal of Business Ethics* 2001, 30: 361-373.

³⁷ Hinson, Rober and Adjasi, Charles K. *The Internet and Export: A Glimpse from Selected African Countries*. Working Paper No. 51. 2009 Aalborg East: International Business Economics Aalborg University.

and development. Therefore, Garicano portrays ICTs as “strong instruments for empowerment and revenue creation in LCDs”.³⁸

2.3 Small and medium enterprises in Egypt

A good number of the global economies depend essentially on the function of SMEs in strengthening the state economy in various nations. SMEs contribute considerably to the economies of the Africa as a continent, with approximately 90% of all businesses, and offering the major source of employment and earnings for the people of Africa. In the non-oil-producing countries of the area, like Egypt, SMEs represent a higher percentage of financial activity and global development companies are active.³⁹ In Egypt, SMEs in the past played a moderately considerable function in the process of financial growth. The description of SMEs is not exceptional; it differs across states and in some states, the description varies further among sectors. The people employed and amount of resources, turnover, assets among others are utilized in categorizing enterprises into small, medium and micro. The Ministry of Industry in Egypt categorized SMEs on the basis of workforce and the costs of investment criterion. SMEs are classified as those with 10 to 49 and 50 to 99 personnel respectively. On the basis of costs of investment, they are put at LE 5 million for small and LE 10 million for medium enterprises respectively.⁴⁰

2.3.1 Ecommerce

Ecommerce is the carrying out of business transactions through the Internet, which entails exchange of valuable information in the form of goods and services and costs, by use of web-related technologies. The research on ecommerce related matters in developed states

³⁸ Garicano, Luis and Kaplan, Steven N. “The Effects of Business-to-Business E-Commerce on Transaction Costs.” *Journal of Industrial Economics* v. 44(4), 463-487.

³⁹ EIU, *Economist Intelligence Unit*, 2009, Available at: http://www2.accaglobal.com/documents/surviving_drought.pdf.

⁴⁰ MOFT (Ministry of Foreign Trade), —MSME Definition Study (PHASE II) - Final Reportl, *Ministry of Foreign Trade*, 2004. Available at: http://www.sme.gov.eg/English_publications/Definition.pdf

indicate that issues encountered by SMEs in developing states can be entirely diverse.⁴¹ A good number of SMEs in developing states have not realized even smallest levels of ecommerce acceptance. In addition the acceptance of web-supported transaction running by small business has not yet been as extensive as they are expected. It is evidence that the rate of ecommerce embracing in SMEs has been very minimal.⁴²

2.3.2 Barriers to e-commerce adoption in SMEs in Egypt

Ecommerce has always been anticipated to be a fresh driver of financial development for developing states. The SME division plays an important function in its participation to the state economy on the basis of the capital produced and the people who are already employed. SMEs in Egypt symbolize the biggest share of the fruitful units of the economy of Egypt and the present state guidelines directions deal with means of increasing the abilities of SMEs. A good number of factors are liable for the reduced use of ecommerce amongst the SMEs in Egypt. So as to establish the factors that support the acceptance of ecommerce, SMEs acceptors and non-acceptors of ecommerce were requested to give the factors hindering them from accepting ecommerce. The results indicate that technical obstacles are the most significant barriers as well as the lawful and regulatory controls, while lack of Internet safety is the greatest hindrance that hampers the execution of ecommerce in Egypt SMEs as well as the restricted utilization of banking through internet and web entries by SMEs. In addition, studies indicate that more endeavours are required to help and give confidence to Egypt SMEs so as to increase the rate of ecommerce acceptance, mainly the highly developed applications.⁴³

⁴¹ Huff S. & Yoong P., (2000). SMEs and E-commerce: Current Issues and Concerns: A Preliminary Report, *International Conference on E-commerce*, Kuala Lumpur, Malaysia.

⁴² Stockdale R. & Standing C., (2006). A classification model to support SME e-commerce adoption initiatives, *Journal of Small Business and Enterprise Development*, 13(3): 381-394.

⁴³ Terzi N., (2011). The impact of e-commerce on international trade and Employment, *Procedia Social and Behavioral Sciences*, 24: 745–753.

Even though study shows that ecommerce gives practical solutions for companies to handle difficulties of a principally varying environment, the accessible research associated with SMEs in developing states shows a delay of SMEs in accepting ecommerce. Diverse sources of information indicate that obstacles to ecommerce acceptance and diffusion in SMEs were originally reported in from the year 1990 to 1999. For instance, in 1999, according to Ismail and El-Nawawy research of ecommerce acceptance by Egypt SMEs indicated that the major factors turn around consciousness and education, the volume of the market, infrastructure of the ecommerce, infrastructure of telecommunications, legal structures, government issues, cost system and societal and psychological elements.⁴⁴

From 2005 various studies have indicated fresh obstacles on ecommerce acceptance in SMEs. The challenge of getting and retaining competent workers with the right skills and understanding and the danger of indulgence of an organization particular knowledge is a major barrier.⁴⁵ Bolongkikit et al. found that SMEs markets required a high level of human involvement.⁴⁶ Other barriers as stated by Kshetri are financial system obstacles, socio-political obstacles and cognitive obstacles.⁴⁷

2.4 Small and medium enterprises in Senegal

The ICT industry in Senegal has continuously developed in current years and even if its involvement to state economy has been very small, it has been lately included amongst the priority industries in the Government growth strategy arrangement. The section who apparently has the greatest prospective is the business process outsourcing services and the

⁴⁴ Fraser J., Fraser N. & McDonald F., (2000). The strategic challenge of electronic commerce, *Supply Chain Management: An International Journal*, 5(1): 7-14.

⁴⁵ Kaynak E., Tatoglu E. & Kula V., (2005). An analysis of the factors affecting the adoption of electronic commerce by SMEs: evidence from an emerging market, *International marketing Review*, 22(6): 632 – 640.

⁴⁶ Bolongkikit J., Obit J., Asing J., & Tanakinjal G., (2006). An exploratory research of the usage level of e-commerce among SMEs in the West Coast Sabah, Malaysia. Available on line at: <http://www.arraydev.com/commerce/JIBC/2006-08/Bolongkikit.asp>.

⁴⁷ Kshetri N., (2007). Barriers to e-commerce and competitive business models in developing countries: A case study, *Electronic Commerce Research and Applications*, 6: 443–452.

Call Centre which have pulled significant investment from state and overseas investors in the past several years. Conversely, other industries are slightly developed, for example the hardware amass, the software expansion, and the Internet services. A good number of Senegalese ICT companies are actually easy equipment sellers or service providers of basic IT assistance like software customization, setting up and repairs as well as IT consultancy.

2.4.1 Barriers to ecommerce acceptance by SMEs in Senegal

Achievement of application and execution of ecommerce is based on being familiar with the barriers posed by the internet for the success of ecommerce. Once an organization is in a position to recognize its hindrances, it can without difficulty make a decision on approaches and technologies to conquer them.⁴⁸ Based on Senegal, Kshetri stated the hindrances to ecommerce financial, socio-political and cognitive approaches. The economic are the slow internet transmission in Senegal, lack of easier accessibility to credit cards, and lack of physical transmission systems and presence of reduced bandwidth within the country. The socio-political hindrances include Senegal government policies like confidentiality and security, absence of business policies for ecommerce in the country and Senegalese cultural outlook of preference to verbal transactions as opposed to online transactions. Finally, the cognitive hindrances include lack of consciousness and knowledge of possible opportunities that ecommerce offers.⁴⁹

Even though numerous scholars of ecommerce indicates that ecommerce has huge businesses openings in developing states, numerous challenges should be conquered before developing states like Senegal can completely enjoy the advantages of ecommerce acceptance. In Senegal, these challenges include inadequate telecommunications networks;

⁴⁸ Rakhmanov E., (2009). The Barriers Affecting E-government Development in Uzbekistan, *4th International Conference on Computer Sciences and Convergence Information Technology*. ICCIT '09, 24-26 Nov. Seoul, South Korea: 1474 – 1480.

⁴⁹ Kshetri N., (2007). Barriers to e-commerce and competitive business models in developing countries: A case study, *Electronic Commerce Research and Applications*, 6: 443–452.

low availability of competent personnel with the necessary expertise to expand and sustain ecommerce online sites, reduced level of expertise in ICT deters people from making use of the internet, ill-timed and undependable structures to distribute physical products, minimal bank account and credit card diffusion, reduced income as well as reduced computer diffusion.⁵⁰

In addition, the high rate of distrust of what businesses do in Senegal with individual and credit card data is an ecommerce problem and is a grave barrier to ecommerce development. Another most important challenge is in the section of the volume of internet users required to put up a significant collection of online customers.⁵¹ This is woefully insufficient. It is also clear that a number of SMEs do not have acquaintance with even conventional forms of ecommerce like telephone turnovers and the utilization of credit card. In addition, reduced level of economic growth and low per capita returns of developing states like Senegal becomes a difficulty to SMEs acceptance of ecommerce and internet developments.⁵²

2.5 Small and medium enterprises in South Africa

South Africa, being a developing state, experiences a number of challenges like high rate of joblessness, reduced levels of effective expertise, poverty and uncontrolled crime. The support of the growth of SME's may assist in raising these challenges and advance the levels of expertise in the nation. This should add value towards financial development and generally help in alleviating poverty and joblessness levels. Communication and information expertise have been indicated as ways of raising the output levels of SME's. However, the view, execution and the use of the Internet by the SMEs in South Africa is still moderately

⁵⁰ Olatokun W. & Kebonye M., (2010). E-Commerce Technology Adoption by SMEs in Botswana, *International Journal of Emerging Technologies and Society*, 8(1): 42 – 56.

⁵¹ Alamro S. & Tarawneh S., —Factors Affecting E-Commerce Adoption in Jordanian SMEs, *European Journal of Scientific Research*, 2011, 64(4): 497-506.

⁵² Quader S. & Abdullah M., (2009). Constraints to SMEs: A Rotated Factor Analysis Approach, *A Research Journal of South Asian Studies*, 24(2): 334 -350.

unknown. Electronic trade, as an area of study, is still changing with many scholars not agreeing on to the advantages or boundaries. A good number of advantages from the use of ecommerce being accepted by SME's are as discussed, nevertheless its acceptance seems to be minimal for a given number of reasons.⁵³ The study done on SME's from the 2000 dotcom crash shows that views and thoughts towards ecommerce have greatly transformed to fairly some degree and people frequently look at possible advantages in a highly pessimistic way. In addition, in a study done by Courtney on ecommerce reception of by SMEs in South Africa numerous factors which influence the acceptance of ecommerce are failure to have information alternatives, insufficient time to explore alternatives, unavailability of computers, lack of accessibility to software and software, inadequate understanding of ecommerce frameworks and styles.⁵⁴

2.5.1 Factors that affect e-commerce acceptance in South Africa

The factors that influence ecommerce acceptance are helpful in finding the rationale behind an SME being at a given level. These acceptance factors are due to the owner's business position as and the company's characteristics as summarized by Courtney.

2.5.1.1 Owner's Characteristics

Acceptance of ecommerce is greatly dependent on the reception of ecommerce technology by the owner of the company. In case the owner fails to see the technology to be helpful, nor comprehend its potential ability, then he will be unwilling to accept it. Furthermore, the level of computer knowledge by the owner and failure to have the skill on how to utilize the technology will make the business reluctant in to accepting ecommerce. In case the owner is prejudiced and appreciates the views of knowledgeable people who

⁵³ Davies S, (2002). South African SME's and Internet Based Electronic Business. Empirical Research Project, Department of Information Systems, UCT.

⁵⁴ Courtney S, Fintz J. (2009). Small Businesses' Acceptance and Adoption of e-Commerce in the Western-Cape province of South-Africa, Empirical Research Project, Department of Information Systems, UCT.

advocate for the acceptance of ecommerce into the company, then he is also in a higher position to acknowledge their views. In addition, the owners of SME are worried of the proceeds that come from their investment. The demands to indicate a return frequently makes small companies to be greatly troubled with short-term continued existence instead of long-term productivity. Consequently, owners are frequently uncertain to put considerable investments in ecommerce when short-term gains are not certain.

2.5.1.2 Company's characteristics

The volume of technology presently in use in the company like PCs with modems and the utilization of email can render the acceptance of ecommerce simpler. Companies may accept the utilization of ecommerce due to their rivals making use of it, so that they may not drop their competitive benefit. In case a company has huge volume of information and transactions, it can easily affect its decision to accept IT since this can assist in make more efficient operations and present process effectiveness within the company. In their study on small enterprises, Courtney found that lack of trust in the IT sector since a number of owners viewed the IT sector to be exaggerating the advantages of technologies and misleading them is a factor that contributes to the acceptance of ecommerce. Also, lack of time to understand the difficulties and opportunities of the Internet due to its fast evolution affect the acceptance of ecommerce.⁵⁵

2.5.1 3 Contextual characteristics

The economic advantages of shifting business transactions from telephone and fax and put to the Internet are clearly stipulated in various publications. According to Wilde and Swatman⁵⁶, the forces of financial globalism have improved the market as the ultimate

⁵⁵ Courtney S, Fintz J (2001). Small Businesses' Acceptance and Adoption of e-Commerce in the Western-Cape province of South-Africa, 2001. Empirical Research Project, Department of Information Systems, UCT.

⁵⁶ Wilde WD, Swatman PA. (2000). Studying Telecommunications Enhanced Communities: An Economic Lens. Deakin School of Management Systems, Victoria, Australia. (Available at: http://mis.deakin.edu.au/research/working_papers_2000/2000_07_wilde.pdf, accessed 12 May 2001, last updated July 2001.).

authority of cost and service with the stability of power moving from the producer to the customer. Considering this wearing down of margins, organizations should lower costs, in both manufacture and transaction, so as to make their goods and services highly competitive. This can only be done through the Internet.

2.6 Small and medium enterprises in Kenya

Presently, the competitiveness of Kenya in the international clothing sector has been down in contrast to other states that at one time experienced similar difficulties in their attempts to promote growth. India and China are some of the countries that have moved far to conquer growth challenges by offering employment and growing their export foundation in part by means of the clothe manufacturing and accessories that provide to the international market. On the contrary, Kenya and various East African states have not been able to attract the major foreign investment that several other developing states have in their period of fresh independence. This is as a result of their lack of ability to contend with the labour power, transport and communication, or fast-developing economies of such states. Likewise, the failure of East Africa states producers to go with the degree, capacity, and cost of production with top producer states mirrors the test of small producers in whichever environment to contend with the main companies and significant producers that are more and more dominating the market. These purchasers or top companies have basically kept away from producing in nations such as Kenya, further restraining the region's capacity to contend on an international scale. As an option, ethical trade purchasers such as Global Handcrafters and Ten Thousand Villages search for areas such as Kenya particularly for the intention of supporting local artisans.⁵⁷

⁵⁷ Dickson, Marsha A., Littrell, Mary A. (2010). *Artisans and Fair Trade: Crafting Development*. Sterling, Virginia: Kumarian Press.

Crane⁵⁸ indicates that whereas an ethical artefact disregards a typical or general definition, producers can offer additional value to their goods by way of ethical growth. He further notes that the four production levels at which ethical growth can be used include the product, marketing, business and nation. Ethical growth can be connected to labels stick to goods whose manufacture discloses a definite value structure. He further deals with the importance of setting in the ethical structure of garments and textile manufacture, recognizes that “for a number of consumers, the nation of origin of their acquisitions is an important ethical reflection, from the positive growth given by drives to purchase only home-manufactured goods, to the negative growth increasing to producers in states with government policies considered unacceptable by foreign consumers. This presents purchasing companies with the chance to strategically deal with their sourcing environments in handling the demand of the consumer.⁵⁹ Nevertheless, they encounter similar production needs in relation to price, value and timing. Additionally, they maintain the power in production of influencing where and when manufacturing will happen, and the amount of profit that builds up at every stage. Therefore, areas eager to exploit the demand of the consumer for ethically manufactured products must all through make sure that they can meet the demands of the purchasing firms. This has catalysed optimistic areas to find out their accessibility of labour, capital and the suitable skills required to meet the expectations of the purchasing firms. Involvement in projects like the ones in this case study has seemed in past studies to give towards the growth of skills, resources and business expertise required to help areas develop. This relates to the call for companies to go past fair labour and other practices and to establish an objective for “social development of local people and impartiality in the culture

⁵⁸ Crane, Andrew, (2001). “Unpacking the Ethical Product.” *Journal of Business Ethics*, 30: 361-373

in which they are running. Therefore, Park et al.⁶⁰ relates the social maintenance of a state to its supply chain ability.

As Barrientos⁶¹ indicates, a consumer's first choice for ethically produced products and their tendency to evade products with poor name is checked by the buyer's similar curiosity in receiving the best possible product for the smallest amount of money. Therefore, whereas they have increased consciousness of labour matters with suppliers, they fail to curtail the pressure presented by purchasing firms. Since cost is a regular subject in ethical sourcing, these kinds of labels are time and again used to focus on niche buyers who have shown a readiness to pay a cost for the guarantee of production behaviours they support. There is a likelihood for similar project to be imitated, putting up the set of artisans' expertise and the connectivity amongst groups in a position to contain large-scale demands on a global scale, thus enhancing the producers' geographic reach and guarantying constant process, product and practical improvement. This improvement can be seen as a type of organizational change since artisans get exposure to fresh markets and their sets of expertise develop as a result. The significance of implementation and well-organized value chains for institutions looking forward to encounter achievements due to specialization.⁶²

2.7 E-commerce market access for ethical artisans

E-commerce is renowned for its ability in developing states to boost people's right of entry to information and the rate in which transactions can be done, thus empowering their participation in the global marketplace. In addition, ecommerce is regarded by some individuals to be a significant springboard towards being an information filled society.

Moodley quote the WTO's and the WIPO's assertion that ecommerce provides developing

⁶⁰ Park, Haesun and Stoel, Leslie (2005). "A model of socially responsible buying/sourcing decision-making processes." *International Journal of Retail & Distribution Management*, 33 (4): 235-248.

⁶¹ Barrientos, Stephanie, (2008). "Contract Labour: The 'Achilles Heel of Corporate Codes in Commercial Value Chains." *Development and Change*, 39 (6): 977-990.

⁶² SØrensen, Olav Jull, (2009). *Formation, Organisation and Management of the (Global) Value Chain in a Theoretical Perspective*.2009, Working Paper Series No. 52. Aalborg: International Business Economics.

states access to global markets, tendering, and supply procedures at reduced costs and with minimal capital investment, whereas Humphrey indicates that e-commerce ability for developing states is the capacity to boost sales by basically making their goods recognized by foreign consumers. It is also evident that to show those states with the fastest ICTs diffusion is a sign of a comparable employment rate and production growth. By offering the foundation for an incorporated ICT structure,⁶³ e-commerce could offer uninterrupted supply chain optimization. Nevertheless, in effect to all research on the function of e-commerce in developing states, such suggestions are founded on assumption, thereby calling for constant empirical study into the area. Also, there is a powerful call for research dealing with the function of e-commerce in ethical business particularly. Even if ethical business and e-commerce advocates both has an objective of getting rid of costs by offering direct connections amongst sellers and buyers, there remains modest statistics to show whether or not this is an efficient joint venture.⁶⁴

E-commerce openings are particularly applicable for developing states as they create the chances to reduce the transaction costs that have conventionally been the hindrances to the international market. One major decrease in transaction costs can be the removal of intermediaries among groups formerly dependent on such companies or agents to assist bargain sales and products transportation. Simultaneously, even if e-commerce can disconnect different relations in the supply chain by straightforwardly linking sellers and buyers, it cannot constantly reinstate the skill or communications support intermediaries offer. Therefore, whereas e-commerce may not get rid of all middlemen, it can assist to reduce market avenues that have become unproductive or very burdensome due to numerous

⁶³Moodley's "building blocks" include a network of trading partners, a single point of connection to all participants in the value chain and production network, a common digital platform to facilitate seamless communication and transaction processes among trading partners, and real-time response capabilities to adapt to unplanned events in the value chain.

⁶⁴Humphrey, John., (2002). *Business-to-business e-commerce and access to global markets: exclusive or inclusive outcomes?* IDS Final Draft. Sussex: Institute for Development Studies, 2002

middlemen by generating numerous open communications and marketing avenues. Also, extra hindrances to access are likely to vanish as right of entry to information flourishes, thus contributing to the elimination of supply chain connections.⁶⁵

So as for such links to work, purchasing companies or consumers should be self-assured of the goods they are being lead to in an electronic means. This challenge is regularly cured by the constant involvement of intermediaries or third party firms. WorldofGood.com authorizes these as Trust Providers. A number of e-marketplaces take extra steps to give buyers assurance by offering their individual purchasing structures, as eBay has been doing with PayPal. In addition, this shows the significance of ecommerce communication means to use the prevailing dependence and communication networks institutions already have prepared. Per se, bigger manufacturers and companies are more prone to take part in ecommerce business than smaller companies.

2.8 Kenya's Electronic Communication Reality

Like it is indicated in the literature review, the power and environment of local institutions significantly affects the likelihood for Kenyan artisans to hold close and pursue ecommerce openings in the ethical business sector. Whereas electronic communications achieved fame in Kenya in the 1990's, Internet and telecommunications infrastructure have been time-consuming to be full-grown. Artisans constantly experience a disparity between existing technology and the demand that is being determined by globalization. In the last two years, there has been the setting up of two main fibre-optic cables with the likelihood to significantly improve the speed and range of Kenyan communications.⁶⁶

⁶⁵ Knorringa, Peter and Pegler, Lee, (2002). "Globalisation, firm upgrading and impacts on labor." *Royal Dutch Geographical Society KNAG*. Oxford: Blackwell Publishing Ltd.

⁶⁶Moodley finds that the availability of affordable access to high-speed telecommunication infrastructure correlates to a firm's movement from traditional practices to e-commerce, 2009

Whereas most studied companies do exhibit the utilization of email, one division of Kenyan companies especially in the clothing industry conveys a standing liking for face-to-face interaction, even in those by now taking part in international trade. In addition, these companies indicate that they are exposed making use of electronic communications to collect information but not to carry out business transactions. Among all technical activities, email is mentioned as the most significant application for producers in Fair Trade and is indicated as among the most cost-efficient advantages of the Internet. Again, a lot of small artisan groups continue to be un-connected and ignorant about the advantages of investments like the ones on leading in lacking the upfront resources required to institute functioning Internet connections. Kinyanjui and McCormick disagree with the point that Business-to-Business ecommerce procedure has direct association to involvement in global markets.⁶⁷

2.9 Policy suggestions for ecommerce

For developing states looking forward to make bigger their market admission using ecommerce, a powerful policy system initiated by the country is of great significance. Whereas the country should play a foremost function in making sure state infrastructure can provide accommodation for ecommerce requirements and development, globalization is also demanding the state's power and capacity to do so. As indicated by Oyelaran-Oyeyinka⁶⁸, the synthetic disconnection of technology from the organizational makeup in which it is set up has been a main theoretical and policy error. Policies should be adapted to deal with the particular characteristics, requirements, and difficulties the Kenyan artisans experience. Simultaneously, ecommerce offers great chances to artisans who are not restricted by the firm terms of a lot of high level industries. Kenya has summarized policies and approaches in

⁶⁷ Kinyanjui, Mary Njeri and McCormick, Dorothy, (2004). "E-Commerce in the Garment Industry in Kenya: A Preliminary Review of Usage, Obstacles and Policies." In McCormick, Dorothy and Rogerson, Christian (eds). 2004. *Clothing and Footwear in African industrialisation*. Johannesburg: Africa Institute of South Africa, 2005

⁶⁸ Oyelaran-Oyeyinka's study, (2004). "Learning new technologies by SMEs in Developing Countries" concluded that local and overseas training opportunities are instrumental in increasing technological complexity for firms, 2004

policy papers intended to offer a podium for industrialization anticipated by the year 2020, of which SMEs are given priority. Such policies, particularly those connected to training, will be significant in empowering artisans to have right of entry to the international market by means of ecommerce.

2.10 Forces that fuel ecommerce

There exist at least three main forces that stimulate ecommerce. They include the economic forces, customer interaction and marketing forces as well as technology, mostly multimedia convergence.

2.10.1 Economic forces

Among the most apparent advantages of ecommerce is economic effectiveness that emanates from the decrease in costs of communications, reduced-cost technological transport and communication, faster and highly economic electronic dealings with suppliers, reduced international information dissemination and costs of promotions as well as cheaper consumer service options.

Economic incorporation can either be internal or external. External incorporation is regarded as the companies' electronic networking, suppliers, and consumers/clients and autonomous contractors into a single community being in touch through an effective setting with the Internet as means of information sharing. Conversely, internal incorporation is the networking of the different sections in a corporation, and of business dealings and procedures. This leads to the storing of vital business data in a digital structure that can be recovered immediately and conveyed electronically. Internal incorporation is best demonstrated by corporate intranets. Amongst the firms with well-organized corporate intranets are IBM, Nestle, Procter and Gamble and Intel.⁶⁹

⁶⁹ Pretious, Mike and Love, Mary, (2006). "Sourcing ethics and the global market." *International Journal of Retail & Distribution Management*. 34(12): 892-903.

2.10.2 Market forces

Businesses are persuaded to make use of e-commerce in advertising and marketing to access both huge and small global markets. Similarly, the Internet is utilized as a means for better client support and service. It is much simpler for firms to offer their target customers with more comprehensive goods and service data by means of the Internet.⁷⁰

2.10.3 Technology forces

The growth of ICT is a key factor in the development of e-commerce. For example, technological progress in digitizing information⁷¹, compression and the advertising of open structures technology have created the way for the union of communication services into a single podium. This as a result has made communication highly effective, quicker, simpler, and highly economical as the significance to establish different networks for phone services, TV broadcast, wire television, and Internet admission is eradicated. From the standpoint of businesses and customers, having a single information supplier implies reduced costs of communication.

In addition, the general code of access can be made highly attainable with convergence. At the present time the high charges of setting up landlines in sparsely populated rural regions is a hindrance to telecommunications firms to set up telephones in these regions. Setting up landlines in rural regions can become an advantage to the private sector if these landlines' income is not restricted to local and long distance charges of using telephones, but also consist of wire TV and Internet costs. This progress will make sure that there is access to information within people's reasonable means especially those in rural

⁷⁰Park, Haesun and Stoel, Leslie, (2005). "A model of socially responsible buying/sourcing decision-making processes." *International Journal of Retail & Distribution Management* 33(4): 235-248.

⁷¹ Communication Authority of Kenya (Formerly CCK)

regions and will save the government the difficulty and charges of setting up costly landlines.⁷²

2.11 Conclusion

It is evidence that E-Commerce started when businesses initially used telephone, telex, fax and telegram to perform business activities with the simplicity of transaction, widening markets and minimal overheads costs as the factors that made it increasingly admirable, as indicated by the growth of online sales. It is also clear that there are various factors that influence the adoption of ecommerce in various countries namely Egypt, Senegal, South Africa and Kenya are based on economic, market and technological forces. By considering the four states, it is evidence that technical barriers are the major obstacles as well as the legitimate and regulatory measures, whereas lack of Internet safety is the greatest barrier that hampers the adoption of ecommerce in Egypt SMEs as well as the restricted use of banking through internet and web entries by SMEs. Also, the slow internet transmission, lack of easier accessibility to credit cards, and lack of physical transmission systems and presence of reduced bandwidth within the country, government policies like confidentiality and security, absence of business policies for ecommerce in the country, cultural outlook of preference to verbal transactions as opposed to online transactions, lack of consciousness and knowledge of possible opportunities that ecommerce offer affect the ecommerce adoption.

⁷² Park, Haesun and Stoel, Leslie, (2005). "A model of socially responsible buying/sourcing decision-making processes." *International Journal of Retail & Distribution Management*, 33 (4): 235-248.

CHAPTER THREE

MOBILE TECHNOLOGY AND E-COMMERCE AS DEVELOPMENT TOOLS IN DEVELOPING COUNTRIES

3.1 Introduction

Information and Communication Technology (ICT) is defined as a set of primarily digital technologies designed to collect, organise, analyse, store, process and communicate information.⁷³ As a broad model, ICT includes information systems, information technology and digitization. ICT can be categorised into old ICT that include telephones, radio, television, films, audio and video cassettes and new ICT that include, computers, mobile phones, faxes, point of sale systems, global positioning systems, Informational geographical systems, satellites, networked environments and Internet.

This study critically analyses the mobile technology and its sister innovation; e-commerce, how they have impacted on growth of business in the developing countries and in particular how they impact on SMEs. SMEs are professed as the engine of development in Kenya because of their main role in economic development. The sector generates employment opportunities, provides goods and services and steers competition and innovation.⁷⁴ SMEs comprise about 75 % of all businesses, employ 4.6 million people (30%), account for 87% of new jobs created and contribute 18.4 % to the GDP.⁷⁵ The Kenyan government regards the sector the core factor of industrial development and has hinged several development strategies on it.⁷⁶ However, the sector faces binding problems that make it unrealistic for it to realise its full potential and deliver to the government expectations.

⁷³ Ritchie R. & Brindley C. (2000). Disintermediation, Disintegration and Risk in the SME. *Global Supply Chain Management Decision*, 8: 575-58

⁷⁴ Kenya Institute for Public Policy Research and Analysis (2006). *Developing a marketing framework for Micro and Small Enterprises in Kenya*. Nairobi, KIPPRA.

⁷⁵ Government of Kenya, (2009). *Economic Survey Report*. Nairobi, Government Printers.

⁷⁶ Government of Kenya, (2007). *Kenya Vision 2030: "A Globally Competitive and Prosperous Kenya"*. Nairobi, Government Printers.

These include limited market access, limited access to information, finances and technology and unfavourable policy and regulatory environment among others.⁷⁷

3.2 Ecommerce platforms and mobile technology empowering SMEs

This study seeks to investigate the ability of e-Commerce platforms in impacting the lives of the Small and Medium entrepreneurs listed/ endorsed on these sites, by looking at various e-Commerce platforms in Kenya. For the purposes of this study, Shop Soko, Bombolulu Workshops and Sasa Designs by the Deaf among others shall be used as examples of e-Commerce platforms. Use of mobiles phones is also studied in the use of technology that focuses on empowering SMEs.

3.2.1 Mobile technology

Mobile phones are used more often for keeping in contact with customers and clients compared to any other form of communication. Seventy-six percent of SMEs in the sample used the mobile phone for this purpose compared to 48% using fixed-line telephones (of those who owned it).⁷⁸ The difference is not so dramatic when ordering supplies, something that can be done using a fixed-line phone more easily since this can be an occasional occurrence. Nevertheless, there is a difference with 48% of SMEs using mobile phones compared to 36% using fixed lines, which again speaks to the increasing importance of mobility and low start-up costs associated with mobile phones.⁷⁹ The crossover between business and personal use is also more evident among mobile phone users compared to fixed-line phone users. Of all the ICTs used by SMEs, mobile phones are seen as vital across the

⁷⁷ Government of Kenya, (2005). *Sessional Paper No. 2 of 2005 on Development of Micro and Small Enterprises for Wealth and Employment Creation for poverty reduction*. Nairobi, Government printer.

⁷⁸ Ibid

⁷⁹ Ibid

range of formal and informal businesses. Mobile phones score nearly exactly the same in the informal sector compared to the formal sector.⁸⁰

It is true to say that SMEs have limited resources. In practical terms, this means that there is a strong focus on those tools that have an immediate benefit, compared to those with longer-term benefits. The advantage of the mobile phone, for example, is twofold: first, it can be used with little training. Second, increasing numbers of people have mobile phones (the network externality effect). Other forms of ICTs, such as the fax machine and post box, have a rapidly declining network effect as fewer people continue to use them.

With regard to mobile technology and mobile shoppers, it was in 2012 expected that the number of consumers who purchase from their phones would go up by about 50% by end of 2014.⁸¹ As at August 2014 the global count of mobile phone shopping consumers has grown to about 580 million users, not just as a browsing tool but as a payment tool⁸² thus increasing the importance of mobile as an e-Commerce channel which has translated to more online sales. In Kenya this is especially true for sites like OLX, Jumia and Shop Soko, all of which have mobile phone applications to enable buyers to access the products at their convenience and for the seller to be easily connected to the consumer through their products. This is very encouraging since one of the key challenges to growth of mobile e-Commerce is that many sites/ platforms lack the optimization for mobile browsing, registration or purchasing. In Kenya the concern of mobile transaction security has been resolved by M-Pesa and other phone banking solutions.

The mobile phone is the most used ICT tool in that is rated most significantly in terms of desirability, accessibility and affordability. Mobile phones emerge as the preferred ICT

⁸⁰ Communication Commission of Kenya (2012). *Quarterly ICT statistics*. Nairobi: Communication Commission of Kenya.

⁸¹ Communication Commission of Kenya (2012). *Quarterly ICT statistics*. Nairobi: Communication Commission of Kenya.

tool to SMEs due to affordability, ease of use, and a reliable network. More than 95% of SMEs in Kenya own mobile phones with subscription reaching 30.7 million in April, 2013 and mobile penetration at 78%.⁸³ This offer SMEs a great opportunity to employ the services of this preferred tool to enhance market access. Mobile phones offer various functionalities that can enhance market access and include communication, enabling market transactions, product promotion, customer relationship, market research and other internet enabled services. Mobile phones offer a quick, efficient and affordable way of communication to SMEs which is essential for initiating and maintaining customer relationship, facilitating market transactions, acquisition of market information and for communicating product information to customers.

Communication can be achieved through voicemail or the short message service that is relatively cheap. SMEs can also benefit from the use of Interactive Voice response which uses voicemail for information delivery on the user dialling given numbers to access information through simple menu steps. This gives SMEs the opportunity to obtain market information necessary to achieve market access.⁸⁴

Mobile phones can also be used to facilitate market transactions to improve efficiency and reduce high transaction costs. Such transactions include m-banking, m-payments and mobile money transfer. SMEs can take advantage of services that already exists e.g. pay-bill service, “Lipa na M-Pesa”, “M-Pesa” banking and money transfer from Safaricom service providers.⁸⁵ M-internet is a fast growing technology that can be used for mobile commerce to facilitate online marketing, communication, networking, and market research.

⁸³ Communication Commission of Kenya, (2012). *Quarterly ICT statistics*. Nairobi, Communication Commission of Kenya.

⁸⁴ OECD, (2002). *The Impacts of Electronic Commerce on Business: Summary*, DSTI/ICCP/IE(2002)5/FINAL, OECD, Paris.

⁸⁵ Graeber, Charles (2014). Ten Days in Kenya With No Cash, Only a Phone. Business Week. <http://www.businessweek.com/articles/2014-06-05/safaricom-m-pesa-turns-kenya-into-a-mobile-payment-paradis>

3.2.2 E-commerce platforms

With the growth of internet, and the rise of e-commerce, online shopping is almost inevitable. Be it for the convenience of it, or simply the thrill – the ‘because I can’ factor, ecommerce is on the rise in Kenya. At face value it seems like a booming industry, but it is in its true element still quite embryonic especially for business owners trying to sell their wares via an e-commerce platform.

With regard to mobile technology and mobile shoppers, it was in 2012 expected that the number of consumers who purchase from their phones shall go up by about 50% by end of 2014.⁸⁶ As at August 2014 the global count of mobile phone shopping consumers has grown to about 580 million users, not just as a browsing tool but as a payment tool thus increasing the importance of mobile as an e-Commerce channel which has translated to more online sales. In Kenya this is especially true for sites like OLX, Jumia and Shop Soko, all of which have mobile phone applications to enable buyers to access the products at their convenience and for the seller to be easily connected to the consumer through their products. This is very encouraging since one of the key challenges to growth of mobile e-Commerce is that many sites/ platforms lack the optimization for mobile browsing, registration or purchasing. In Kenya the concern of mobile transaction security has been resolved by M-Pesa and other phone banking solutions.

Another promising ICT tool for enhanced market access in SMEs is the computer with all the computer related applications. Statistics indicate computer usage in Kenya has increased over the years, 77% SMEs indicating they own a computer.⁸⁷ However, majority use computers for basic applications like automation and communication. In a study on ICT adoption and use by SMEs, only 28% of interviewed SMEs had Websites and 24% indicated

⁸⁶ Atiya Hussain. (2013) International Trade Centre December 01, 2013: <http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs/> .Accessed 28/8/2014.

⁸⁷ Kiveu, M. (2008). *Factors Influencing ICT Adoption by Small and Medium Enterprises: A case of Thika Municipality*. Unpublished Thesis, Kenyatta University, Nairobi.

they used ICT for product marketing and e-commerce.⁸⁸ The computer has the advantage of having much functionality that can be used to for communication, e-commerce, promotion, design and development of superior products, market research, customer-relationships, networking and the creation of linkages, acquisition of important market information. A significant application for market access in computers is the internet whose users in Kenya stand at 16.2 million currently, with an internet penetration of 41.1%.⁸⁹ Internet offers SMEs an opportunity to create their websites for promotion, communication and for efficient market transactions. According to Chacko and Harris⁹⁰ the use of e-commerce has emerged as an efficient gateway for SMEs to take greater advantage of opportunities in the global markets. Internet can be to identify markets and for market research, for social networks to promote products, for communication and networking to increase market access. However a great impediment to the use of computer by SMEs is the high cost of computer hardware and connectivity, unreliable network, lack of awareness and limited computer knowledge and skills.⁹¹

3.3 Structures and processes of e-Commerce platforms in Kenya

Kenya has a vibrant mobile apps system and mobile payment platforms as evidenced by the iHub⁹² incubator and M-Pesa respectively. Currently, M-Pesa is vital in enhancing e-commerce because it can make Kenyans change their attitudes towards e-commerce. For example, why shouldn't a customer pay for their drinks at a pub using M-Pesa? Second, mobile services providers should provide open access to their payment systems' application programming interfaces (APIs) that will enable developers to build applications that solve e-

⁸⁸ Ibid

⁸⁹ <http://www.ihub.co.ke/>

⁹⁰ Chacko, G. & Harris, G. (2006). Information and Communication Technology and Small, Medium and Micro Enterprises in Asia-Pacific – size does not matter. *Information Technology for Development*, 12(2): 175-177.

⁹¹ Minges, M. (2003). *Measuring Business Access to ICT*. United Nations Conference on Trade and Development.

⁹² <http://www.ihub.co.ke/>

commerce challenges and make online shopping fun. Additionally, telecommunication companies should allow consumers to link the former's payment systems to the latter's bank accounts. Finally, mobile services providers should enable their consumers to seamlessly do business with one another through their various mobile payment platforms.

The growth of e-commerce has been further advanced by various web-based technologies like automation and delegation (also known as smart/intelligent agents) which have attributes like scheduling tasks, automated negotiations, resource allocation, shopping bots, and bidding elves. In addition to enabling consumers to conduct automated comparisons and sellers to access visitors' background information in real time, such software programs can make decisions for individuals, negotiate with other programs, and participate in online markets. Much of e-commerce's economic value arises from this kind of automation, which not only reduces operating costs but adds value by generating new market interactions.

Online security is a key concern for those participating in e-trade, since the agent is able to access information on the users' preferences and willingness to pay. As payments are mainly by credit cards (with the concerns on credit card fraud), more and more sites find it safer to have their platforms hosted on a central location that processes all payment options for their clients and maintains anonymity and does not save users personal details, for instance Shopify⁹³, which has various online money payment options like PesaPal and PayPal. In the case of Kenya, M-Pesa (a mobile technology innovation) has also helped to resolve this. Safaricom accepts deposits of cash from customers with a Safaricom cell phone SIM card and who have registered as M-Pesa users. Registration is simple, requiring an official form of identification (typically the national ID card held by all Kenyans, or a passport) but no other validation documents that are typically necessary when a bank account is opened. Formally, in exchange for cash deposits, Safaricom issues a commodity known as

⁹³ <http://www.shopify.com/>

“e-float,” measured in the same units as money, which is held in an account under the user’s name. This account is operated and managed by M-PESA, and records the quantity of e-float owned by a customer at a given time. There is no charge for depositing funds, but a sliding tariff is levied on withdrawals (for example, the cost of withdrawing \$100 is about \$1).⁹⁴

3.4 Impact of mobile technology and e-Commerce as development tools in Kenya

Several literature materials were consulted to affirm the scope and specific areas in businesses the latter have played a big role. With regard to mobile technology and mobile shoppers, it was in 2012 expected that the number of consumers who purchase from their phones shall go up by about 50% by end of 2014.⁹⁵

E-commerce is a huge tool for SMEs to leapfrog development. Beyond local markets, beyond national markets, beyond even regional markets, it puts an SME into the global marketplace,’ said International Trade Centre (ITC) Executive Director Arancha González, addressing a session focused on leveraging e-commerce for trade development in the African, Caribbean and Pacific Group of States.⁹⁶ New technologies offer opportunities that can be used to diversify national economies. Services, in particular those supported by new technologies, can be tapped to reduce dependence on commodities. Half of the countries in Africa derive more than 80% of their merchandise export income from commodities, and the need for new development paths to counter this dependence on commodities is especially important for least developed countries (LDCs).⁹⁷

The incomes of rural households in Kenya have increased between 5% to 30% since they began using mobile banking, according to a study cited in Standard Bank’s September

⁹⁴ The complete tariff schedule is available at <http://www.safaricom.co.ke/personal/m-pesa/my-m-pesa-account/tariffs>

⁹⁵ <http://www.juniperresearch.com/reports.php?id=767>

⁹⁶ Atiya Hussain, (2004). Consultant, *International Trade Centre*. Available at: <http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs>.

⁹⁷ UNCTAD (2012). UNCTAD’s 2012 Commodities and Development Report. http://unctadxiii.org/en/SessionDocument/suc2011d9_overview_en.pdf

2011 Africa Macro Insight and Strategy report. The 2012 Global Mobile Money Adoption Survey estimated that more than 60% of Kenya's gross domestic product (GDP) and over 30% of the United Republic of Tanzania's GDP moves through mobile money platforms. But mobile money is gaining currency elsewhere, too. Mobile money deployments in Côte d'Ivoire, Madagascar, Paraguay, Rwanda, Tonga and Zimbabwe range between 2% to 5% of GDP.⁹⁸

The slew of development services that the growth in mobile money has enabled, from healthcare services to tips for animal husbandry, are just as important. The most sophisticated of ITC's Trade at Hand services is in Kenya and uses a range of technologies – including M-Pesa, interactive voice response, radio outreach, cloud hosting, and even the blackboards on which farmers' offers are displayed – to link smallholder farmers to food traders and export-driven supply chains.

For example, the Soko Hewani platform, which was upgraded in early 2013 with support from ITC, aids the Kenya Agricultural Commodity Exchange (KACE) in the daily collection and dissemination of commodity price information in regional markets. The technology provides farmers with up-to-date market information, enabling them to make more informed sales decisions. The project is initially expected to impact about 500 rural farmers each month – the buyers and sellers who physically visit KACE's Market Resource Centers. Gradually, however, the project's use of radio is expected to extend connectivity to regional markets, reaching a wider group of rural farmers who previously had little option but to take the prices they were offered by buyers and middlemen.⁹⁹

⁹⁸ Atiya Hussain. (2013) International Trade Centre December 01, 2013: <http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs/> .Accessed 28/8/2014.

⁹⁹ Atiya Hussain. (2013) International Trade Centre December 01, 2013: <http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs/> .Accessed 28/8/2014.

3.5 Impact of ICT environment on SMEs and their business processes

Marketing is important success function for SMEs that is facilitated by market access. Information plays a key role in market access and is the main core of any marketing system. Market access in developing countries is a major challenge to small businesses due to market imperfections that can be attributed to lack of market information, lack of linkages between the actors in the supply chain, distortions or absence of input and output markets, high transaction cost and high presence of trade intermediaries. Different strategies exist for improving market access of which the use of ICT is one. Strategies that enhance market access greatly impacts on the performance of small enterprises.¹⁰⁰

Potential benefits of ICT to SMEs include enhancing efficiency, reducing costs and broadening the market both locally and globally, empowering SMEs to participate in the knowledge economy by facilitating connectivity; helping to create and deliver products and services on a global scale and providing access to new markets.¹⁰¹ ICT can significantly impact the market –oriented dimensions of products and services.¹⁰² Market –oriented ICT include websites which display the goods, services and information of a firm on the worldwide-web (WWW). It can also integrate the e-commerce functionality, such as offering the ability to place orders. The www is a powerful platform for expanding and reaching new markets for SMEs while the Internet is critical in enhancing a firm's market reach and operational efficiency.

ICT offers SMEs flexibility in trading by enabling 24 hours of trading, borderless market space and leverage SMEs to compete against larger enterprises on the same platform. In addition, ICT facilitates remote access to knowledge, suppliers and a borderless

¹⁰⁰ Shepherd, W. (2007). *Approaches to linking producers to markets: A review of experience to date*. Agricultural Management, Marketing and Financial Occasional paper 13, FAO, United Nations, Rome.

¹⁰¹ Chyau, C. (2005). *Why Should Countries Embed ICT into SME policy?*. 2005. APDIP e- Note Available at <http://www.apdip.net/apdipenote/4.pdf>

¹⁰² Ritchie R. and Brindley C. (2000). Disintermediation, Disintegration and Risk in the SME Global Supply Chain Management Decision 38(8), 575-583

environment, offering SMEs the ability to deliver products and services on a different platform that is easily accessible. ICT can be used to reduce barriers of entry into different market segments exposing SMEs to a wider customer base.¹⁰³ Chibelushi¹⁰⁴ noted that ICTs, especially the internet, have a significant impact on the operations of SMEs by facilitating their access to global markets, enabling them to sell to international customers, and to compete favourably with large corporations. Strategic use of ICTs is viewed as near solutions to firm's problems e.g. ICT has the potential to reduce the impacts of distance, reduce transaction costs, be used in information gathering and dissemination, inventory control, and quality control. ICT can enable SMEs to participate in the regional and international markets which are strategic for competitiveness, growth and further development.¹⁰⁵ Access to global markets offers a host of business opportunities, such as new niche markets; possibilities to exploit economies of scale, the upgrading of technological capability; and ways of spreading risks.¹⁰⁶ Internet based technologies provide small firms the Opportunity to effectively overcome the limitations of size and compete and/or in larger markets with bigger sized establishments. There is some evidence to suggest that the Internet has increased international opportunities for SMEs.¹⁰⁷

ICT also has the ability to transform global and local markets to become more efficient. Electronically mediated markets greatly impacts on the cost, speed and transparency of market-based transactions. As a result lower transaction cost and increased reach result in

¹⁰³ Lloyd, M. and Kroeze, H. (2008). *ICT and SMEs competitiveness in South Africa: how SMEs could use ICT to become competitive in South Africa*. Unpublished Thesis, University of Pretoria, Pretoria.

¹⁰⁴ Chibelushi, C. (2008). ICT industry challenges in adopting ICT: a case study from the West Midlands, UK", in *proceedings of the 2008 International Conference on Information Resource Management*, May 18-20, Niagara Falls, Canada.

¹⁰⁵ Ramsey, E., Ibbotson, P., Bell, J. and Gray, B. E-opportunities of service sector SMEs: An Irish cross-border study. *Journal of Small Business and Enterprise Development*, 10(3), 2003, 250-264.

¹⁰⁶ OECD. The Impacts of Electronic Commerce on Business: Summary, DSTI/ICCP/IE(2002)5/FINAL, OECD, Paris, 2002.

¹⁰⁷ Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

up to 15% lower costs to consumers, and up to 20% lower costs in business procurement.¹⁰⁸ Business-to-business (B2B) net-based transactions are transforming supply chains across the globe, leading to the rise of new channels or net-based intermediaries, and enabling SMEs to pool resources and auction or collectively supply large multinationals. Net-based business-to-consumer (B2C) transactions and point-of-sale scanners provide producers, with detailed and instant information on local and distant buyers and markets. For consumers, C2B transactions cut consumer search costs, reduce lead time wait, and broaden choices. Increased information on both sides helps align supply and demand ever more tightly.¹⁰⁹ At a more basic level, ICTs are the lifeblood of efficient markets and have the potential to develop markets and alleviate poverty.

Market prices act as coordinating signals for producers and consumers, where sources of information are limited basic ICT could play a major role in creating efficient markets, improving producer practices and speeding innovation, through the provision of information on market prices.¹¹⁰ ICT causes fast accessibility to the market, increases selection power, improves communication, facilitates identification of markets, improves marketing and reduces business transaction costs. From a Survey conducted in Kenya and Tanzania¹¹¹; SMEs that used different forms of ICT rated their effects mostly positive. On top were telephone and computer applications that are assumed by 88% and 76% of users to considerably increase management efficiency and competitiveness respectively. Mobile phones are considered to contribute significantly to regional market expansion by most

¹⁰⁸ Atiya Hussain. (2013) International Trade Centre December 01, 2013: <http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs/> .Accessed 28/8/2014.

¹⁰⁹ Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

¹¹⁰ Ibid

¹¹¹ Matambalya, F. (2000). The Significance of Information and Communication Technologies (ICTs) for Economic Productivity in Africa: Micro Level Evidences from a Survey of Small and Medium Scale Enterprises (SMEs) in Tanzania. *Internationales Afrika Forum* 3, 271-278.

enterprises followed by fixed phones and faxes. ICT has a proven role in enabling SMEs to increase their productivity and access information and markets, but remain unaffordable.¹¹²

In general SMEs rely much more on informal information systems than larger enterprises. To get the relevant information that is needed for a rational decision is not costless especially as in SMEs usually there is only one decision maker – the owner/manager – whose personal resources (time, knowledge and capabilities) are restricted. However SMEs have the advantage of smaller internal coordination costs, as all decisions are made by one or few people.

A more qualitative study by Duncombe and Heeks¹¹³ stresses the different information and ICT needs for different types of SMEs. They conclude that smaller SMEs with little working capital (which they characterize as survivalists and trundlers) rely mainly on informal information from known sources where personal relations and trust plays a major role. For these enterprises ICTs are of minor relevance and only telephone can help to increase access to this kind of information. As phones can help to extend social and business networks and in some cases substitute for journeys and business intermediaries access to telephone services should be given priority.

In this regard, ICTs can improve efficiency and increase productivity by different ways including, improving efficiency in resource allocation, reducing transaction costs, and technical improvement, leading to the outward shifting of the production function. So far there is little empirical evidence of how the diffusion and application of information and communication technologies (ICTs) can be a catalyst for economic competitiveness and growth in developing countries.

¹¹² Minges, M. (2003). *Measuring Business Access to ICT*. United Nations Conference on Trade and Development.

¹¹³ Duncombe, Richard and Heeks, Richard: Information and Communication Technologies and Small Enterprise in Africa, Lessons from Botswana, IDPM University of Manchester, January 2001.

ICTs can serve as information channels because they are able to support the decoupling of information from its physical repository, which can be argued to be the truly revolutionary aspect of these technologies.¹¹⁴ This property allows the immediate transmission of large volumes of information and permits communication independent of the physical movement of individuals. This decoupling effect allows users access to a body of information and ideas which are non-rival in use and potentially generate large content related externalities that will improve the innovation capacity and diffusion. One effect of the diffusion of ICT is the disruption of established economic relations as new possibilities are in the reach. Changes in how the economy works will also have effects on employment. Creation of new jobs and a loss of jobs that become redundant, new contents and quality of work, relocation of firms and maybe most important the skills required are all affected by the spread of ICT.¹¹⁵

3.6 Challenges faced by e-Commerce organizations in achieving empowerment of SMEs

The concept of e-commerce is still pretty new as such needs to be explicitly understood in its real sense. This is where the challenge arises. To some e-commerce sounds just a technology but in reality e-commerce is simply more than technology it is in fact a whole new modern business strategy in which if small or large firms integrate into their existing strategies can gain more in productivity, market share or even bottom-line profitability. Today SMEs in both developed and developing countries continue to fail due to either poor implementation or understanding of e-commerce strategies and technology. It has been revealed that regardless of the business environment, the biggest challenge most SMEs managers or entrepreneurs face is one of transformation – how to basically transform their brick and mortar companies into one of click and mortar company in order to be competitive

¹¹⁴ Evans, P.B. and Wurster T.S. Strategy and the new economics of information. In: Stern, C.W. and Stalk, G. Jr. (eds.) (1997): Perspectives on Strategy from The Boston Consulting Group, New York

¹¹⁵ ILO: (2000). World Employment Report - Life at work in the information Economy, Geneva.

in this inevitable digital economy. These challenges are predominantly enormous in developing countries particularly in Africa where the digital age is still taking its roots gradually. The challenges primarily include lack of proper commercial and legal system for conducting the business and commerce through the electronic commerce. Added to this are hindrances such as security, poor telecommunication infrastructure, lack of skilled labour and trust, privacy and psychological barriers, digital divide as well as poor e-commerce planning and strategy.

Majority of Kenyan SMEs although aware of doing business online perceive it as being of high risk due to security breaches. Security being the major stumbling block for SMEs, there is also a reluctance culture among SMEs owners or managers to adjust their businesses with the requirements of e-commerce participation because they believe that it is first and foremost costly and complex as well as time consuming assuming further that such participation involves complete re-design of their business strategy. There is also a societal illiteracy and failure to see any advantage of using e-commerce. Many researchers express that the later continues to convince many managers that e-commerce does not fit the products or services their firms offer. Indeed, while e-commerce adoption has eroded trading barriers for SMEs, this has to often come at the price of altering or eliminating commercial relationships and exposing the business to external risks.¹¹⁶ Lee¹¹⁷ agrees that the biggest challenge for SMEs is not to find the best E-commerce model but to change the mind-set of the owner/managers themselves. For those who have developed an organization-wide strategy (in anticipation of E-commerce), these changes can lead to an increase in efficiency

¹¹⁶ Ritchie, B. & Bridley, C. (2005). *ICT adoption by SMEs: Implications for relationships and management*. New Technology, Work and Employment.

¹¹⁷ Lee C.S. (2001). An analytical Framework for Evaluating E-commerce Business Models and Strategies. *Internet Research: Electronic Network Applications and Policy* 11(4), 349-359

in the business. For those who have not developed a strategy, this can reduce the flexibility of the business and often lead to a duplication of the work effort.¹¹⁸

A substantial number of Kenyan e-commerce websites lack updated content, and they are hard to navigate and are poorly designed, among other flaws. This is more evidence that Kenyan businesses despise e-commerce, or do not take it seriously. Just like anything accepted in society, e-commerce needs good storytelling. Local businesses haven't heard a story of successful, local web-based businesses they can look up to. For example, the rest of the telecoms companies in Kenya are trying to replicate M-Pesa's success once Safaricom cracked the money transfer code. Secondly, these businesses do not understand the value of a well-designed and updated site in the growth of their online business. Pamoja Media is currently partnering with firms which want to win and win big in e-commerce, and which realize that a well-designed website is a prerequisite.

3.7 Government's Role in the Development of e-Commerce and Mobile Technology

Access to markets and marketing information remains a severe constraint to SMEs development and competitiveness in Kenya. Prescribed policies to address these challenges seem not to be effective.¹¹⁹ Overall, aggregate demand is low; markets are saturated due to dumping and overproduction, and in most cases markets do not function well due to lack of information and high transaction costs.

The ability of SMEs to survive in an increasingly competitive global environment is largely dependent upon their capacity to leverage information as a resource and to benefit from the value of information. SMEs need ready access to comprehensive relevant information since they operate in severe time and capacity constraints. They require

¹¹⁸ Tetteh E. and Burn J. (2001). Global Strategies for SME-business: Applying the SMALL Framework. *Logistics Information Management*, 14(1), 171–180

¹¹⁹ Ramsey, E., Ibbotson, P., Bell, J. and Gray, B. (2003). E-opportunities of service sector SMEs: An Irish cross-border study. *Journal of Small Business and Enterprise Development*, 10(3), 250-264.

information on business trends and markets; business environment, legal and regulatory aspects, business management, customer needs, business expansion and diversification; technology; business opportunities; linkages and business partnerships.¹²⁰ Limited access to opportune, current, relevant and adequate information is a notable constraint to SMEs in Kenya. The enterprises struggle to gain access to important information needed for improved productivity, customer satisfaction, improved cycle time and opportunities at the market place.¹²¹ Market signals on business opportunities and customer trends are not communicated effectively to SMEs, who perform better in information rich environments.¹²² Major challenges in relation to market information relate to acquisition and capacity to interpret and effectively use the acquired information. Without access to timely, simplified, reliable and relevant information on market opportunities, production technology, the sector is unable to survive and grow in a highly globalised and competitive market environment. Even though acquisition of information is costly in developing countries, there is evidence to suggest that SMEs are willing to pay significant sums for relevant information where available.¹²³ Difficulties associated with information acquisition have negative implications; lack of information may reduce the extent of mutually beneficial exchanges and lead to uncertainty concerning economic decisions in the enterprises.

Moreover, Information and Communication Technology (ICT) is identified as an enabler of other sectors, presenting enormous opportunities for SMEs to improve market access.¹²⁴ ICT is an indispensable tool in the highly globalised, knowledge economy. Market access constraints facing SMEs include; poor quality products, lack of knowledge to explore

¹²⁰ Schleberger, E. (2014). *Report of Regional meeting of the working group: Entrepreneurship development and training*. 1998. Available at: www.fes.de/fulltext.buer Accessed on 29-08-2014

¹²¹ Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

¹²² Kenya Institute for Public Policy Research and Analysis (2006). *Developing a marketing framework for Micro and Small Enterprises in Kenya*. Nairobi, KIPPRA.

¹²³ Ibid

¹²⁴ Government of Kenya (2006). *Kenya ICT Strategy Paper for Economic Growth*. Nairobi: Ministry of Information and Communication.

niche markets, limited resources to promote their products and poor market research. ICT can improve market access by facilitating communication with customers, competitive positioning, enable information acquisition and production of quality products, generation of market information, reduction in logistic costs, facilitating access to global markets, facilitating market research, networking, market transactions and market identification.

To support this, the Kenyan government has placed incentives such as zero rating ICT equipment and encouraging the laying of undersea cables to increase bandwidth speeds. Are these measures good enough to grow e-commerce? What more can the government do to accelerate the adoption of e-commerce? It's a good thing the government is addressing the infrastructure side of things, but it's not enough. I see two areas that need urgent intervention. First, it's cost prohibitive to consume and download digital content. For example, most Kenyans consume YouTube videos at offices during working hours because their employers have good internet bandwidth. Internet access fees should drop drastically for the 4 million Kenyans who have Internet access at home. Second, local authorities should institute better street address systems that will make it easy for courier services to deliver goods ordered online to customers living across the country. Our streets haven't been numbered or follow any specific order thus making it hard to find most properties. If the government solves the above challenges, then Kenya will be in a much better position to scale up e-commerce and enjoy the benefits such as increased job opportunities.

3.8 Conclusion

This study discusses the capacity of e-Commerce platforms in influencing the lives of the Small and Medium entrepreneurs listed/ endorsed on these sites, by considering various e-Commerce platforms in Kenya such as Shop Soko and Bombolulu Workshops. It has also discussed the structures and the way these platforms run. The use of mobiles phones has also

been studied in the use of technology that aims at empowering SMEs. It is also clear that E-commerce is a huge tool for SMEs in development. In addition, it is also clear that ICT to SMEs enhances efficiency, reduces costs and increases the market size both locally and globally, empowers SMEs to take part in the knowledge economy by facilitating connectivity; facilitates creation and delivery of products and services on an international scale and gives access to new markets. It is also evidence that there are several Challenges that faces e-Commerce organizations in realizing empowerment of SMEs and that the government participates fully to ensure there is constant uptake of ecommerce in the country through various roles.

CHAPTER FOUR

ANALYSIS OF EMPOWERMENT OF SMEs THROUGH E-COMMERCE AND MOBILE TECHNOLOGY IN KENYA

4.1 Introduction

This chapter analyses five key emerging issues from the study on empowerment of small and medium enterprises through e-commerce and mobile technology in developing countries with Kenya as the case study. These issues include: ecommerce platform and mobile technology, the impact of mobile technology and e-commerce as development tools in developing countries, the challenges faced by e-commerce organizations in achieving empowerment of SMEs through e-commerce and mobile technology in Kenya, the structures and processes of e-Commerce platforms in Kenya which aim to empower artisans and the role of the government in development of e-commerce and mobile technology in Kenya.

4.2 Ecommerce platforms and mobile technology empowering SMEs

The study critically analysed the capacity of e-Commerce platforms in influencing the lives of the Small and Medium entrepreneurs by considering a variety of e-Commerce platforms within Kenya. It majorly focused on Shop Soko and Bombolulu Workshops as prominent cases of e-Commerce platforms. The study also covered the utilization of mobile phones in the application of technology whose aim is to empower SMEs.

From the interviews with the artisans, the function of mobile phones in sustaining consumer relations is discussed. The interviewees also indicated that mobile phones are frequently used for maintaining touch with consumers and clients compared to any other form of communication. From the interviews conducted by phone among the artisans, it was found that the artisan groups used mobile phones when ordering supplies. Nevertheless, from

the study there is a disparity with 48% of artisans using mobile phones compared to 36% using fixed lines, which again speaks to the increasing importance of mobility and low start-up costs associated with mobile phones. The crossover between business and personal use is also more evident from the study among mobile phone users compared to fixed-line phone users. Of all the ICTs used by artisans, mobile phones are seen as fundamental across the range of formal and informal businesses. Mobile phones score nearly exactly the same in the informal sector compared to the formal sector.

From the interviews with the artisans, artisans have limited resources. In practical terms, this implies that there is a strong focus on those tools that have an immediate benefit, compared to those with longer-term benefits. The interviewees further indicated that the advantage of the mobile phone, for example, is twofold: first, it can be used with little training. Second, increasing numbers of people have mobile phones. The study found out that in line with the mobile technology and mobile shoppers, the 2012 expectation was that the number of people who purchase from their phones would rise by about 50% by end of 2014. By August 2014 the global count of mobile phone shopping customers grew to about 580 million users, not just as a browsing tool but as a payment tool thus increasing the importance of mobile as an e-Commerce channel which has translated to more online sales. In Kenya the study found that this is the case for sites like OLX, Jumia and Shop Soko, all of which have mobile phone applications to enable buyers to access the products at their convenience and for the seller to be easily connected to the consumer through their products. This is a great step forward in Kenya since according to the study, the key challenges to growth of mobile e-Commerce is that most platforms do not have optimization for mobile browsing, registration or purchasing. In Kenya, the study found that the concern of mobile transaction security has been resolved by M-Pesa and other phone banking solutions.

From the interviews with the artisans, the mobile phone is the most used ICT instrument in that is rated most significantly in terms of desirability, accessibility and affordability. The interviewees indicated that mobile phones emerge as the preferred ICT tool to artisans as a result of affordability, ease of use, and a reliable network. It is evidence from the study that over 95% of artisans in Kenya own mobile phones with subscription reaching 30.7 million in April, 2013 and mobile penetration at 78%. This according to the study offer artisans a great opportunity to employ the services of this preferred tool to enhance market access. It is also clear from the study that mobile phones offer various functionalities that can enhance market access and include communication, enabling market transactions, product promotion, customer relationship, market research and other internet enabled services. The study found that mobile phones offer a quick, efficient and affordable way of communication to artisans who are essential for initiating and maintaining customer relationship, facilitating market transactions, acquisition of market information and for communicating product information to customers.

Furthermore, the interviewees indicated that communication is realized through voicemail or the short message service that is relatively cheap. Artisans, according to the study, benefit from the use of Interactive Voice response which uses voicemail for information delivery on the user dialling given numbers to access information through simple menu steps. The interviewees reported that these steps give the opportunity to obtain market information necessary to achieve market access. The study also found out that mobile phones are used to facilitate market transactions to improve efficiency and reduce high transaction costs. According to the study, such transactions include m-banking, m-payments and mobile money transfer. The artisans indicated that artisans take advantage of services that already exists e.g. pay-bill service, “Lipa na M-Pesa”, “M-Pesa banking and money transfer from Safaricom service providers. It is evidence from the study that M-internet is a fast growing

technology that can be used for mobile commerce to facilitate online marketing, communication, networking, and market research

On e-commerce platforms, the study found out that with the growth of internet, and the rise of e-commerce, online shopping is almost inevitable. Be it for the convenience of it, or simply the thrill, according to the study findings– the ‘because I can’ factor, ecommerce is on the rise in Kenya. The study also found that at face value it seems like a booming industry, but it is in its true element still quite embryonic especially for business owners trying to sell their wares via an e-commerce platform.

From the interviews with the artisans, with regard to mobile technology and mobile shoppers, it was in 2012 expected that the number of consumers who purchase from their phones shall go up by about 50% by end of 2014. As at August 2014 according to the study, the global count of mobile phone shopping consumers has grown to about 580 million users, not just as a browsing tool but as a payment tool thus increasing the importance of mobile as an e-Commerce channel which has translated to more online sales. In Kenya, the study found that this is true for sites like OLX, Jumia and Shop Soko, all of which have mobile phone applications to enable buyers to access the products at their convenience and for the seller to be easily connected to the consumer through their products. This is very encouraging in line with the findings from the study since one of the key challenges to growth of mobile e-Commerce is that many sites/ platforms lack the optimization for mobile browsing, registration or purchasing. The study found that in Kenya the concern of mobile transaction security has been resolved by M-Pesa and other phone banking solutions.

From the interviews with the artisans, ICT is another very promising instrument for enhanced market access in SMEs is the computer with all the computer related applications. According to the findings, statistics indicate computer usage in Kenya has increased over the

years, 77% SMEs indicating they own a computer. However, according to the study, majority use computers for basic applications like automation and communication. In accordance to the findings, a study on ICT adoption and use by SMEs, only 28% of interviewed SMEs had Websites and 24% indicated they used ICT for product marketing and e-commerce. The study found out that the computer has the advantage of having much functionality that can be used to for communication, e-commerce, promotion, design and development of superior products, market research, customer-relationships, networking and the creation of linkages, acquisition of important market information. According to the findings, a significant application for market access in computers is the internet whose users in Kenya stand at 16.2 million currently, with an internet penetration of 41.1%. The study found out that Internet offers SMEs an opportunity to create their websites for promotion, communication and for efficient market transactions. According to the findings, the use of e-commerce has emerged as an efficient gateway for SMEs to take greater advantage of opportunities in the global markets. Furthermore, according to the findings, Internet can be to identify markets and for market research, for social networks to promote products, for communication and networking to increase market access. However, the study found that a great impediment to the use of computer by SMEs is the high cost of computer hardware and connectivity, unreliable network, lack of awareness and limited computer knowledge and skills.

4.3 Structures and Processes of e-Commerce Platforms in Kenya

From the interviews with the artisans¹²⁵, very important distinctiveness of artisans was recognized thereby resulting to a comprehensible picture of the structures and processes that enhances access to E-commerce. These findings are evidence in the account and background of every firm. The same findings were gathered through interviews, email connection and sometimes visits to the firms' fabrication locations. The study reveals that this Bombolulu

¹²⁵ Interview by this researcher with Stephen Kine and Nicholas Mulinge of Shop Soko on 1st of August 2014

workshop project is now the largest project producing textiles, carvings, bags and jewellery. In the beginning, the study indicates that the program was set up to match government programs for the disabled. As indicated by the study, this workshop surpassed its primary purpose by ending up being the only rider for the artisans. Also, the study reveals that the artisans get assistance on health and accommodation. Mostly, as indicated by the respondents, the program greatly depends on donors financing. Located at Mombasa County as indicated by the study, the Bombolulu workshop makes all its production on the grounds with managerial offices and accommodation offices in the same area. The study shows that there is a huge IT site where numerous computers and servers are located. From the study, Soko is reasonably related to Bombolulu but it is different on the basis of the variety and nature of products and in addition the marketing structures. Soko has groups in Garissa, Garsen, Hola, Isiolo and Bangale where the groups are trained in preparation to the venture.

4.3.1 Characteristics of Artisan Groups

From the interviews with the artisans, there are various processes and structures that facilitate Kenya artisan groups to getting in touch with rising e-commerce openings. As indicated by the study, there exist a huge difference between producer firms and the internet sales avenues through which products are sold. Evident from the interviews done on Bombolulu group and Shop Soko group¹²⁶ table 4.1 shows the major characteristics found in this study that shed light on the nature of groups whose involvement in e-commerce has been made possible.

From the interviews with the artisans¹²⁷, in relation to the response by the artisan, a discussion with Shirley and Cheryl Genga indicated that the artisans have a lot of vigour and passion. Their readiness to learn and advance on production makes it effortless to work with

¹²⁶ Interview by this researcher with Dina Sang of Shop Soko on 4th of August 2014

¹²⁷ Interview by this researcher with Shirley and Cheryl Genga of Shop Soko on 3rd of July 2014

and their product variety is exclusive and admirable as indicated by the study. They have an enthusiasm for fashion where they develop motivation from and are devoted to meet delivery timelines. Additionally, a one on one discussion with an individual artisan indicated that they were ready to develop their ability to make the most of their efforts and they did not fear pushing their workmanship past their comfort level.

Table 4. 1: Artisan Group Characteristics

	Bombolulu Workshop
Mission	“Empower people with disabilities to fully transition back into their community.”
Group Structure	Individual artisans with equal male: female ratio reporting to supervisors who report to line managers who report to the Program Manager
Total Artisans	110 permanent + 30-70 seasonal workers
Education of Artisans	Primary School
Age Range of Artisans	18-68
Tribal breakdown	Multiple
Education of Project Head	<ul style="list-style-type: none"> -Advanced Diploma in Project Management -Advanced Diploma in Business Administration -Degree in Theology - majoring in leadership -Currently pursuing degree in Business management

Source: Author (2014)

4.3.1.1 Program Leadership

From the Interviews¹²⁸, a distinguished characteristic is the existence of a reasonably well-qualified woman who is the project director. The study reveals that there are several men artisans taking part in the production course even if the group hires women too through the mentorship of highly qualified female leader who is fluent in English and skilled in linking and networking with worldwide and local purchasers and firms. The study reveals that the level of education for the project leaders is essential to the group, since the level of education of the artisans hired are low with a few lacking formal education.

4.3.1.2 Group Structure

From the interviews¹²⁹, the artisan group at Bombolulu reaches out to relatively numerous artisans across the years that are not in permanent employment but are accessible when production demand rises. The structure of the artisan group divides the huge number of artisans to a minor group of artisan associates. These groups are given a name as per the nature of goods produced, for example, woodcarving, textiles, and costume jewellery among others. Each of this minor group is managed by a selected division leader and not program or the executive director.

4.3.1.3 Network Affiliations

From the interviews with the artisans, Bombolulu is among the several local and international networks for just business operation licensing and marketing. This entails the Cooperation of Fair Trade in Africa (COFTA), World Fair Trade Organization (WFTO) and the Kenya Federation for Alternative Trade (KEFAT). From the findings, the group stated that the major inspiration to becoming members of these networks was to get support from

¹²⁸ Interview by this researcher with Diana Sang: Monitoring and Evaluation program manger of Shop Soko on 3rd of July 2014

¹²⁹ Ibid

networking openings, training and the chance to search for new customers. Nevertheless, the findings show that the group failed to mention reliability development as among the cause for the network association. The study reveals that the group was ignorant of the existence of its products on the website WorldofGood.com. It is also evident from the findings that they were ignorant of the role of trust provider in authenticating their moral production services. This shows that the customer plays a very important part in revealing the structure of moral production groups to the internet sales avenue and finally, the consumer.

Table 4. 2: Network Affiliation

	Bombolulu Workshop
Network Affiliation	COFTA, WFTO
Buyer Relationships	<ul style="list-style-type: none"> • Ten Thousand Villages (current) • Fair Trade Original (past) • Eine Welt (past)
E-commerce Site Participation by group	<ul style="list-style-type: none"> • WorldofGood.com • TenThousandVillages.com • qwtomarket.com • lovethatstuff.co.uk • servv.org • theafricahouse.com • tradeaid.org.nz • thefairtradestore.co.uk • tradecraftshow.co.uk • inexchange.org • b2bfairtradedirect.com • Fairtradedirect.com

	<ul style="list-style-type: none"> • ebay.com
Market focus moving forward	Domestic Market

Source: Author (2014)

4.3.1.4 Personal Association at Bombolulu

From the interviews with the artisans¹³⁰, there is a special association among artisans the purchasers and the artisan group at Bombolulu. This can be ascribed to the well-built association between the two that has been there over years. The study reveals that the top management has been acting as the personal contact point for their purchaser group throughout the years. The excellent personal associations would be influenced negatively if management was to change more often than it does currently. According to the findings, it is the numerous years of service given to the managers that have enabled them develop trust with the purchasers. This association seems to have allowed the steering of the group amidst challenging moments particularly in the times of infamous international economic crisis.

4.3.2 Processes Facilitating Relationships with Buyers

The respondents indicated that African producers experience numerous difficulties than other producer states. These difficulties according to the findings comprise of increased cost of inputs, transportation and workforce in an effort to produce flourishing export business. From the findings, the observance and institution of well-built production processes is among the means of managing these difficulties by moral producers in developing states. The study reveals that Bombolulu Workshop makes use of a composite management structure and automated production process where the administrator key in orders into a software course which sorts the raw material record and properly assigns production to the appropriate workshop.

¹³⁰ Interview by this researcher with Program Coordinator of Bombolulu on 8th of July 2014

Table 4. 3: Processes and Product

	Bombolulu Workshop
Products	Jewellery Wood carvings Textile products
Product Manufacturing Process	Products made at time of order in workshop.
Order Process	1. Email to Liaison Officer (LO) 2. LO to Product Coordinator (PO) 3. PO to Invoicing Personal (IP) and Designer (D) 4. Sent to production team
Artisan Payment	Piece rate upon completion
Shipping Process	Consolidate with other producers by air or sea freight
Banking / Accounting Practice	Payments received through Shared Interest for large orders, M-Pesa for small local orders and Western Union for small International orders.
Technical Structures	Multiple computers, 1-2 dedicated IT staff, IT systems for processing orders and managing inventory, payroll etc. Broadband internet through Access Kenya, Africa Online and Wananchi Online

Source: Author (2014)

4.3.2.1 Communication between Directors and Artisans

From the interviews¹³¹, the administrator is the contact point with global buyers at Bombolulu group and this helps in improving the association since it keeps away the buyers from being familiar with the whole production process. The study also reveals that it also develops confidence in the purchasers with the manager when he delivers frequent quality. Hence, the manager is thus expected to be informed of each phase of the production process, programs, necessities and the difficulties thereby allowing them to efficiently communicate their production ability to the buyers through email.

4.3.2.2 Artisan Payment

From the interviews with the artisans, all groups reimburse artisans through a piece rate means. The study findings indicate that it helps program leaders to approximate production cost and offer understandable expectations for every party involved. According to the findings, Bombolulu Workshop has a large sufficient executive and budgetary structure enabling them to have the capacity to buy supplies from their artisans with deposits on orders. From the study, whereas there are substitute recompense structures that are there in the moral production field, reimbursing artisans for each piece is desired by the groups' management as well as the artisans. The study indicates that according to the "Fair Trade" feature of wages, it was found that Bombolulu Workshop that they are experiencing challenges to compete with global producers – particularly those from Asia where the production cost is very minimal. From the finding, it is clear that there is an aspect of "competitive drawback" which is worth noting; notwithstanding the achievement these groups have had accessing global markets by means of e-commerce.

¹³¹ Interview by this researcher with Program Coordinator of Bombolulu on 8th of July 2014

4.3.2.3 Clear Production Timelines

From the interviews with the artisans¹³², during the less official interviews with artisan groups, the aspect of buyers ending associations as a result of belated production or delivery of products was evident. On the contrary, all the groups gave a systematic process through which orders were established and how production is designed and programmed. According to the findings, every group's manager converses directly with the purchaser about the production cost as well as the timeline. The respondents indicated that this leads to merged shipping for a few of the groups which facilitates low costs as an advantage of lower per piece/weight prices for superior shipments. The study also indicates that there is demonstration of the group's capacity to meet global production expectations. From the findings, managers indicated that through the years their capacity to produce at a higher rate and quality levels has enabled them to develop good relationships with consumers.

4.3.3 Structures That Enable Access to E-commerce

Three prominent structures that have contributed to the success of each of these groups creating relationships that enable the sale of their goods through E-commerce channels were identified: technology, banking and accounting and shipping. Bombolulu Workshop has a dedicated IT department made up of one full time worker and one volunteer. With software to assist with inventory and production, Bombolulu Workshop is able to handle very large-scale orders. Ultimately, access to email and a dedicated person to correspond with buyers appears to be the most important technology-related system in place. All groups indicated additional computers would be helpful to their operations, along with training. While most of the artisans in each of the groups have very low level of education, the administrators should to provide more computer skills training in an effort to increase

¹³² Interview by this researcher with Ben of BEMOS on 3rd of August 2014

production practices. Looking at the sophistication of Bombolulu Workshop's systems, it can be inferred that additional technical resources could aid smaller artisan groups in accommodating larger orders and managing their inventory while alleviating the multitude of responsibilities placed on the Executive Director.

Bombolulu Workshop utilizes an internationally available banking co-operative known as Shared Assets that was designed to work with Fair Trade producers. This third party payment structure builds confidence in buyers and takes some of the technicalities of payment off the shoulders of both parties. Cost of transport and shipping remain a major challenge for Kenyan producer groups, therefore having strong relationships with freight companies and awareness of all shipping options helps ensure producers can offer buyers the best shipping costs available. Bombolulu Workshop's buyer, Ten Thousand Villages, works with a local freight company to consolidate purchases from various producers. Bombolulu Workshop is careful to accommodate this and provide their orders on time in order to take advantage of this consolidation.¹³³

4.3.3.1 Learning about Soko

From the interviews with the artisans¹³⁴, artisans learn about Soko either as a result of being recruited from traditional marketplaces by Soko staff or as a result of hearing about it from experienced artisans. Experienced Artisans are known as 'mentors' in Soko. After signing up with Soko they can upload information and images on their products with the help of staff, or directly from their phones after installing Soko mobile application. Once the items are vetted by the Soko team, they are added to the website where American consumers can view and purchase their handmade and ethically-produced jewellery.

¹³³ Shared Interest is a Fair-Trade lending organization that operates much like a micro-finance bank. More info available here: <http://www.shared-interest.com>.

¹³⁴ Interview by this researcher with Veronica Rachiedo on 8th of August 2014

After selling a product, the artisan gets an SMS notification, informing them to drop off the item to their nearest mentor. The mentor then confirms that the item delivered is exactly what has been ordered. The mentor gets a small payment for reviewing the item and taking it to the Soko office. The item is then shipped to the buyer, and the artisan receives 25% of their initial asking price via M-Pesa. After the item has been successfully delivered to the consumer, the artisan receives the remaining 75% they are owed.

Soko is a social enterprise that offers artisans an additional channel of distribution where they can sell their goods. Soko hopes to expand the marketing reach of its artisans, putting the power in their hands by allowing them to establish the prices for their products, to which Soko adds a 35% commission as well as additional charges for shipping. While the core of the company is the technology behind the platform, Soko also manages the logistics of the operations, including offering monthly training modules for the mentor artisans and coordinating product delivery.

4.4 Impact of mobile technology and e-commerce as development tools

From the interviews with the artisans and staff¹³⁵, the respondents indicated that mobile technology and e-commerce changes the way people work, socialize, generate and share information and manage the movement of people, ideas around the world. Across the developed economies and so to the developing ones, mobile technology and e-commerce has had strong impact on the economic growth rates of developing states.¹³⁶

From the interviews with Soko management¹³⁷, the respondents indicated that mobile technology and e-commerce has changed the life of numerous consumers. This also argued that mobile technology and e-commerce has helped in making better the living standard of

¹³⁵ Interview by this researcher with Alex Kihuna: Software developer Shop Soko on 8th of July 2014

¹³⁶ Interview by this researcher with Samuel Magundu: Software developer, M-Survey on 20th of July 2014

¹³⁷ Interview by this researcher with Catherine Mahugu: Founder Shop Soko on 29th of August 2014

the poor by use of better communications and bigger touch to information. In addition, with mobile technology and e-commerce, poor producers are in a position to have good prices for their produce since they have touch to information on operating market prices, principally through mobile technology. In addition, the respondents indicated that mobile technology and e-commerce have generated an affluence of micro-enterprises, providing work opportunities to people with low education and a small amount of resources. These findings agree with Halewood and Surya ¹³⁸ argument that in Bangladesh, with micro-credit from the Grameen Bank, roughly 100,000 Bangladeshi women have started mobile phone exchanges in the rural areas where they earn from thereby making them self-sufficient.

From the interviews with industry stakeholders¹³⁹, mobile technology and e-commerce have helped customers to overpass the digital split among regions. The wireless technologies allow the consumer to make use of mobile technology and e-commerce for internet access without requiring a PC or wire connection. From the study, in accordance to the International Telecommunications Union 2010 report on mobile technology and e-commerce dispersion in developing states, mobile cellular penetration in Africa stood at 45.2% and the internet user dispersion in Africa had grown by 20% in by 2010 from 2000. ¹⁴⁰ This growth not only sets up a new business opening for the poor but also enable access to statistics, marketplace, medical and other services to the distant rural areas in developing countries.

From the interviews with the artisans¹⁴¹, marketing is important success function for SMEs that is facilitated by market access. According to the findings, different strategies exist

¹³⁸ Halewood, Naomi J. and Surya, Priya, Mobilizing the Agricultural Value Chain, "<http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/IC4D-2012-Chapter-2.pdf>"

¹³⁹ Interview by this researcher by email correspondence with Brian Omwega: Associate head C4D Lab on 15th of August 2014

¹⁴⁰ Interview by this researcher with Diana Sang: Monitoring and Evaluation program manager of Shop Soko on 3rd of July 2014

¹⁴¹ Interview by this researcher with Catherine Mahugu: Founder Shop Soko on 29th of August 2014

for improving market access of which the use of ICT is one. Strategies that enhance market access greatly impacts on the performance of small enterprises.¹⁴² The study found out that potential benefits of ICT to SMEs include enhancing efficiency, reducing costs and broadening the market both locally and globally, empowering SMEs to participate in the knowledge economy by facilitating connectivity; helping to create and deliver products and services on a global scale and providing access to new markets.¹⁴³ In accordance to the findings, ICT can significantly impact the market –oriented dimensions of products and services.¹⁴⁴ According to the study, market –oriented ICT include websites which display the goods, services and information of a firm on the worldwide-web (www). Also, the study found out that it can also integrate the e-commerce functionality, such as offering the ability to place orders. According to the findings the www is a powerful platform for expanding and reaching new markets for SMEs while the Internet is critical in enhancing a firm's market reach and operational efficiency.

Furthermore, the interviewees indicated that ICT offers SMEs flexibility in trading by enabling 24 hours of trading, borderless market space and leverage SMEs to compete against larger enterprises on the same platform. In addition, according to the findings, ICT facilitates remote access to knowledge, suppliers and a borderless environment, offering SMEs the ability to deliver products and services on a different platform that is easily accessible. The study also found out that ICT can be used to reduce barriers of entry into different market segments exposing SMEs to a wider customer base.¹⁴⁵ The study found that¹⁴⁶ ICTs,

¹⁴² Shepherd, W. (2007). *Approaches to linking producers to markets: A review of experience to date*. Agricultural Management, Marketing and Financial Occasional paper 13, FAO, United Nations, Rome.

¹⁴³ Chyau, C. (2005). *Why Should Countries Embed ICT into SME policy?*. 2005. APDIP e- Note Available at <http://www.apdip.net/apdipenote/4.pdf>

¹⁴⁴ Ritchie R. and Brindley C. (2000). Disintermediation, Disintegration and Risk in the SME Global Supply Chain Management Decision 38(8), 575-583

¹⁴⁵ Lloyd, M. and Kroeze, H. (2008). *ICT and SMEs competitiveness in South Africa: how SMEs could use ICT to become competitive in South Africa*. Unpublished Thesis, University of Pretoria, Pretoria.

¹⁴⁶ Chibelushi, C. (2008). ICT industry challenges in adopting ICT: a case study from the West Midlands, UK”, in *proceedings of the 2008 International Conference on Information Resource Management*, May 18-20, Niagara Falls, Canada.

especially the internet, have a significant impact on the operations of SMEs by facilitating their access to global markets, enabling them to sell to international customers, and to compete favourably with large corporations. According to the study, strategic use of ICTs is viewed as near solutions to firm's problems e.g. ICT has the potential to reduce the impacts of distance, reduce transaction costs, be used in information gathering and dissemination, inventory control, and quality control. The study also found that ICT can enable SMEs to participate in the regional and international markets which are strategic for competitiveness, growth and further development.¹⁴⁷ Furthermore, the study found that access to global markets offers a host of business opportunities, such as new niche markets; possibilities to exploit economies of scale, the upgrading of technological capability; and ways of spreading risks.¹⁴⁸ According to the findings, Internet based technologies provide small firms the opportunity to effectively overcome the limitations of size and compete and/or in larger markets with bigger sized establishments. According to the findings, there is some evidence to suggest that the Internet has increased international opportunities for SMEs.¹⁴⁹

From the interviews, ICT also has the ability to transform global and local markets to become more efficient. The study found that electronically mediated markets greatly impacts on the cost, speed and transparency of market-based transactions. As a result, the findings indicated that lower transaction cost and increased reach result in up to 15% lower costs to consumers, and up to 20% lower costs in business procurement. Furthermore, the study revealed that Business-to-business (B2B) net-based transactions are transforming supply chains across the globe, leading to the rise of new channels or net-based intermediaries and enabling SMEs to pool resources collectively supply large multinationals. In addition, the

¹⁴⁷ Ramsey, E., Ibbotson, P., Bell, J. and Gray, B. E-opportunities of service sector SMEs: An Irish cross-border study. *Journal of Small Business and Enterprise Development*, 10(3), 2003, 250-264.

¹⁴⁸ OECD. The Impacts of Electronic Commerce on Business: Summary, DSTI/ICCP/IE(2002)5/FINAL, OECD, Paris, 2002.

¹⁴⁹ Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

study found that Net-based business-to-consumer (B2C) transactions and point-of-sale scanners provide producers, with detailed and instant information on local and distant buyers and markets. For consumers, the study found that C2B transactions cut consumer search costs, reduce lead time wait, and broaden choices. Increased information on both sides helps align supply and demand ever more tightly.¹⁵⁰ At a more basic level, ICTs are the lifeblood of efficient markets and have the potential to develop markets and alleviate poverty.

Furthermore, the interviewees¹⁵¹ indicated that market prices act as coordinating signals for producers and consumers, where sources of information are limited basic ICT could play a major role in creating efficient markets, improving producer practices and speeding innovation, through the provision of information on market prices.¹⁵² According to the findings, ICT causes fast accessibility to the market, increases selection power, improves communication, facilitates identification of markets, improves marketing and reduces business transaction costs. The study also found that from a Survey conducted in Kenya and Tanzania¹⁵³; SMEs that used different forms of ICT rated their effects mostly positive. On top were telephone and computer applications that are assumed by 88% and 76% of users to considerably increase management efficiency and competitiveness respectively. Furthermore, the study found that mobile phones are considered to contribute significantly to regional market expansion by most enterprises followed by fixed phones and faxes. According to the findings, ICT has a proven role in enabling SMEs to increase their productivity and access information and markets, but remain unaffordable.¹⁵⁴

¹⁵⁰ Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

¹⁵¹ Interview by this researcher with Stanley and Gabriel Thuita of Shop Soko on 3rd of July 2014

¹⁵² Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

¹⁵³ Matambalya, F. (2000). The Significance of Information and Communication Technologies (ICTs) for Economic Productivity in Africa: Micro Level Evidences from a Survey of Small and Medium Scale Enterprises (SMEs) in Tanzania. *Internationales Afrika Forum* **3**, 271-278.

¹⁵⁴ Minges, M. (2003). *Measuring Business Access to ICT*. United Nations Conference on Trade and Development.

4.5 Challenges faced by e-commerce organizations in achieving empowerment of SMEs

From the interviews with the artisans¹⁵⁵, among the highly important findings was the recognition that only a few artisan groups had information about the website WorldofGood.com and were aware that their products were being sold through that means. This according to the study revealed ignorance about e-commerce which clearly indicates the constant lack of an e-commerce model for groups producing goods for global sale. Even if the government of Kenya has acted in response to the global rise in e-commerce by integrating it into government strategy and priorities, the chances and vital adaptations are not essentially flowing down to the groups producing products. The study shows that this separation, along with other challenges, constantly hinders the capability of artisan groups to take advantage of on e-commerce market openings. Some of these challenges are lack of awareness regarding e-commerce, technical limitations and Fair Trade appeal and increasing competition.

4.5.1 Lack of Awareness

First, in relation to lack of awareness regarding e-commerce, the study reveals that only a single group has made efforts to form their personal website that would facilitate online orders, and this attempt has been constantly frustrated by a lack of monetary resources and technical capability.¹⁵⁶ The study shows that whereas Ministries of Trade and Industrialization in Kenya have both recognized e-commerce as a rising market opening in the National Information and Communications Policy, there is a disparity between our strategies and their associations to these individuals. The study also indicates that government programs delays a lot and as a result, the private firms capitalizing on the e-commerce and

¹⁵⁵ Interview by this researcher with Diana Sang: Monitoring and Evaluation program manger of Shop Soko on 3rd of July 2014

ICT sector by offering employment and direct training to young people. This shows that whereas e-commerce is flourishing around the globe, and the government of Kenya has appreciated its potential for the domestic industrialized society, artisan groups are still ignorant of the openings it gives them to make known their products.

According to the interviews that the concept of e-commerce is still pretty new as such needs to be explicitly understood in its real sense. This is where the challenge arises according to the findings from the study. The interviews¹⁵⁷ reveals that to some e-commerce sounds just a technology but in reality e-commerce is simply more than technology it is in fact a whole new modern business strategy in which if small or large firms integrate into their existing strategies can gain more in productivity, market share or even bottom-line profitability. Today according to the findings, SMEs in both developed and developing countries continue to fail due to either poor implementation or understanding of e-commerce strategies and technology. It has been revealed by the study that regardless of the business environment, the biggest challenge most SMEs managers or entrepreneurs face is one of transformation – how to basically transform their brick and mortar companies into one of click and mortar company in order to be competitive in this inevitable digital economy. These challenges according to the findings are predominantly enormous in developing countries particularly in Africa where the digital age is still taking its roots gradually. The study reveals that the challenges primarily include lack of proper commercial and legal system for conducting the business and commerce through the electronic commerce. According to the study, added to this are hindrances such as security, poor telecommunication infrastructure, lack of skilled labour and trust, privacy and psychological barriers, digital divide as well as poor e-commerce planning and strategy.

¹⁵⁷ Interview by this researcher with Diana Sang: Monitoring and Evaluation program manger of Shop Soko on 3rd of July 2014

According to the interviewees¹⁵⁸, majority of Kenyan SMEs although aware of its benefits perceives that doing business online as being of high risk due to security breaches. According to the study, security being the major stumbling block for SMEs, there is also reluctance culture among SMEs owners or managers to adjust their businesses with the requirements of e-commerce participation because they believe that it is first and foremost costly and complex as well as time consuming assuming further that such participation involves complete re-design of their business strategy. There is also a societal illiteracy and failure to see any advantage of using e-commerce. The study found out that most of the researchers express that the later continues to convince many managers that e-commerce does not fit the products or services their firms offer. Indeed, while e-commerce adoption has eroded trading barriers for SMEs, the study found that this has to often come at the price of altering or eliminating commercial relationships and exposing the business to external risks.¹⁵⁹ In accordance to the findings from the study,¹⁶⁰ the biggest challenge for SMEs is not to find the best E-commerce model but to change the mind-set of the owner/managers themselves. The study found that for those who have developed an organization-wide strategy (in anticipation of E-commerce); these changes can lead to an increase in efficiency in the business. Also, it revealed that for those who have not, it can reduce the flexibility of the business and often lead to a duplication of the work effort.¹⁶¹

4.5.2 Technical Limitations

Secondly, technical limitations have greatly lowered the capacity for artisan groups to take advantage of the chances introduced through e-commerce and web-related business

¹⁵⁸ Interview by this researcher by email correspondence with Brian Omwega: Associate head CD4 Lab on 15th of August 2014

¹⁵⁹ Ritchie, B. & Bridley, C. (2005). *ICT adoption by SMEs: Implications for relationships and management*. New Technology, Work and Employment.

¹⁶⁰ Lee C.S. (2001). An analytical Framework for Evaluating E-commerce Business Models and Strategies. *Internet Research: Electronic Network Applications and Policy* 11(4), 349-359

¹⁶¹ Tetteh E. and Burn J. (2001). Global Strategies for SME-business: Applying the SMALL Framework. *Logistics Information Management*, 14(1), 171 –180

instruments. From the findings, various groups face difficulties in sustaining their websites due to lack of internal skill to develop websites hence they are forced to employ external developers who ultimately run away or else leave the work unfinished as is the case in Bombolulu Workshop which constantly struggle to maintain skilled IT personnel. The study reveals that non-profit artisan groups always struggle due to high competition for skilled IT staffs with firms that can offer greater salaries to enable them run business and update the production. The study also shows that the group's websites focus is advertising for wholesale purchasers instead of making use of online sales models or even displaying lists of products available. According to the study, there is an indication of the constant lack of online sales avenues in Kenya, as a result of the lack of payment structures that facilitates e-commerce on either a B2B or B2C basis.¹⁶²

As indicated by the interviewees¹⁶³, a substantial number of Kenyan e-commerce websites lacks updated content, is hard to navigate and are poorly designed, among other flaws. The study answered the question that, isn't this more evidence that Kenyan businesses despise e-commerce? No, they don't. Just like anything accepted in society, e-commerce needs good storytelling. According to the study, local businesses haven't heard a story of successful, local web-based businesses they can look up to. For example, as revealed by the study, the rest of the telecoms companies in Kenya are trying to replicate M-Pesa's success once Safaricom cracked the money transfer code. Secondly, these businesses do not understand the value of a well-designed and updated site in the growth of their online business. Pamoja Media is currently partnering with firms which want to win and win big in e-commerce, and which realize that a well-designed website is a prerequisite.

¹⁶² Interview with Megan MacDonald Sasa designs by the deaf on 5th of May 2014

¹⁶³ Interview by this researcher with Catherine and Diana of Shop Soko on 3rd of July 2014

4.5.3 Fair trade appeal and increasing competition

In relation to fair trade appeal and increasing competition, all artisan groups and vital informants gave the moral trade field in which they function as having been affected by the international economic recession in 2008 and 2009. According to the findings, in difficult economic moments, the information on a product is not sufficient to verify the sale but the product itself has to be a creditable competitor in a growing international market. The study reveals that given the competition from states where workforce and materials are less costly than Kenya particularly China and India, Kenya's ethical artisans encounter a small profit margin and others. For instance, the Bombolulu Workshop considers changing their production from art to edible products such as honey which according to them is in high demand in the local market.

4.6 Government's Role in Development of E-Commerce and Mobile Technology

According to the interviews¹⁶⁴, access to markets and marketing information remains a severe constraint to SMEs development and competitiveness in Kenya. The study reveals that prescribed policies to address these challenges seem not to be effective¹⁶⁵ since the overall aggregate demand is low; markets are saturated due to dumping and overproduction, and in most cases markets do not function well due to lack of information and high transaction costs.

The interviewees¹⁶⁶ reveal that the ability of SMEs to survive in an increasingly competitive global environment is largely dependent upon their capacity to leverage information as a resource and to benefit from the value of information. According to the

¹⁶⁴ Interview by this researcher with email correspondence with Catherine Adeya-Weya: Ag CEO KoTDA 18th of July 2014

¹⁶⁵ Ramsey, E., Ibbotson, P., Bell, J. and Gray, B. (2003). E-opportunities of service sector SMEs: An Irish cross-border study. *Journal of Small Business and Enterprise Development*, 10(3), 250-264.

¹⁶⁶ Interview with researcher with Ella Peinovich: CEO Shop Soko on 31st of May 2014

findings, SMEs need ready access to comprehensive relevant information since they operate in severe time and capacity constraints. The study indicated that they require information on business trends and markets; business environment, legal and regulatory aspects, business management, customer needs, business expansion and diversification; technology; business opportunities; linkages and business partnerships.¹⁶⁷ According to the findings, limited access to opportune, current, relevant and adequate information is a notable constraint to SMEs in Kenya. The study reveals that enterprises struggle to gain access to important information needed for improved productivity, customer satisfaction, improved cycle time and opportunities at the market place.¹⁶⁸ The study also found out that market signals on business opportunities and customer trends are not communicated effectively to SMEs, who perform better in information rich environments.¹⁶⁹ According to the findings from the study, major challenges in relation to market information relate to acquisition and capacity to interpret and effectively use the acquired information. The study revealed that without access to timely, simplified, reliable and relevant information on market opportunities, production technology, the sector is unable to survive and grow in a highly globalised and competitive market environment. The study found out that even though acquisition of information is costly in developing countries, there is evidence to suggest that SMEs are willing to pay significant sums for relevant information where available.¹⁷⁰ According to the study, difficulties associated with information acquisition have negative implications; lack of information may reduce the extent of mutually beneficial exchanges and lead to uncertainty concerning economic decisions in the enterprises.

¹⁶⁷ Schleberger, E. (2014). *Report of Regional meeting of the working group: Entrepreneurship development and training*. 1998. Available at: www.fes.de/fulltext.buer Accessed on 29-08-2014

¹⁶⁸ Hanna, N. K. (2010). *Enabling enterprise transformation. Business and grassroots innovation for the knowledge economy*. New York, Springer.

¹⁶⁹ Kenya Institute for Public Policy Research and Analysis (2006). *Developing a marketing framework for Micro and Small Enterprises in Kenya*. Nairobi, KIPPRA.

¹⁷⁰ Ibid

Moreover, the interviewees¹⁷¹ indicated that Information and Communication Technology (ICT) is identified as an enabler of other sectors, presenting enormous opportunities for SMEs to improve market access.¹⁷² According to the findings, ICT is an indispensable tool in the highly globalised, knowledge economy. The study also found that the market access constraints facing SMEs include; poor quality products, lack of knowledge to explore niche markets, limited resources to promote their products and poor market research. The study revealed that ICT can improve market access by facilitating communication with customers, competitive positioning, enable information acquisition and production of quality products, generation of market information, reduction in logistic costs, facilitating access to global markets, facilitating market research, networking, market transactions and market identification.

To support this, the Kenyan government has placed incentives such as zero rating ICT equipment and encouraging the laying of undersea cables to increase bandwidth speeds. The study also answered various questions with regard to the findings. Are these measures good enough to grow e-commerce? What more can the government do to accelerate the adoption of e-commerce? It's a good thing the government is addressing the infrastructure side of things, but it's not enough. I see two areas that need urgent intervention. First, according to the findings, it is cost prohibitive to consume and download digital content. For example, the study found that most Kenyans consume YouTube videos at offices during working hours because their employers have good internet bandwidth. According to the study, Internet access fees should drop drastically for the 4 million Kenyans who have Internet access at home. Second, in line with the findings, local authorities should institute better street address systems that will make it easy for courier services to deliver goods ordered online to

¹⁷¹ Interview with Catherine Mahugu of Shop Soko on 30th of August 2014

¹⁷² Government of Kenya (2006). *Kenya ICT Strategy Paper for Economic Growth*. Nairobi: Ministry of Information and Communication.

customers living across the country. The study found that Kenya streets haven't been numbered or follow any specific order thus making it hard to find most properties. If the government solves the above challenges, then Kenya will be in a much better position to scale up e-commerce and enjoy the benefits such as increased job opportunities.

From the interviews¹⁷³, road network, particularly in developing states is a major component of the e-commerce infrastructure. Apart from music and software, most products are delivered through the Internet since even the products that are bought through the Internet are still distributed through physical delivery. Therefore, poor roads, ineffective transport structures and increased worldwide parcel service's costs and technical customs authorization processes, are the main hindrances in taking up e-commerce in Kenya.

Thus, the study reveals that in order to enhance e-commerce uptake, the government has set up a policy atmosphere that will promote investments in the state physical and transport systems as well as offering electronic customs approval processing to modernize the bureaucracy create more transparency, predictability and effective customs processes. This contributes to the decrease of distribution costs. Moreover, the respondents indicate that in the support and growth of e-commerce among SMEs, the government has played various roles in a number of ways.

First, in e-SME Development, government offers incentives to promote extensive use of e-commerce by SMEs. In the e-SME growth program numerous sectors can offer technical support to SMEs to encourage ecommerce uptake. Moreover, the government also promotes huge businesses and companies to move technology to SMEs by providing them with free

¹⁷³ Interview by this researcher with Clerk at ICTA on 27th of July 2014

ICT and e-commerce training.¹⁷⁴ According to the findings, the government promotes awareness campaign.

The interviews¹⁷⁵ reveal that SME owners have inadequate understanding of ICT and e-commerce which is enhanced through the ministry of technology that the government has already established as a commitment to technology. According to the study, government in conjunction with private sector participates in the campaign to spread information to businesses on e-commerce values, policies, success stories, and openings and hindrances linking to the use of and e-commerce and ICTs. In addition, the government enhances these alertness campaigns, which involve free training programs and promotions on e-commerce, safety and confidentiality, awards plans, and information points to give assistance to businesses. Secondly, through e-Government program, the government is the leading-user of e-commerce so that different industry and private-sector related practices are motivated to get online with the government being a positive impact. According to the findings, the e-government assumes the structure of diverse online transactions like corporation registration, taxes, and applications for a range of workers and business associated needs.

Thirdly, the government has established well-built national information structure, which is essential for e-commerce uptake by businesses. It is evident from the study that in absence of dependable and cheap telecommunications and new information services, businesses will not be in a position to get online. The government embarks on the establishment of electronic society centres that serve as a society-shared access and linkage stage particularly in the rural areas. These electronic society centres become a platform for capacity building, expertise development, training, communications and substance growth.

¹⁷⁴ Interview by this researcher by email correspondence with Brian Omwega: Associate head CD4 Lab on 15th of August 2014

¹⁷⁵ Ibid

Fourthly, the government has strengthened Consumer Protection portals. In general, however, amongst e-commerce users in developing states, there is a much reduced desire to offer sensitive monetary information through the Internet. Also, consumers have uncertainties about transacting with businesses through the Internet as a result of the lack of a comprehensible policy on returns and utilization of information. To deal with this worry, the government can persuade corporations to make their confidentiality policy open in their Web sites. The study indicates that there is a more wide-ranging strategy that government has assumed to make sure there is safety in e-commerce transactions like having in place a Certification Authority, which confirms seller and consumer characters, inspects transactions and safety procedures, and gives digital licenses to those who are in a position to meet the set safety measures.

In relation to human resources improvement, the government has established pilot projects and plans for capacity-building, teaching and e-commerce sustenance services, like Web design. For instance, the young people from the slums in Nairobi are constantly being trained in Web design expertise. Generally, the government projects are in accordance to the present efforts in the current areas of concern.¹⁷⁶

The role of the Government in the ICT sector includes the establishment of an ICT policy advisory secretariat. The National Communications Secretariat (NCS), initiated through the 1998 Kenya Communications Act is constantly the policy advisory section of the Government on all issues related to the ICT sector. Another major role according to the findings is to act as an ICT sector regulator. The Communication Commission of Kenya, which was set up through the 1998 Kenya Communications Act is the regulatory organization in the e-commerce and ICT sector for the government. Finally, the ICT Appeals Tribunal plays a role for the government in ICT and e-commerce. All the disagreements arising among

¹⁷⁶ Ibid

parties in the ICT division are listened to and settled by the Communications Appeals Tribunal, which was set up through Section 102 of the 1998 Kenya Communications Act.

4.7 Conclusion

This chapter has critically analysed the structures and processes of ecommerce platforms in Kenya by considering the characteristics of Artisan groups in Kenya, the processes that facilitates their relationships with consumers, structures that allow access to ecommerce as well as the impact of mobile technology and ecommerce as development instruments. In addition, the chapter has critically analysed the challenges faced by ecommerce organizations as ignorance, technical issues and fair trade and growing competition. It further critically examines the role of government in enhancing the growth of ecommerce and mobile technology.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the very important findings from the study, the conclusion derived from the findings stated as well as the recommendations made therein. The conclusions and recommendations objectives were to address the purpose of the study.

5.2 Summary

First, the study discussed the impact of mobile technology and e-commerce as development tools in developing countries. The study found that mobile technology and e-commerce transforms the way people work, interact, generate and share information as well as the way they manage their movement and ideas around the world. It is evident that mobile technology and e-commerce has changed the life of numerous consumers in developing states by helping make better the living standard of the poor by use of better communications and bigger touch to information. For instance, it is possible through mobile technology and e-commerce for poor producers to have good prices for their produce since they have touch to information on operating market prices, principally through mobile technology.

In addition, the study found that mobile technology and e-commerce have generated a wealth of micro-enterprises, providing work opportunities to people with low education and a small amount of resources in developing countries like Senegal, South Africa and Egypt as well as Kenya. The study also revealed that mobile technology and e-commerce have helped customers to overpass the digital split among regions in numerous developing states thereby enabling the consumer to make use of mobile technology and e-commerce for internet access without requiring a PC or wire connection.

The study also addressed the challenges faced by e-commerce organizations in achieving empowerment of SMEs through e-commerce and mobile technology in Kenya. For instance, lack of awareness regarding e-commerce, the study reveals that, only a single group has made efforts to form their personal website that would facilitate online orders, and this attempt has been constantly frustrated by a lack of monetary resources and technical capability. While Ministries of Trade and Industrialization in Kenya have both recognized e-commerce as a rising market opening in the National Information and Communications Policy, there is a disparity between our strategies and their associations to these individuals.

Also, it is evident that technical limitations have greatly brought down the capacity for artisan groups to take advantage of the chances introduced through e-commerce and web-related business instruments. It is clear that numerous groups face difficulties in sustaining their websites due to lack of internal skill to develop websites hence they are forced to employ external developers who ultimately run away or else he leave the work unfinished as is the case in Bombolulu Workshop which constantly struggle to maintain skilled IT personnel. Hence, non-profit artisan groups always struggle due to high competition for skilled IT staffs with firms that can offer greater salaries to enable them run business and update the production. Finally, on fair trade appeal and increasing competition, all artisan groups and vital informants gave the moral trade field in which they function as having been affected by the international economic recession in 2008 and 2009. It is clear that, in difficult economic moments, the information about a product is not sufficient to verify the sale but the product itself has to be a creditable competitor in a growing international market.

The study revealed that Kenyan artisans have a set of characteristics that has seen them through and helped them to participate in their participation in the e-commerce arena. These characteristics include the leadership notably the presence of English speaker with some

experience in the fair trade field and relatively higher education. The other characteristic is the size of the group. The group works with over a hundred artisans in a year. Thirdly, the group has effective network affiliations both globally and locally. Such networking has helped in introducing the group to potential buyers and also to increase their awareness of the market opportunities. Then there are the personal relationships that the artisans have cultivated with their buyers over the years. These relationships have cemented the group's place in the e-commerce area. The study came up with processes that the group utilized. The first focused on the way in which a group's leadership communicates with their artisans. The group followed a clear process to relay relevant information and orders to the artisans in order to complete an order to the buyer's specifications. This communication process corresponds to a clear payment process that guarantees payment to each artisan based on piece rates. Artisans are also given clear production timelines so as to accommodate the wholesale focus for production that each group practices. All of these processes take into account the tribal and cultural authority structure the artisans are already involved in, along with local customs that bear relevance in their lives.

The Bombolulu workshop structure is extremely vital to ensuring the partnerships with buyers that remain at the core of artisan group access to e-commerce. Order accomplishment is due to a large extent, communications that revolve around e-mail, requiring at the very least a consistent Internet connection and working computer. Some level of sophistication in regards to banking and accounting has helped Bombolulu workshop continue partnerships with buyers, along with consistent shipping practices that deliver in a safe and timely manner. It has experienced persistent challenges and barriers that threaten the future of these relationships and perhaps more prominently, obstruct their ability to build upon them. Most notably, barriers to accessing the e-commerce arena are near total lack of awareness on behalf of the group about the opportunities that exist to engage in e-commerce.

Therefore, while they had in place processes and systems that facilitated a relationship with a buyer that could post their items for sale using an e-commerce mechanism, the vehicle and its opportunities has not yet made its way to the group itself. Beyond this initial awareness are the technical limitations the group faces, starting with extremely out-dated hardware.

The group also cited a lack of technical training and capacity, and struggle to keep trained IT staff due to higher salaries available elsewhere and larger market demand. Finally, though the group has had a lasting relationship with its buyer, the fair trade and ethical arena has flourished in recent years, translating to stiff competition and leaner margins for producers. Even though e-commerce presents an opportunity to eliminate the “middle-men” or buyers and permits artisans to post their items directly for sale, Bombolulu workshop is not currently doing this or expressed interest in doing so.

5.3 Conclusions

This study concludes that mobile technology and e-commerce has a positive impact in the developing countries in that it leads to the state development through empowering business people and companies as well. Nevertheless, there are various challenges that hinder the adoption of ICT and e-commerce by individuals and businesses hence delaying growth and development in the respective states.

In Kenya, there are various structures and processes of e-Commerce platforms whose objective is to empower artisans in their day to day running especially through educating them on the importance of ICT and e-commerce. This research shows that the role of the buyer remains critical for the group studied for a number of key reasons. Buyers can assist small groups by consolidating shipments and lowering the overall cost of freight, especially due to the high cost of shipping and challenging logistics presented by the Kenya’s trade

standing and location. Buyers also bring consultation and design advice influenced directly by the end consumers that artisans simply do not have access to.

Buyers can offer technical capacity by way of technical and tools banking designed to assist small, ethical producers in growing their competitive advantage. Though e-commerce has offered these buyers a new avenue to market their goods, the increased market exposure has not been sufficient to address the chronic challenges facing ethical artisan groups in Kenya. Nevertheless, leaders of the artisan group expressed gratitude for the awareness generated by the website and indicated enhanced online operations and technology improvements are a priority moving forward.

The government plays a significant role in ensuring that that in order to enhance e-commerce uptake, government has set up a policy atmosphere that will promote investments in the state physical and transport systems as well as offering electronic customs approval processing to modernize the bureaucracy create more transparency, predictability and effective customs processes. This contributes to the decrease of distribution costs. Moreover, in the support and growth of e-commerce among SMEs, the government has played various roles in a number of ways like offering incentives to promote extensive use of e-commerce by SMEs, participating in conjunction with private sector in the campaign to spread information to businesses on e-commerce values, policies, success stories, and openings and hindrances linking to the use of and e-commerce and ICTs, being the leading-user of e-commerce so that different industry and private-sector related practices are motivated to get online with the government being a positive impact and having a well-built national information structure is an essential for e-commerce uptake by businesses. It is clear that the government is playing a very significant role in ensuring that businesses like artisan groups, SMEs among others embrace e-commerce.

5.4 Recommendations

Improving access to e-commerce could improve the wellbeing of artisans for whom no other feasible opportunities or jobs exist. The study therefore offers the subsequent recommendations.

All the SMEs should also be incorporated in the policy directives geared towards e-commerce. Goals should include targets for both SMEs and larger producers. Programs developed for larger corporations should be made available to organizations that work with SMEs to modify and extend the resources provided to the SME community. Recognizing the inadequacy of current policy and incorporating progressive ICT standards provides a strong foundation to support businesses and producers in pursuit of e-commerce participation. Strengthening the legal and regulatory framework will help Kenya's Ministry of Information & Communications to play a critical role in empowering even small producers to utilize the global e-commerce arena.

There are countless opportunities for buyers to enhance the experience of artisan groups by expanding their role beyond that of buyer. Seeking grants or other support to cover their costs, buyers could provide technical trainings or assistance to the artisan groups they work with, capitalizing on their long relationships and intimate knowledge of each group's operations and structures. They could focus their efforts on utilizing what technology these groups are familiar with (like the popular mobile money platform, M-Pesa, in Kenya) as proposed by key informants. Artisan groups may not be aware of e-commerce, but Kenya is awash in mobile technology – perhaps such knowledge could be used to increase groups' understanding of the opportunities similarly presented by the global e-commerce market.

Finally, as buyers continue to recover from the impacts they experienced during the global economic downturn, they could work to provide technical grants or scholarships to

individual staff or organizations aimed at enhancing their processes and structures in pursuit of improved production capacity. Such assistance would benefit from an awareness of the government policy structure in the countries buyers operate in, along with affiliation and participation in organizations like the Export Promotion Council (EPC) and other groups like the Japan International Cooperation Agency, JICA, who are working to improve access to external markets for artisan groups.

There remains a lack of data relating Kenyan policy directly to e-commerce opportunities. Future studies would benefit from an in-depth review of Kenyan policy and whether or not it is having an effect on artisan groups and their awareness or ability to engage in e-commerce. Analysis could involve comparison between different sizes of enterprise, making sure to explore whether SMEs are experiencing any gains as a result of formal policy directives.

Further study into the structures and processes enabling access to e-commerce for artisan groups would benefit from expanding the sample size to include artisan groups represented on other e-commerce sites. Additionally, groups working with a larger variety of buyers and Trust Providers could introduce different variables than those taken into consideration in this study. Other groups might be aware of e-commerce channels and could reflect different experiences that would provide useful information for evaluation.

In addition, Kenya has served as a great site to look at well-established artisan groups who have been offered access to e-commerce, whether they were aware of the channel or not. To truly understand how artisan groups can capitalize on this growing market opportunity, exploration in other countries would provide a richer awareness of the structures, processes and barriers that stand between ethical artisans and a world of consumers making choices to buy online every day.

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Appendices

Appendix I: Artisans Interview Guide

To analyze the structures and processes of e-Commerce platforms in Kenya which aim to empower artisans.

1. Which e-commerce platform do you use?
2. How did you join your e-commerce platform?
3. What are the features (mobile apps or artisan pages) of the e-commerce platform that you use?
4. What are the processes (from the point of joining to having the product online) involved in doing business using your e-commerce platform?

To investigate the impact of mobile technology and e-Commerce as development tools in developing countries.

5. Do you use mobile technology in your business? If yes, in which areas?
6. How does mobile technology and e-commerce affect/enhance your business?
7. What are the benefits of e-commerce and mobile technology to artisans in Kenya?

To assess the challenges faced by e-Commerce organizations in achieving empowerment of SMEs through e-Commerce and mobile technology in Kenya.

8. What challenges do you face in using mobile technology and e-commerce?
9. What do you think should be improved in the mobile technology and e-commerce organizations?

To examine role of the government in development of e-Commerce and mobile technology in Kenya.

10. What is the role of the government in development of e-Commerce and mobile technology in Kenya?

Appendix II: Soko Management Interview Guide

1. What is the structure of shop soko?
2. What are the processes involved in using shop soko?
3. What is the impact of shop soko on artisans?
4. What challenges does Shop Soko and other e-commerce organizations face in empowering artisans?
5. What is the role of the government in development of e-Commerce and mobile technology in Kenya?

Appendix III: Interview Guide

1. In your opinion, does the current education system encourage young people to be entrepreneurs? Is there anything that can be done to improve the education system?
2. What are some of the stereotypes that exist in the technology field especially in developing nations, and what are some of the impacts that you may directly attest to SMEs and how technology based small enterprises do business?
3. How do you see mobile technology driving the cause of development and empowerment of SMEs in developing countries, especially Kenya?
4. What are your thoughts on the state of eCommerce and mobile technology platforms in Kenya? What can be done to improve eCommerce in Kenya and other developing countries?
5. What would it take, in your opinion, for Kenya to be a first class ICT state?
6. With regard to ICT for Development, is ICT able to bridge the digital divide, and what has been its impact on a broader scale on development? With regard to Kenya, what is the current state of the digital divide and what can be done about it?