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## **Effects of E-Commerce on SMEs in Uganda**

Thesis

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## **Thesis abstract**

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This thesis was conducted on the topic assessing the impact of E-commerce adoption on the expansion of SMEs in Uganda. The study was commissioned by a fashion company called Kyaligonza, which is gradually integrating E-commerce into its operations, and it was guided by the following objectives: 1. To examine E-Commerce adoption by SMEs in Uganda; 2. To identify the benefits of E-commerce adoption to SMEs in Uganda; 3. To examine the barriers to E-commerce adoption by SMEs in Uganda, 4. To identify measures of SMEs expansion used in Uganda; 5. To establish the relationship between E-Commerce Adoption and the expansion of SMEs. In order to achieve the above objectives, a sample of 80 respondents from Ugandan SMEs using E-commerce was collected.

Using a questionnaire and interview guide, data was collected from them and analyzed in order to provide answers to the research questions raised. The key findings of the study were that the adoption of E-commerce by SMEs in Uganda was low because of many barriers, such as a great many SMEs customers not being connected to the Internet.

The study revealed that E-commerce provided many benefits to the expansion of SMEs, as it provided businesses with the opportunity to sell their products and services to a vast number of customers beyond Uganda. Further, the study revealed that sales volume and number of customers were critical measures of business expansion. There was a strong positive relationship between E-commerce adoption and business expansion reflected by the Pearson correlation coefficient. From that, it was concluded that if Kyaligonza wanted to achieve a cost-effective expansion of their shops, they should open an E-commerce shop.

Keywords: E-Commerce, SMEs, Expansion, Barriers

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## Terms and Abbreviations

AST	Adaptive Structural Theory
DIT	Diffusion of Innovation Theory
E-Auctioning	Electronic Auctioning
E-Commerce	Electronic Commerce
E-Government	Electronic Government
ERP	Enterprise Resource Planning
E-shop	Electronic Shop
E-Business	Electronic Business
GDP	Gross Domestic Product
LDC	Least Developed Countries
UNCTAD	United Nations Conference on Trade and Development
UTL	Uganda Telecom Limited
PPDA	Public Procurement and Disposal of Public Assets
Shs.	Shillings
CVI	Content Validity Index
GOU	Government of Uganda
URA	Uganda Revenue Authority

# 1 INTRODUCTION

## 1.1 Background of the study

E-commerce development has created tremendous changes in the business sector globally (Zulkifli 2001). E-commerce has made it easier for customers to shop extensively, anywhere, anytime and still get the same service as they would in the brick and mortar shops without incurring an extra cost. Paperless transactions are now preferable to the traditional paper transaction as a result of the extensive adoption of E-commerce in the industrialized world, where the need for the consumers to visit physical shops/businesses to execute purchases is not necessary (Mansor and Abidin 2010). Many organizations worldwide are implementing E-commerce and making tangible benefits. However, many people and organizations interpret E-commerce in different ways. According to Zillur and Bhattachryya (2002), the term “E-commerce” emerged when organizations discovered the benefits of using the internet to conduct business, most notably in the service sector as it can improve the customer-supplier relationship.

Furthermore, Samadi et al (2011) define E-commerce as

a type of business activities related to trade and organizational operations, aimed at implementing the process of buying and selling goods and services for profit

Laudon and Traver (2014) describe E-Commerce as

all about time cycle, speed, and globalization, enhanced productivity, reaching new customers and sharing knowledge across the institution, through digitally enabled transaction across boundaries in return for products and services.

E-commerce can be used in various commercial relationships within the business circle. Some of this relationship can be in the form of business to customer (B2C),

business to business (B2B), business in business (BIB), business to government and lastly customer to customer (C2C). Aden (2018), explained business to business (B2B), commerce as the trade between business organizations. Transactions in organizations with business to business (B2B) model are usually on an equal basis in terms of bargaining power as opposed to business to customer (B2C) where a customer is at a disadvantage.

E-commerce is generally most adopted by a business to business (B2B) organizations compared to other organizations with other business models. E-commerce is not limited to information between businesses as it has been effectively used by several companies globally to transact directly with consumers and even by consumers to transact directly to other consumers (Heizer and Render, 2001). Companies like Amazon and eBay are clear examples of organizations that have utilized E-commerce to sell to both other companies as well as directly to consumers. As such, the significant role of the internet as the primary tool in E-commerce is becoming more relevant as it also acts as a distribution channel on top of involving with the task of the traditional intermediaries (Vrana, 2006). The numerous benefits E-commerce provides business forms a basis for policymakers and small business owners to adopt E-commerce in their business. Failure to adopt E-commerce has made many small and medium enterprises (SMEs) in Uganda less competitive and has threatened their expansion potential. This is not only in Uganda but also in the global market.

The definition of SMEs is derived from the characteristics of the organization in terms of size of investment capital, size of the staff, and location of the business, the position of the organization in the market and the size of the balance sheet (Katua, 2014). Businge (2017) cites the Uganda ministry of trade as categorizing SMEs by their number of employees and turnover. He goes further to say that small businesses have 50-49 employees, and the medium has 50-100. He shows that the contribution of SMEs to the Ugandan economy is at 70% of the GDP. According to the OECD (2017), SMEs contribute a lot in different sectors of the economy to enhance the economic and social well-being of the population, and they play a key role in national economies globally through creating employment and value added. In industrialized countries SMEs account for more than 99% of all firms,

employ about two-thirds of the workforce and contribute to nearly between 50% and 60% of value added. Nevertheless, it seems to be a global phenomenon that SMEs are confronted with many factors hindering them from adopting E-commerce, a situation that constrains their expansion. SMEs also provide the economy with a continuous supply of ideas, skills and innovation necessary to promote competition and the efficient allocation of scarce resources (Businge, 2011).

According to PPDA (2010), most Ugandan businesses are categorized as SMEs or just small firms. These businesses contribute significantly to the economy, regeneration of communities and the development of rural areas. Start-ups in Uganda are the primary source of employment, creation of wealth and promotion of investment of goods and services produced in the country, which is a significant driver of prosperity in the country. Most disadvantaged Ugandans rely on entrepreneurship to get them out of poverty. The growth and innovation that Uganda has seen have mostly been driven by SMEs.

Uganda being a landlocked country faces stiff challenges especially in trade development. Although Uganda was among the first countries in sub-Saharan Africa to acquire modern ICT tools, SMEs in this country are taking snail step in embracing E-commerce which is one of the ways to stimulate economic growth especially in the current Information and Digital Age. Despite the numerous benefits E-commerce offers to SMEs, it is bothersome that such a profitable business avenue used all over the world is less adopted by Ugandan SMEs, a situation that has dramatically affected their potential to expand.

## **1.2 Purpose of the study**

This thesis aims to examine the effect of E-commerce on the performance of small and medium sized companies in Uganda and how it will affect Kyaligonza Fashion Company in terms of efficiency and expansion.

### 1.3 Study Objectives

The study is aimed at achieving the following objectives;

- To Examine E-Commerce adoption within SMEs in Uganda
- To identify the benefits of E-Commerce adoption within SMEs in Uganda
- To examine the Barriers to E-Commerce adoption within SMEs in Uganda
- To identify measures of SMEs expansion in Uganda
- To establish the relationship between E-Commerce adoption and SMEs expansion

### 1.4 Structure of the Thesis

Figure 1 below shows the structure of this thesis.



Figure 1. Thesis structure.

Figure 1 explains the structure of the thesis which consists of six sections. Section one entails the background of the research, purpose of the thesis, objectives of the study, research questions and the structure of the thesis. Section two covers the review of the theoretical and empirical literature on study objectives. In specific terms it covers literature on resource-based view theory, definition of E-commerce, E-commerce adoption in Uganda, benefits of E-commerce to SMEs in Uganda, barriers to E-commerce adoption in Uganda, measures of SMEs expansion and the relationship between E-commerce adoption and SMEs expansion and the development of E-commerce in a business model. Section three presents the methodology used in data collection and analysis. It specifically covers the research design, population of the study, sample determination, type data of users in the study, instruments of data collection and data analysis section four of the thesis presents the analysis, presentation of data, and the interpretation of data. Section five gives an overview of the case company and Section six presents the conclusions and recommendations.

## **2 LITERATURE REVIEW**

### **2.1 Introduction**

This section covers the review of both theoretical and empirical literature on the study variables. The section begins with the provision of theories informing the study and concludes with the presentation of literature on the research objectives in an empirical form. It also gives and explains the conceptual framework that is guiding this study. The Literature review analyses existing literature on the effect of E-commerce on the performance of SMEs in Uganda. The literature survey highlights similar investigations conducted that are like this study and helps in answering the above five questions.

### **2.2 Theoretical Review**

#### **2.2.1 The Diffusion of Innovation Theory (DIT),**

The Diffusion of Innovation Theory (DIT) according to Rogers (2003), is often cited as one of the key proponents of adoption and diffusion in literature. Diffusion is

The process by which an innovation is communicated through various channels over time among the members of the social system' while Adoption is 'a decision to make full use of an innovation as the best course of action (Rogers, 2003).

Rogers (2003) further categorized the individual innovativeness from earliest adopters to lagers which therefore will help the researchers to know the rate of adoption of most SMEs.

The criticism of the theory by most critics such as Botha and Atkins (2005), is based on the fact that the adoption of technology is based on the traits of the individual not

the social organization as a whole. This fact makes the adoption of E-commerce by SMEs in developing countries like Uganda sluggish because any impact in the organization greatly depends on the owner's traits. Also, the innovation theory as pointed out by Rogers (2003) is less applicable in Uganda because the level of technology and craftsmanship in Uganda is still heavily lacking. This makes it hard to subject the theory in the Ugandan context thus creating the need to establish further research on how E-commerce effects SMEs performance.

### **2.2.2 Adaptive Structuration Theory (AST)**

To balance the theoretical framework literature from Poole (2004), the proponent of the Adaptive Structuration Theory (AST), is also deliberated. The Adaptive Structuration Theory (AST) has been used for several years in the information systems discipline to study the use of new technologies such as E-commerce in SMEs. The supporters of the theory pointed out that the developers and users of E-commerce hold high hopes for their potential to change their businesses for the better. However, actual changes often do not occur or occur inconsistently. The theory thus examines the change process from two vantage points being the structures that are provided by advanced technologies and the compatibility that is undertaken to confirm the SMEs businesses to E-commerce.

### **2.2.3 The Resource-Based View of the firm theory**

This study is informed by the resource based view of the firm theory developed by Wernerfelt (1984). The resource-based theory assumes that firms possess resources, a subset of which enables them to achieve a competitive advantage, and a subset of those that lead to superior long-term performance. These resources can be acquired or developed internally for example, E-commerce is for this case a resource that can be acquired by any business provided it has an initial investment. Once acquired and used properly, it can help in serving customers better thus providing a competitive advantage to the firm. Wernerfelt (1984) concluded that the business's competitive advantage is based on the way it can effectively use those

resources either acquired or developed from within. This view was also supported by Wernerfelt (1984) when he noted that, some resources in organizations are most valuable than others because of their contribution to competitive advantage in the market. In the same line of thinking, the resource-based view theory has been supported because it highlights those resources that create economic value to the firm irrespective of the type of business and industry of operation. In business, economic value to customers is created when the internal mechanisms of the firm can enable them to receive the best services or goods at a reasonable price. The implication of this theory to the fashion shop like that of Kyaligonza is that the resources like E-commerce can result in value when it enables the firm to make its sales to a wide range of customers and in quick unmatched time compared to other fashion shops. Although technology provides the distinctive capability to firms, its adoption depends on many factors that management should analyze well before deciding to adopt. Since in modern business environment innovation in a different form is crucial whether in a product, process or marketing form, it is aimed at providing the company with rare and more efficient means of serving its customers more than its competitors.

Although the resource-based view theory has been praised for stressing the role of resources at the disposal of the firm in furthering firms' goals and objectives, it has been criticized on many grounds as seen when Essay UK (2018) cited Kraaijenbrink et. al (2010), in the discussion of the following shortfalls of the theory. First, some of the assumptions made by the theory are not realistic for example, it assumes that firm can be profitable even in a highly competitive market as long as it can exploit advantageous resources. However, this may not necessarily be true because many firms have made losses despite having superior resources in the industry in which they operate. In such circumstance, it ignores external factors concerning the industry, meaning that it concentrates only on the internal mechanisms and it ignores the external ones.

## 2.3 Conceptual Framework

Figure 2 below shows the conceptual framework of the thesis.

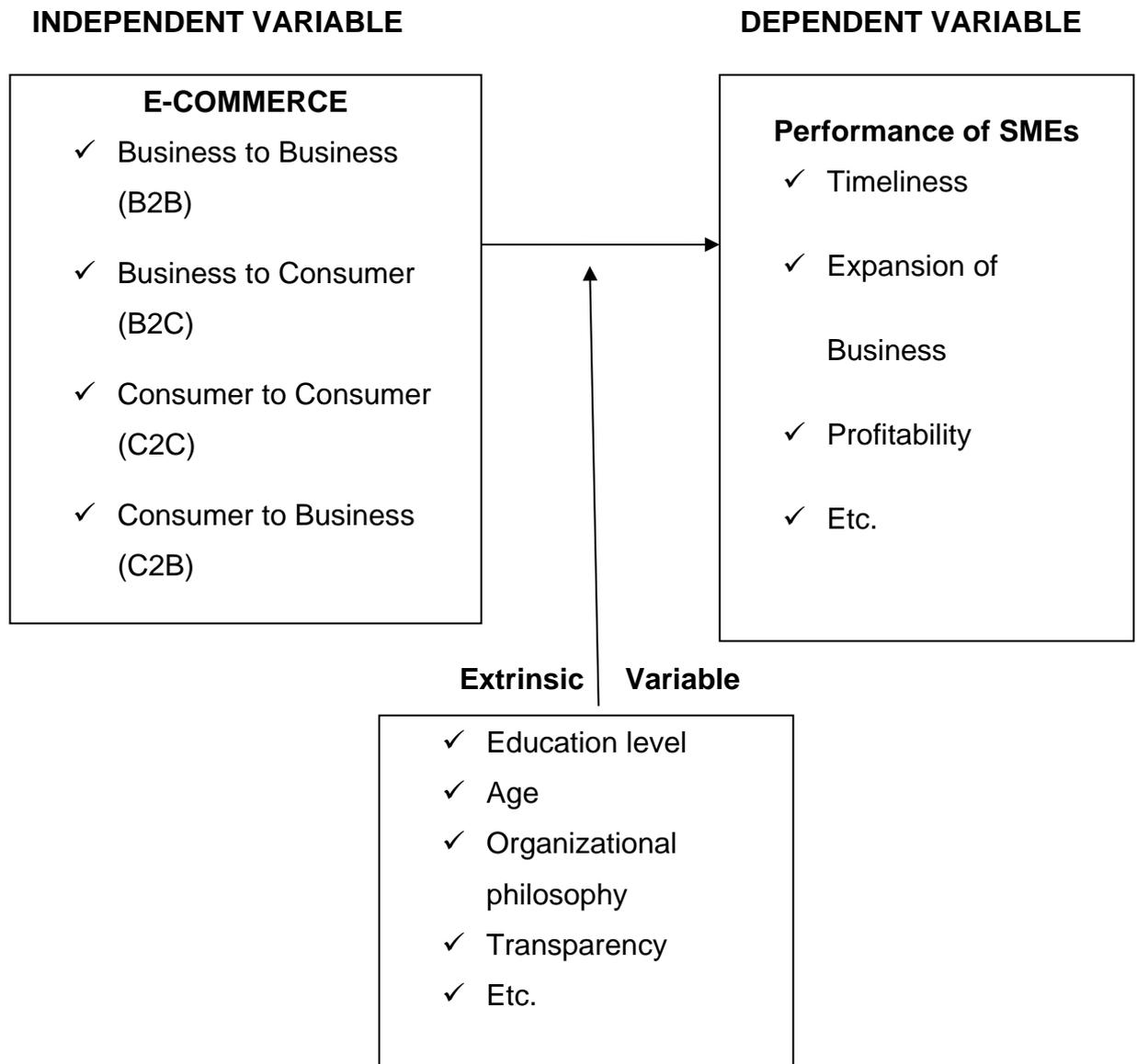


Figure 2. Conceptual framework.

### Explanation of the framework

The conceptual framework in figure 2 presents the relationship between the Independent variable (E-Commerce) and the dependent variable (performance of

SMEs). The illustration depicts that E-commerce models such as business to business (B2B), business to consumer (B2C), consumer to consumer (C2C), and consumer to business (C2B) could perhaps influence the performance of an organization through the effective timeliness of the organizations operations, expansion of businesses, and increase in the business's profits.

However, other extrinsic variables are external to the study such as the education level of employees which might hinder effective usage of E-commerce if they lack ICT skills, the people operating in organizations are more conservative, and the organizational philosophy can also be a deterrent to change. Lastly, E-commerce relies on transparency which might be lacking thus causing incompatibilities and influencing the results when ascertaining the relationship between the variables. In this regard, the influence of the moderating variables must be gauged and controlled by eliminating them to ensure that the variables under investigation are not manipulated.

## **2.4 Definition of E-commerce**

According to several authors E-commerce, a branch of E-Business, also known as electronic commerce, means the buying and selling of goods or services online, where payment for these goods and services is also made online. E-commerce is not only limited to buying and selling of physical products online; it also refers to the exchange of data and information that enables the completion of a transaction as elaborated by Chaffey (2007). For example, invoices, bills, orders and so forth. E-business, on the other hand, is a broader term referring to all business operations done online. This includes the whole supply chain of a business not just the transaction of goods and services. Nanehkaran (2013) goes further to describe E-commerce as the interaction between communication systems, data management systems and security that enables an organization to exchange information of their commercial operations.

### **2.4.1 Types of E-commerce models**

Just like in the brick and mortar commerce, there are four main types of E-commerce models that show the different relationships between consumers and businesses. These are;

#### **Business to Consumer (B2C)**

This is when a business sells a good or service to an individual consumer online. For example, when a customer buys furniture from Ikea and gets it delivered to their home without having visited Ikea shops physically. In other words, a consumer buys a product directly from the retailer. Jessica (2019), states that

Consumers worldwide purchased \$2.86 trillion on the web in 2018, up from \$2.43 trillion the previous year, according to our early projections

#### **Business to Business**

According to Nanekaran (2013), business-to-business is a type of commerce transaction that exists between businesses or companies to transfer services and products. This is not as visible like B2C model, but businesses are utilizing it. For example, a company contacts a software company and purchases from them the software, and a shoemaker sells shoes to a retailer. Kumar and Raheja (2012), further explain that

Many businesses are now using social media to connect with their consumers (B2C); however, they are now using similar tools within the business so employees can connect. When communication is taking place amongst employees, this can be referred to as B2B communication.

#### **Consumer to Consumer (C2C)**

According to Nemat (2011)

Consumer-to-consumer (C2C) marketing is the creation of a product or service with the specific promotional strategy being for consumers to

share that product or service with others as brand advocates based on the value of the product.

This is where consumers sell goods or service to other consumers for example on platforms like Tori, eBay, Oryx, Facebook etc. A consumer with unwanted items puts them on these platforms where other consumers can easily purchase them from.

### **Consumer to Business (C2B):**

When a consumer sells their products or services to a business or organization (e.g. an influencer offers exposure to their online audience in exchange for a fee, or a photographer licenses their photo for a business to use).

E-commerce can be in forms like

- Retail where the business sells directly to a customer without any intermediary,
- Wholesale where the sale of products in bulk, often to a retailer that then sells them directly to consumers,
- Drop shipping: The sale of a product, which is manufactured and shipped to the consumer by a third party,
- Crowdfunding: The collection of money from consumers in advance of a product being available in order to raise the startup capital necessary to bring it to market,
- Subscription: The automatic recurring purchase of a product or service on a regular basis until the subscriber chooses to cancel,
- Physical products: Any tangible good that requires inventory to be replenished and orders to be physically shipped to customers as sales are made,

- Digital products: Downloadable digital goods, templates, and courses, or media that must be purchased for consumption or licensed for use,
- Services: A skill or set of skills provided in exchange for compensation. The service provider's time can be purchased for a fee.

## **2.5 SMEs adoption of E-commerce in Uganda**

According to Export.gov (2019),

E-commerce in Uganda is loosely regulated and informal, but it continues to grow at a fast rate due to the widespread use of mobile money payments and rapid growth in telecommunication users.

Since 2009, mobile network operators (MNO) have offered mobile money transactions in Uganda, providing informal banking services that allow clients to send and receive money and access loans of up to one million shillings (\$270) using their cell phones. The number of adult Ugandans with bank accounts increased from 28 per cent in 2014 to 33 per cent in 2017 making it possible for these consumers to transact online. E-commerce by Ugandans is on the rise through the usage of mobile money, credit cards and other facilities like PayPal all of which is made possible as more and Ugandans achieve financial inclusion which went from 35 per cent in 2014 to 51 per cent in 2017. However, the biggest challenge the Government of Uganda (GOU) finds in regulating E-commerce is identity-enforcement which has caused it to lag. The GOU lacks regulations and enforcement mechanisms to combat illegal activities advertised on informal mobile platforms and fraud in online shops which affect the level of trust in the industry. (Export.gov 2019)

According to Business-Sweden (2016), African countries such as Kenya, Uganda, Ethiopia Cameroon, Malawi and Zambia have gone ahead to outline strategic plans that will drive the respective countries towards the realization of ICT and internet infrastructure which will sooner or later further boost E-commerce.

Figure 3 below is a graph showing Mobile phone usage in East Africa.

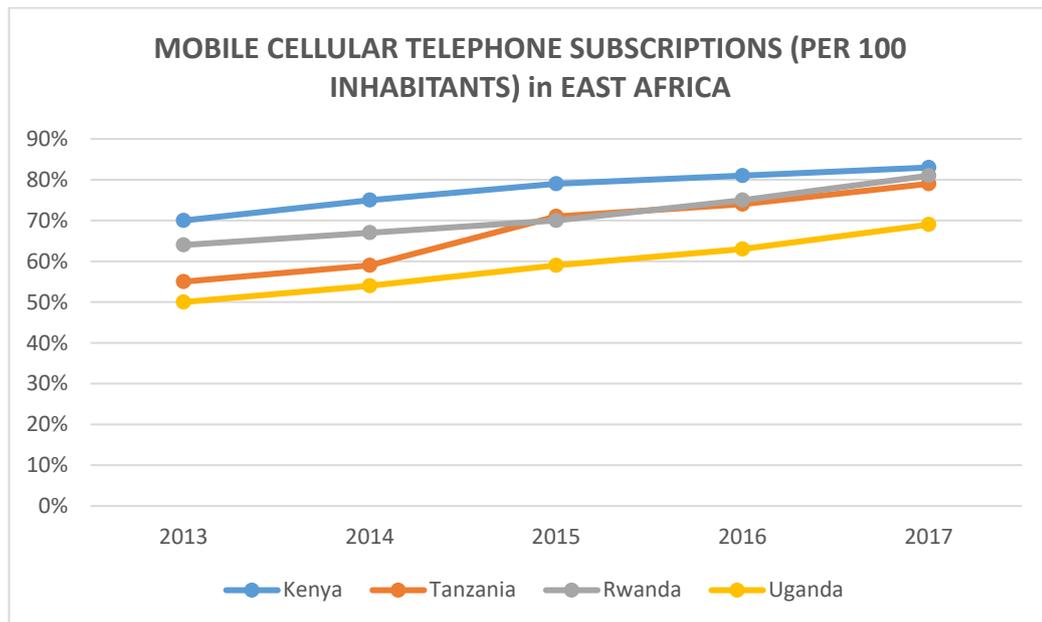


Figure 3. Mobile cellular telephone subscriptions in East Africa (BMI Telecommunication Report 2016: Kenya, Tanzania, Rwanda and Uganda)

Telecommunication operators with the support of the respective governments in East Africa have contributed immensely towards infrastructural development. Figure 3 above clearly depicts that countries such as Rwanda and Kenya are relatively outstanding despite the introduction of E-commerce in a short period. The East African Countries are keen on driving E-commerce with Rwanda and Kenya looking to transform their economies into knowledge-based economies. As a fiscal measure, the Rwandese government has slashed taxes on mobile phones and introduced credit schemes to increase mobile phone penetration in rural areas which explains why E-commerce is developing exceedingly greater than Uganda that was primarily one of the first countries to introduce E-commerce and digitisation in the region. The current estimates envisage that Rwanda could be on the course of ensuring that over 90% of her population have access to the basic E-commerce platforms which are phones.

Admini (2018), says that it is common in Uganda for most businesses to use the traditional business models of manufacturing, distribution and retail. However, the entrepreneurship style is changing from the traditional start-up of opening up retail shops and boutiques to more trendy forms of business like online business. He goes further to say,

Internet world stats put Uganda at 31% penetration rate, and more and more Ugandans are embracing E-commerce. E-commerce refers to commercial transactions conducted electronically on the internet.

Admin (2018), quotes the ministry of Information communication technology and national guidance through its agency National Information technology Authority Uganda (NITA-U), as having commenced the trial provision of free wireless access internet in the Kampala central business district and parts of Entebbe town.

SMEs in Uganda have been able to expand their business operations using E-commerce. For example, Jumia has expanded its business operations that see the company operating in more than 20 African countries in Africa. However, some impediments have still limited the SMEs in Uganda from fully thriving to the desired performance. For example, Kasoma (2018) mentions that Uganda is still one of the least countries in Africa to embrace the E-commerce platform in its economic transformation journey. Uganda is rated at 1% in terms of using E-commerce which registers a negative influence on SMEs performance. Kamoga (2015), notes that E-commerce is loosely regulated and thus informally operationalized. This is factual in a sense that as well as the GOU regulates Mobile Money, identity enforcement, remains poor. This has seen many SMEs suffer as a result of fraudulent online fraudsters which has hampered SMEs performance in Uganda.

## 2.6 Implementation of E-Commerce in SMEs

### 2.6.1 Introduction

Small and medium enterprises (SMEs) are extremely important to many countries, and therefore they should radically be encouraged to change the way their businesses are conducted. The use of E-commerce provides the opportunity for SMEs to compete in global markets with large companies and to facilitate business growth more efficiently.

### 2.6.2 E-commerce process flow

According to Codeless (2017), most company usually overlook the E-commerce process flow as it is believed that it is an automated area of the business. This is not the case, and if a business wants to maximize sales opportunities and achieve a competitive advantage, it must map out an E-commerce process to show the key areas needed to be automated or modified in order to improve performance.

Figure 4 below shows the process flow of transactions in E-commerce

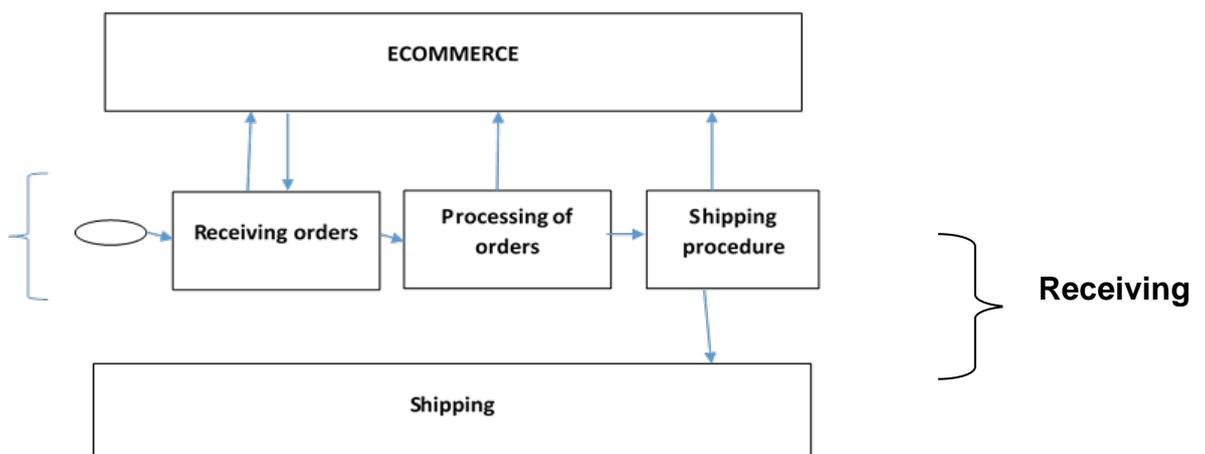


Figure 4. An intricate diagrammatic illustration of an E-commerce process flow of an SME business (Codeless platforms)

### **Explanation of the framework**

Figure 4 shows that at the top level of an E-commerce process flow, the following can be easily identified:

- Customers place their orders using an E-commerce system
- The order details are extracted from the E-commerce system and subsequently entered the company's business software.
- The order is then passed to the warehouse to be processed.
- The order is placed for fulfilment

#### **2.6.3 Sub process: Receiving orders**

When a customer places an order within your E-commerce system the order details need to be extracted and placed into your business software. Manually dealing with information held within a sales order can detract from the businesses planned objectives. It is important to note that in the case of data entry errors, employee efficiency is reduced, and order processing costs increase; thus employees ought to ensure that minimal or no errors are made.

#### **2.6.4 Sub process: Processing an order in an SME organization**

After the order is checked and processed into the business software, the order is passed onto the warehouse for processing. Here, employees will have to check the order against your pick list business rules manually.

Figure 5 shows the process of receiving orders by Warehouse in E-commerce.

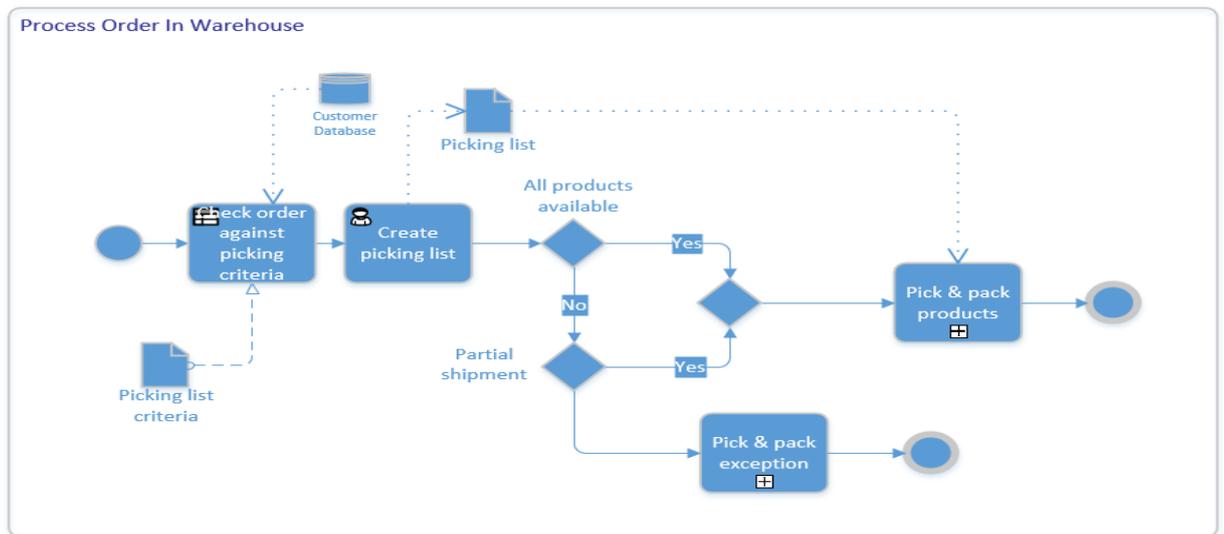


Figure 5. The receiving process in an E-commerce organization (Codeless platforms)

### Explanation of the above illustration

- The Employee notifies the organisation of an order that needs to be processed; the information is passed down to the organisations' warehouse department.
- The organization's employee manually checks the order against pick list criteria, for example, stock availability, item location in warehouse and so forth.
- The organisation's employee creates and prints pick list
- If the products are in stock and available, the order is picked and packed.
- Lastly, the order is made ready for the shipping process which might be handled by the organisation or third party logistics providers

## **2.7 Factors influencing successful implementation of E-commerce within SMEs in Uganda**

There are various factors that influence the successful implementation of an E-commerce system in an organisation.

### **Availability of resources**

For any business to successfully implement E-commerce, it should have adequate financial resources to invest in the project. The organization will have to spend on things like hardware, software, labour and so forth. If the organization has enough resources, it will find it easy to progress with the implementation. For example, this can be seen in some organizations like Jumia, Oryx, MTN and so many others that have successfully implemented E-commerce. However, Uganda as a developing country is still at a stage where the majority of the population lives below the poverty line, and most of its efforts and resources are geared towards meeting their basic needs. This means that few people are willing to spend on the appliances that support E-commerce such as mobile phones, computers, internet fees etc. This, therefore, hinders even those companies that are willing to implement E-commerce because they cannot get the population needed.

### **Organizational factors**

According to Beard (2014), how much company relates to its customers is usually a result of the efforts the company puts in researching and analyzing customers' needs. As E-commerce might provide new opportunities for companies to interact with customers, the electronic medium put in place should be designed in such a way that customer needs are served with quality information and responsive service. That is however still a challenge in Uganda considering that many E-commerce SMEs hardly offer effective communication to their client base discerning that the essence of E-commerce is to reduce customer interaction.

### **Limited top management support**

The support from top management is the precondition for successful implementation of E-commerce systems; thus top management support facilitates the adoption and implementation of E-commerce systems. However, many SMEs in Uganda are individually owned. Thus the managers are often the owners of the business whose decisions are often irrational. It should be noted that such managers are often resistant to changes which affect the operationalization of E-commerce.

### **Environmental Factors**

The environment in which the organization operates is going to affect how easy/hard it finds it to implement E-commerce. This involves the competitors, customers, culture etc. Small businesses that are in an environment that is more competitive would feel a greater need to turn to electronic commerce to gain a competitive advantage. External Support from consultants, vendors and government programmes/policies are also important factors in E-commerce as these policies could either build or break the E-commerce adoption.

### **Technological competencies**

If organizations can easily access people with the required skills to implement E-commerce, it will easily and cost-effectively have it up and running in the shortest time possible. Uganda has embarked on training its youths on computer skills by making computer courses available in all schools, which means that in future most organizations will find it possible to acquire people with the right skills. However, it is still a challenge in the biggest part of the country due to the remoteness of the areas that have no access to electricity and computers.

### **Compatibility and the dynamic nature of E-commerce**

E-commerce is an area that changes at a rapid rate with new technology being developed to replace the existing regularly. This makes most E-commerce obsolete just as soon as or even before it has been implemented. This proves to be

expensive for organizations in Uganda because they have to keep spending on the latest update to keep their E-commerce efficient. Another factor that arises from these regular changes is compatibility. If E-commerce is not compatible with existing work practices, then SMEs will be more likely not to adopt them. This is true especially in Uganda whereby SMEs that are profiting from the traditional ways of transacting business are less reluctant to pursue E-commerce.

### **Internal security and level of trust**

E-commerce is a virtual form of business where the buyer does not see the seller, which means for the transactions to be completed, there has to be a very high level of trust between the two parties. How the consumers' perception of the organization will also greatly contribute to the successful implementation of E-commerce. Customers must have the confidence that items paid for will be delivered and that their financial details will be secure even when they do not visit or even know the physical address of the organization. The low level of trust in Uganda has greatly led to the sluggishness in the implementation of E-commerce both at home and globally.

#### **2.7.1 The critical success factors of E-commerce implementation**

##### **Content**

Content is the ability to present a unique and innovative product or service by using the electronic environment in a value-added way. For instance, in Uganda E-commerce organizations such as Jumia have found challenges when packaging the content of the mobile foodstuff applications that enable customers to receive lunch in their offices. The targeted customers have failed to differentiate the service as it presents no differentiation apart from the fact that it avails food at their premises.

### **Commitment**

The clear idea of companies' goals and objectives as a strong motivation for using the Internet. This is still a weak area in Uganda considering a great multitude of the SMEs still has deprived commitment.

### **Community**

The ability to build up a critical mass of customers/business partners which will translate into sales/costs savings to cover the initial investment.

### **Control**

The extent to which E-commerce is integrated with internal business processes, enabling the SMEs to control all aspects of its business and handle growth and innovation.

In order to implement E-business, SMEs need to change their business processes and existing information systems. Use of appropriate information technology and information systems could be the first step towards E-commerce implementation, but it is important not to promote only the technology, but also the solutions to their organizational problems. The necessary organizational changes of inefficient business processes could be the most considerable obstacles for the perspective of SMEs; therefore SMEs should be prepared for business process reengineering.

## **2.8 The development of E-commerce in SMEs**

Every project starts with a plan which serves as a guide throughout the whole implementation process. An E-Commerce development strategy is needed when a decision to add E-commerce to a business is adopted. The company needs to

conduct exhaustive research on all aspects of the E-commerce development process in order to develop an E-commerce development strategy that will fit into and serve towards realizing the mission and goals of the company. There are many guidelines and existing theories that can be used during the development of E-commerce development strategies. The most relevant is Paul Smith's SOSTAC framework as used by Smith and Chaffey (2005) to develop a roadmap for implementing E-commerce. The table in appendix 3 explains the SOSTAC Framework

As clearly explained in the framework in appendix 3, those are the different stages to follow when developing any plan. Since Paul Smith has clearly explained each stage, the researchers will not go into details but will however base on the framework to emphasize the importance of the planning stage when developing E-commerce.

When the planning process is done, and a decision is made by the business to add E-commerce to its business model, and the strategy is adopted on how to successfully have this done, the next stage is the setting up of the E-commerce shop. An E-commerce shop begins with the development of a website or the modification of the existing company website to enable the building of the shop. There are several steps involved in the development of an E-commerce shop, and these are briefly discussed below.

### **2.8.1 Identify the product/service and the targeted customers**

According to Wallace (2019), when setting up an online shop, the first step is to decide on what to sell. These can be commoditized or unique products. It is important to find yourself a product niche that you can capitalize on and use to set you apart from all the other shops online. It is also important to study the online trends and see which items/services that are pulling large numbers of the customer then form a strategy to help you get a market share in this trend. Google Trends is a tool that can be used to identify current trends to help inform your decision.

### **2.8.2 E-commerce Website development platform**

According to Demates (2019) there are several different kinds of E-commerce software, and it can be hard to tell the difference in features and performance which factor can affect the performance of your business. It is therefore very important to be sure of which vendors to engage as all of them profess to have the best software in terms of speed, reliability, suitability to search engine optimization, PCI readiness for credit card etc. All these premises are detrimental towards creating a well-performing E-commerce shop. Below are some of the top performing E-commerce platforms;

- BigCommere,
- Shopify
- 3dcart
- WooComerce
- Volusion
- Prestashop
- Weebly
- Squarespace
- Magento
- Wix.

Zorzini (2017) emphasizes these factors to consider when choosing a platform; your stock size, are you selling physical or digital goods, the payment method you will use, hosting options and the payment and budget available.

### **2.8.3 E-commerce Website hosting platform**

According to Wood (2019), web hosting means having a server that hosts other companies' website. Maintaining a server explicitly dedicated to the E-commerce website can prove expensive so it makes sense to have a hosting company host the website. According to Gotler (2018) choosing a hosting platform is as important as all the other steps involved in setting up an online shop. There are several E-commerce hosting companies that one can

choose from for example; Bluehost, Just host, HostGator, GoDaddy etc. However, it is important to consider the following factors when deciding on which hosting company to use;

- security capabilities
- E-commerce and CMS software support and compatibility
- Performance capabilities
- Database capacity
- Intuitive Administration Interface.
- Available budget

#### **2.8.4 E-commerce development providers**

After all the research on the product, platforms and hosting company is done, it is important to decide on the different companies to partner with in terms of service provision for the E-commerce project. These will include service providers like telecom companies, computer hardware providers, software and website development companies, financial institutions with payment platforms etc. Research needs to be done and comparisons made between providers and the best chosen. The budget and type of product may contribute to the decision of which provider to partner with.

The choice of the E-commerce service providers (CSP) is a choice one needs to make after careful research. Varon (2018) summaries about CSP as follows,

Digital businesses can use commerce service providers (CSPs) to design their digital commerce strategy and ecosystem, create immersive commerce experiences, and build and integrate digital commerce technologies. However, to realize these benefits, you'll have to select from a diverse set of vendors that vary by size, functionality, geography, and vertical market focus. Digital business strategy professionals should use Forrester's Now Tech report to understand the value they can expect from a CSP and select vendors based on size and functionality.

### **2.8.5 E-commerce website testing**

According to Apphawks (2019) a website will need to be tested before it can be launched, and transaction commenced. Every website is developed with the user in mind, therefore, everything about it is developed for the comfort of the user. Web testing is, therefore, to make sure that all is okay and there are no errors that will inconvenience the users in any way. The website is tested for security, compatibility, usability, reliability and accuracy. It is tested using different tools and in different browsers to make sure that there are no bugs and that it works well with all the tools and the browsers the users will use then with. If all checks out in the tests, then the website is ready for operations, and the transacting can begin.

### **2.8.6 Marketing tools**

Like a physical shop, an online shop has to continuously use of the available tools to position its brands in the online the market if it is to stay competitive and grow. There are several tools available that a company can use to promote its website/shop and attract customers. These include search engine optimization to help make the website more visible to search engines, Google analytics, videos, emails etc. The map in figure 6 below shows the different tools one can use to make a website more effective.

The map in figure 6 below shows the different tools one can use to make a website more effective.



Figure 6. Imagine Brands

## 2.9 The benefits of E-Commerce to SMEs

One of the biggest challenges facing both large and small enterprises in the developed world is the need to find ways to increase the customer's value for their products, to gain revenue growth that is continued instead of purely short-term (Vandermerwe, 2000). The main aim is to make customers want the services of a particular company as their sole or dominant choice because they provide superior value at low cost, from which the company benefits by obtaining a more in-depth and broader share of customer purchases for more extended periods. This economic transformation has been driven by electronic business, and more specifically electronic commerce (E-Commerce), that has provided a powerful way for many organizations to achieve tangible benefits based on web-enabled transactions and use of the Internet. It is worth considering a few of the many definitions of E-Commerce.

The effects of E-commerce already appear in all areas of business, from customer service to new product design. It facilitates new types of information-based business processes for reaching and interacting with customers-online advertising and marketing, online, order taking and online customer service etc. It can also reduce costs in managing orders and interacting with a wide range of suppliers and trading and trading partners, areas that typically add significant overheads to the cost of products and services.

The role of E-commerce in providing an avenue to shift out of the home and onto consumers' digital communication devices by matching messages to consumer preferences and demographics, marketers will be able to better target the right recipient with the right message at the right time. Other than that, marketing functions are now performed under a hypermedia-computer-mediated-environment where interactivity and connectivity are replacing the traditional model of negotiation and communication (Fatimah 1999).

A successful E-commerce business must be globally aware, system-oriented and customer sensitive. Companies can use direct access to consumers to collect information that will help them better develop products to meet the consumers need through customizations or create new niche products (Rohaizat and Hamid 2005). In general, most firms used E-commerce primarily to provide information about the company, its product and services, and for both internal and external communication (Ahmad and AzahJahari 2005).

Also, the online consumer can quickly gain access to graphics, sound, and even movies, thus enabling real-time transaction interactivity at a selected convenience time (Hoffman and Novak 1996). There have been studies into the impact of the Internet on business transformation in large companies, for example Dutta & Segev (2001), but less research has focused explicitly on the implications for SMEs. Baldwin et al. (2001) suggested that SMEs are associated with the relative quality of their customer service, generally an aspect that many larger companies cannot match. This comparative advantage can be of tremendous benefit to SMEs as Internet technology now allows SMEs in geographically disparate locations to attract and retain customers they would otherwise not have been able to reach at all.

Baldwin et al. (2001) also argue that despite varying estimates, the majority of SMEs in developed countries have internet access. Barriers to the effective and greater use of internet technologies within these SMEs typically include a lack of time and a lack of specialized technical expertise. However, SMEs are provided opportunities by the internet that includes export generation, niche marketing, information technology utilization and development of strategic partnerships/alliances. The internet influences the way that SMEs can communicate with contacts and customers, the way they manage information, and how they project their image. This change often means that business processes and operations impact on different levels including external contacts, the industry, internal organization, administration and manufacturing tasks, and fundamentally influence several areas including productivity, information retrieval, communication, knowledge management and the environment (Baldwin et al. 2001)

As part of these efforts in Uganda, the SMEs department recently teamed up with others to map the small business world and identify priority needs in four key areas: business environment, and access to capital, support services, and information. The analysis found considerable entrepreneurial capacity in Uganda, but also many obstacles to success for small business. These include excessive requirements for permits and fees, problems with land acquisition and construction, and other troubling uncertainties (IFC, 2002). The good news is that there is now much broader recognition of the SMEs sector's importance among key stakeholders. In the time past, organizations in Uganda have traditionally invested in non-internet related information technology, established electronic links with selected suppliers and buyers, and enjoyed productivity and efficiency. However, the Internet is fundamentally different from other IT because of its ubiquitous and open nature, low access costs, and the ease of using related applications (Adekunle et al. 2008)

As Wanyama (2007) cited The Asia Foundation (2001) more and more use of E-commerce and information and communications technology (ICT) is realized by private firms, the result is economic growth due to the acquisition of new markets, access to market information, and increased efficiency in the firms. The use of E-commerce has the potential to expand the operations of SMEs and increase its

competitiveness in the global supply chain network. Broadly defined, E-commerce is a modern business methodology that addresses the needs of organizations, merchants and consumers to cut cost while improving the quality of goods and services and increasing the speed of service delivery (Kalakota and Whinston 1996). It also applies to the use of computer networks to search and retrieve information in support of human and corporate decision making. More commonly, E-commerce is associated with the buying and selling of information, products and services via computer networks today and in the future via any one of the myriads of networks that make up the information superhighway (Adekunle et al. 2008). E-commerce is also defined as the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals (Zorayda 2003)

The fact that E-commerce eliminates third-party involvement reduces time spent along the supply chain. Companies interact directly with suppliers or manufacturers of the services or goods. There is usually no need to engage the services of a middleman or agent to run the transaction on behalf of the principle. This has seen local coffee farmers in Uganda who sold their coffee to consortium agencies override these middlemen/third parties, which does not only reduce time in commerce and reduction of lead-times.

Khan (2016) also adds that E-commerce reduces transportation costs, develops and improves the relationship between supplier and customer, develops the company's brand, increases revenue, reduces purchase, procurement, and operation and maintenance costs. Hau-L and Seungiin (2001) further explain that e-business has already had a significant impact on supply chain integration, but it is safe to say that we have only scratched the surface. New models are continuously being developed. By adopting e-business approaches for supply chain integration, companies can realize dramatic returns through efficiency improvements, better asset utilization, faster time to market, reduction in total order fulfilment times, enhanced customer service and responsiveness, penetrating new markets, higher return on assets, and ultimately, higher shareholder value. Institutions in Uganda such as Makerere University which are the model institutions as far as E-commerce

is concerned to have exhibited high efficiency in terms of lead time which has seen other institutions such as Kyambogo University, Uganda Christian University among others to follow the same trend.

Also, Organizations such as Woodin which is a direct competitor to Kyaligonza, have provided a unique blend of business opportunities by using E-commerce to obtain fabrics from unreachable geographical areas. Woodin being a company that makes specifically African attires, the company uses E-commerce to reach out to suppliers as well as customers from other countries such as Congo, Nigeria and South Africa depending on the demand of the attires. Unlike before, when suppliers were obtained unpredictably, E-commerce provides an opportunity for the organization to only select suppliers with high ratings in terms of delivery. Woodin has played a great role in supporting local informal sector businesses by providing E-commerce platforms to showcase various African wear attires. The usage of E-commerce as availed instant feedback using various ICT channels such as phones, email and mobiles. The customers are now in a position to express their grievances in the shortest time possible enabling the companies to remedy their faults instead of losing customers.

The usage of E-commerce provides auto notification that a product has increased or decreased thereby enabling replenishments to be done timely. This prevents unnecessary spending which is one of the most expensive company initiatives. The usage of E-commerce has seen many SMEs in Africa expand their market with the increased ability to transact directly with overseas or international customers and to advertise their services timely without any barriers. This is especially true for small operators of tourism-related services such as air ticketing companies, fashion and design companies such as Woodin have also adopted a just in time (JIT) management philosophy where distant customers can order for their preference in a customised manner, and the company delivers what is required.

E-commerce has enabled companies to keep track of their expenditures by keeping track of financial expenditures. This has enabled companies to predict the anticipated need for financial services such as loans to foster effective delivery. Financial institutions have business loans that are offered to SMEs that need quick

cash to foster business growth and sustainability. However, only E-commerce companies that predict and plan for the resources timely have realised business triumph by ensuring that their customer base enjoys business continuity

### **2.9.1 The barriers to adoption of E-Commerce by SMEs**

The usage of E-commerce in Uganda has registered tremendous benefits; however, the country being a least developed countries (LDC) has some challenges as far as economic progress is concerned. E-commerce encounters unique challenges ranging from socio-political, legal and human preference, cognitive barriers including literacy, content and language as well as economic barriers.

Internet services in Uganda come at a high cost to the users who not only cannot afford the luxuries but also go without the basics thereby affecting E-commerce usage. The low internet penetration rate in Uganda makes it impossible for the SMEs to access their customers and suppliers thus rendering E-commerce impossible

Digital literacy in Uganda continues to lag low which minimises on the transactions that are undertaken using E-commerce. Digital literacy among consumers and businesses in terms of computer literacy, language barriers, awareness of E-commerce benefits, lack of confidence and security in online transactions, including lack of a skilled workforce in E-commerce enterprises, is a common phenomenon in Uganda. Relatively big corporations in Uganda have intentionally resisted E-commerce usage due to limited capacity in terms of human resource and compatibility. Cybersecurity is still lacking, and SMEs continue to be targeted to cybercrimes.

The E-commerce Policies and regulatory framework are lacking in most of the Least Developed Countries such as Uganda. SMEs have failed to register the appropriate level of consumer confidence and trust in their activities. Important among the legal issues that need to be in place are laws on electronic signatures and authentication,

electronic contracting, consumer protection, privacy and data protection, computer/cybercrime, taxation and customs duties, and intellectual property rights.

As the internet penetration in Uganda rises, so does the rate of cybercrime. A new report has put the country's annual monetary loss through the vice at Shs 122 billion. Cybercrime is any form of misconduct committed on the internet or computers with the main aim of defrauding or stealing from users (Kamoga 2017). Kamoga adds that

The increase in the cost of cybercrime in the country is due to the increased sophistication of local cybercriminals, who now deploy complex methods, as well as lack of practical regulatory guidance from government and industry regulators.

SMEs, therefore, risk being part of a development that is not steered systematically in a trustworthy direction. Uganda has three cyberspace laws to govern online fraud, but these are difficult to implement, and they are not known by the public. The laws include the Electronic Transaction Act, Computer Misuse Act and the Electronic Signatures Act (Uganda CMM 2016).

Most developing Countries have been slow in making efforts towards coming up with domestic legislation on E-commerce. This is coupled with questions to do with redress in cross-border case breach of an e-contract. A consumer seeking such redress may not even have a clue about any existing alternative dispute mechanisms within the foreign jurisdiction which would have otherwise cut down on the expenses involved in exploring cross-border litigation.

Obstacles to E-commerce in Uganda, are immense and the primary obstacles can be grouped into three categories;

- Socio-political factors including legal and human preference for example, the president of Uganda often finds it necessary to disable the internet as a tool for creating stability in the country which greatly hampers SMEs that depend on E-commerce.

- The cognitive factors. These include literacy and language command of the population. The low literacy rate and low command of the English language have led to limit the usage of E-commerce because it requires a certain level of education which is not attainable by most people in Uganda.
- The limited affordability of ICT infrastructure, particularly the Internet and broadband, is one of the key factors affecting the growth of E-commerce. The cost of E-commerce gadgets and daily data costs are still a pinch to many African SMEs that wish to integrate E-commerce.

Laudon (2014) asserted that digital literacy among consumers and businesses in Uganda in terms of computer literacy, language barriers, awareness of E-commerce benefits, lack of confidence and security in online transactions, including lack of a skilled workforce in E-commerce enterprises has contributed towards the limited diffusion of E-commerce amongst SMEs. Reports of SMEs being vulnerable to cybercrimes are increasingly evident with larger institutions such as banking institutions and government ministries suffering from the misadventure. Also, the Legal frameworks to build security and trust which is the basis of E-commerce has created difficultness in adopting E-commerce as a strategic business tool. Ensuring a legal and regulatory environment is critical for the complete functioning of E-commerce in a country which is still lacking in most African countries.

Kithunia and Akinusi (2013) investigated the magnitude of barriers facing E-commerce businesses in Kenya. The study research methodology used a questionnaire survey (internet survey) to collect data from 137 E-commerce businesses out of which 74 or 54.01% usable questionnaires were received. The businesses ranged from very small to large organizations cutting across all major industry sectors, consisting of the following forms of ownership: local, government, multinational and joint ventures with foreign ownership. The findings of the study established the following barriers in order of decreasing magnitude: economic, social, telecommunications infrastructure barrier, legal/political, individual and organizational barriers. The first three variables are positively but moderately

correlated with each other, while, except for telecommunications infrastructure, others are poorly correlated with individual and organizational barriers. As expected, the latter two correlates moderately with each other.

The regression analysis suggests that telecommunications infrastructure barriers hold the key to unlocking the complex knot of E-commerce in Kenya, as a decrease in this area would have multiplier effects on the other barriers. The study recommended that the government has a vital role to play in reducing the first four barriers which were all external to organizations. However, in the present day, governments have to a certain extent presented the necessary infrastructure to support E-commerce. The study was conducted in Kenya, which although whose infrastructure by far exceeds that of Uganda, it has similar demographic and socio-economic ups to that of Uganda so the above investigation would be representative of the Uganda standpoint.

In conclusion, based on the existing literature it is evident that E-commerce requires trust, experience, security and privacy. E-commerce conveniently offers all these and yet at the same time, takes them all away through computer misuse by individuals or corporations. E-commerce is a phenomenon that has existed for considerably a long period in industrialized countries such as France, Germany, Turkey and the USA but it is in its preliminary stages in Uganda. Due to this fact, the existing literature does not provide enough information about E-commerce in LDCs like Uganda. This study, therefore, grounds its investigation on the contribution of E-commerce in LDCs like Uganda, the contribution of E-commerce, its effect on business expansion and the barriers in a traditional perspective.

### **2.9.2 Small and Medium Enterprises (SMEs) expansion**

Business expansion or growth is the process through which a business becomes large (Suttle 2019). The business can expand through market penetration which is entering new markets for the already existing products. For example, Kyaligonza being the fashion shop in the market can expand its operations through marketing its products to new market far away from Kampala using E-commerce resources. Another expansion strategy is through establishing several stores from which far away customers can buy the products of the company. From that, it means that business expansion can be achieved in many ways, but for this study, the emphasis is placed on the penetrating new markets using E-commerce platform. Another expansion strategy is through establishing several stores from which far away customers can buy the products of the company.

Researchers have studied a Firm's expansion for many years. Different terms have been used by different authors to define the concept of a firm's growth, but the events through which each enterprise passes remain the same. Most of the researchers suggest that each enterprise must start, then grow while facing various challenges and crises, and finally mature and decline. According to Santos and Brito (2012) firm's growth can be reflected in many ways either in the increase of sales volume, opening up in new markets, and increase in the number of customers the business serves.

### **2.9.3 The relationship between E-Commerce adoption and business expansion**

According to Wolf (2016), small enterprises that adopt E-commerce perform better than those that do not adopt it due to E-commerce's catalytic effect on business expansion. E-commerce in Africa has occurred in the context of global information and communications technologies (ICTs). The African governments have placed high priority to the development and implementation of ICT and mainly E-commerce in business transactions to ease the collection of tariffs and taxes. However, to the

SMEs, E-commerce plays a more significant role than ensuring that taxes are compensated. The role of E-commerce in the expansion of SMEs is being realised today more than ever before. Companies can tap into the global market niche as a result of integrating E-commerce business initiatives. E-commerce has exposed SMEs to wider market bases by bringing the global consumer into the knowledge of goods and services available.

More so, without a doubt, a country with adequate E-commerce regulations is a boost to investor confidence especially from foreign and local investors who would take this as a guarantee that there is a worthwhile enforcement mechanism for them to seek redress if their business interests are not well taken care of. This ultimately leads to business expansion. Bold, another fashion and design company that specialises in making African attires has benefited from E-commerce by targeting customers located beyond the national domains of Uganda. E-commerce has also expanded the performance of government programmes.

The government has also integrated E-commerce usage through the adoption of online government services to improve on the performance of SMEs. E-government platforms boost the development of E-commerce and SMEs familiarity with, and uptake of, it. Some of the e-government services related to businesses, such as business registration, taxation, information provision of legislative or local government information, and government procurement and consultation activities. In Uganda, SMEs that wish to bid for government tenders often are required to download and resubmit their bids through the government website portals.

### **3 METHODOLOGY**

#### **3.1 Introduction**

This section covers how data for the study was collected, analyzed and interpreted in order to answer the research questions, thereby meeting the purpose of this study. This section comprises research design, study population, determination of sample size, sampling techniques, data collection methods, data collection instruments, quality control, data collection procedures, data analysis, measurement of variables and ethical considerations.

#### **3.2 Research design**

This study used a cross-sectional research design. This design was selected because it is crucial for the researchers to find out the opinion of a cross section of employees from different SMEs in Uganda using E-Commerce in order to get prospects of expansion. In this study, numerical figures regarding the sales volume, number of branches was obtained in order to reflect the firm's expansion, thus giving the research both a quantitative and qualitative dimension. While the quantitative design involved administering closed-ended questions to respondents within the selected SMEs in Uganda, the qualitative design used questions that looked for interviewees' opinions.

#### **3.3 Study population**

The population of this study constituted 60 accessible employees from SMEs using E-Commerce and 30 accessible customers (shoppers). In specific terms, managers and customers constituted the study.

### 3.4 Sample size and sampling design

Due to time constraint and the deadline for submission, the researchers decided to use only conveniently accessible respondents from SMEs using E-Commerce in Uganda. Therefore, from a population of 90 managers and customers, a sample of 80 respondents was determined. This is as depicted in Table 1.

Table 1. Sample size of respondents and sampling technique

Types of respondents	Population	Sample
Managers from SMEs using E-Commerce	60	57
Customers	30	23
<b>Total</b>	<b>90</b>	<b>80</b>

#### 3.4.1 Data sources and collecting methods

Data were collected from both primary sources and secondary sources.

#### 3.4.2 Primary Data Sources

Primary data was the first-hand information collected from primary data sources like interviewing and questioning the different respondents from the SMEs using E-commerce and their customers. Other methods that were deployed to collect primary data included observation and interview following systematic and established procedures.

### **3.4.3 Secondary data sources**

Secondary data was already established data from journal articles mainly published by the SMEs and experts in E-commerce of Uganda and individual companies and unpublished reports, newspapers reports. According to Amin (2005), secondary data can provide a basis for comparison with the collected primary data.

## **3.5 Primary data collection instruments**

The researchers used instruments like a questionnaire, interview guide and document review checklists as instruments of data collection. Both qualitative and quantitative approaches were considered as data collection methods. Combination of instruments (questionnaires, interview guide and documentary checklists) were used to collect data for the study

### **3.5.1 How primary data was collected**

Two methods of data collection were used, and these were interviews and questionnaires (appendix 1 and 2 respectively). The researcher recruited two assistants who assisted in the actual collection of the data. One sat at Oasis Mall in Kampala where Kyaligonza has an outlet and used a questionnaire to collect data from random shoppers. (See attached questionnaire in appendix 1). The second assistant interviewed employees from companies that have implemented E-commerce in their business. These were from different companies with different business models, but all are using some form of E-commerce in their business operations. Some of these companies were:

- Wooden which is a fashion business that sells African wear in Uganda and several other countries in Africa.
- Jumia is an online shop in Kampala that sells an assortment of products. It covers several countries in Africa and it the leader in the online shopping business in Uganda.

- Hello Food is a company that uses a mobile app to conduct business. They partner with different companies in the food industry. They receive orders for food from the customers via their app and make the deliveries.
- Afros &Mo is a hair product company selling products online
- Tamales, is a company that sells household items online.
- safe boda is an app for motor cycles taxi.
- Uber an app for car tax
- Mcash is a platform for making payments to farmers and for them to buy goods online.
- Kakira sugar has an app where out growers get paid online and they use the same app to order and pay for items from kakira shop.
- Biyinzinka provides poultry feeds to farmers.

These people were asked about the actual operations involved in running an online business; they were asked about the challenges and barriers one would meet when operating an online shop in Kampala. They were also asked to give insight into the available resources for running an online shop in Kampala.

Table 2. Timeline of the research

Month	Activity	Activity goal	Duration
May 20 <sup>th</sup> -30 2018	Contact and briefing from the Client	Better Understanding of Kyaligonza's Business operations	Two weeks
June 1-15 2018	Designing data collection tools and training of data collectors on how to use them	Making sure we have irrelevant questions and people to use them	Two weeks
June 16-30 2018	Interviewing of sample groups and other data collection activities	To get the needed data	Two weeks

July 2018	Data analysis	Understanding of the gathered data	One month
October 2018 – May 2019	Report writing	Feedback to Kyaligonza	months

Table 3: Cost of the research

Item	Descript	Cost (Euros)
Stationery	For questionnaires, reports etc	50
Wages	For research assistants	100
Wages	Data analysis expert	200
Transport	For researchers and research assistants to and from different sample groups	50
Phone bill	For calls to sample groups and amongst researchers	50
Total		450

### 3.6 Questionnaires

The researchers used a questionnaire to collect data from the respondents. A questionnaire was used to collect the data sample size of 30 shoppers who were moving around in Oasis mall. The research assistants helped to stop these shoppers and asked those questions from the questionnaires. Those who were willing were given to fill the questionnaires themselves. The results were believed

to be dependable and reliable. Since the target respondents were mainly customers in an upscale mall, they were literate and had knowledge and interest in E-commerce. This made the questionnaire appropriate to the respondents to collect data and gather the right information. The questionnaire consisted of both closed and open-ended questions. The questionnaire was developed using a three Likert scale ranging from strongly disagree, not sure and agree to help researcher analyze qualitative data quantitatively.

### **3.6.1 Interview guide**

An interview guide was prepared by the researchers and used to collect data from employees from SMEs who had experience in working with E-commerce. Interviews are person to person verbal communication in which one person or a group of persons are interviewed at a time. Interviews were useful because they had the advantage of probing for more information, clarification and capturing the facial expression of the interviewee. Also, they allowed the researcher to revisit some of the issues which had been over sighted in other instruments but considered vital for the study. To obtain accurate information through interviews the researcher ensured that she obtained maximum co-operation from respondents through making an appointment with the respondent using their convenient time. This made it possible to obtain the data required to meet the specific objectives of the study. The research also made the option of answering via phone call or email possible which made it easier for the targeted people to respond thus giving many respondents.

### **3.6.2 Document review**

Documentary review checklists were the main source of secondary data collection tool and this from text books, internet, media, journals, reports, other researches and magazines. Amin (2005) observed that secondary data could be used as a basis for comparison with the primary data. The researcher reviewed different theories on the development of E-commerce.

### **3.6.3 Ethical considerations**

In this study ethical consideration was ensured through the researcher exercising caution while designing the data collection tools and conducting data collection exercise. The researchers made sure they avoided personal questions that would arouse the personal feeling of the respondents through only asking questions related to the study and giving clear explanations of why the study is conducted. Besides that, she also made sure that she used simple and only related questions to the study.

### **3.6.4 Measurement of variables**

Mugenda and Mugenda (2003) support the use of nominal, ordinal, and Likert type rating scales during questionnaire design and measurement of variables. The nominal scale was used to measure such variables as gender, marital status, and terms of employment, among others. The three-point Likert type scale (1- disagree, 2-not sure, and 3-agree) was used to measure the opinions of different respondents. The choice of this scale of measurement was that each point on the scale carries a numerical score which is used to measure the respondent's experience. According to Mugenda (2003) and Amin (2005) the Likert scale can measure perceptions, attitudes, values and behaviors of individuals towards a given phenomenon.

### **3.6.5 Validity and reliability of research instrument**

The validity of questionnaires was ensured using an expert method whereby the questionnaires were designed based on the objectives and the literature reviewed, then presented to the research expert who commented on the appropriateness of these instruments and recommended adjustments that were reflected in the questionnaires. Any comment from the expert caused adjustments in the questionnaires. After that, a Content Validity Index (CVI) was computed that will reveal whether the instruments are accurate in measuring what it intends to measure. The formula for  $CVI = K/N$  Where, CVI= Content Validity Index, K =Number of items considered relevant/suitable and N = Number of items considered

in the instruments. The same expert was also used in the analysis of the collected data.

To ensure the reliability of instrument in terms of accuracy, internal consistency and completeness, reliability of the instrument were established using Cronbach's alpha coefficient test. The targeted alpha ( $\alpha$ ) coefficients are supposed to be above 0.5, which signified that the Likert scale used to measure the study variables is consistent, and therefore the study variables are reliable. This was per the advice of the Expert.

### **3.6.6 Data process and analysis**

According to Sridhar (2018)

This is the process by which sense is made of data gathered in research by proper application of statistical methods.

After data was collected, the questionnaires and interview responses were handed over to the expert for analysis. Data was sorted, coded and input in the SPSS program for analysis by the expert who gave the analysis report in section five.

## **4 DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS**

### **4.1 Introduction**

This section presents the results of the analysis according to the research objectives. The analysis begins with the presentation of the response rate, presentation of bio-data and then the presentation of finding according to the objectives. The objectives that guided the study were 1) to examine e-commerce adoption within SMEs in Uganda, 2) to identify the benefits of E-Commerce adoption within SMEs in Uganda. 3) To examine the barriers to E-Commerce adoption within SMEs in Uganda, 4) to identify measures of SMEs expansion in Uganda and 5) to establish the relationship between E-Commerce Adoption and SMES expansion.

#### **4.1.1 Response rate**

A total of 65 respondents out of the sample size of 80 returned the questionnaires, representing a response rate of 81.3%, which was within the acceptable response rate as per Mugenda and Mugenda (1999) and Saunders et al. (2007) who suggested that the response rate over 50% is adequate considering that quantitative data is manually collected like it is the case within this study. On top of that, the researchers effectively conducted nine interviews with people that had experienced the E-commerce within the business.

### **4.2 Sample characteristic**

The characteristic of the sample that was considered necessary for this study was gender, level of education, years spent working in the SMEs.

#### 4.2.1 Gender of respondents

The study was interested in understanding the gender distribution of managers and customers within SMEs in Uganda, and the findings to this effect are as summarized in the table below

Table 4. Gender Distribution of the Respondents

<b>Gender</b>	<b>Count</b>	<b>Valid percent</b>
Male	43	66.2
Female	22	33.8
Total	65	100.0

From table 4 above it is indicated that males were 43(66.2%) and the females were 22(33.8%) of the respondents. This means that majority of the respondents were males which is in line with the national survey that indicated that most of the people involved in the business are men. However, the women dominated the customers in SMEs.

#### 4.2.2 Level of education

The researchers wanted to establish the education levels of respondents, and the results to this effect as indicated in the table below.

Table 5. Highest education status of the respondents

Options	Counts	Valid percent
PHD	0	0
Master's Degree	4	6.2
Bachelor's	9	13.8
Diploma	6	9.2
Certificate	11	16.9
Secondary	19	29.2
Primary	16	24.6
<b>Total</b>	<b>65</b>	<b>100.0</b>

From Table 5 above, it is indicated that most SMEs are owned by less educated people as 4(6.2%) of respondents were of master's degree level, 9 (13.9%) were of bachelor's degree level, 6 (9.2%) were of diploma level. 11(16.9%) were of certificate level 19(29.2%) were of secondary level of education, and these dominated the respondents in the study while those with primary level education constituted 24.6 % of the total respondents. This implies that semi-illiterate people dominate the SMEs sector of Uganda. As per the study of E-commerce, most people using it and who know its importance are educated.

#### 4.2.3 Category of respondents

The researchers were interested in establishing the category of respondents that participated in the study and the results in the table below summarize this.

Table 6. Distribution of respondents by category

<b>Category</b>	<b>Counts</b>	<b>Valid percent</b>
Managers (owners) of SMEs	46	70.8
Customers	19	29.2
<b>Total</b>	<b>65</b>	<b>100.0</b>

From table 6 above it is indicated that 46(70.8%) were managers from SMEs and 19(29.2%) constituted customers. This means that the study respondents were dominated by the managers and owners from SMEs.

### **4.3 Findings according to objectives**

There are mainly five objectives of interest in this study and these were; 1) to examine e-commerce adoption within SMEs in Uganda, 2) To identify the benefits of E-Commerce adoption within SMEs in Uganda. 3) To examine the barriers to E-Commerce adoption within SMEs in Uganda, 4) To identify measures of SMEs expansion in Uganda and v) to establish the relationship between E-Commerce Adoption and SMES expansion. Analysis of findings as per the objective was done using mean and on the same mean value close to 1 represents strongly disagreed, a mean value close to 2 means not sure and mean close to 3 indicates agreement with the statement given. The results are summarized in tables 7 & 8.

#### **4.3.1 E-commerce adoption within SMEs in Uganda**

This study was interested in examining E-commerce adoption within SMEs in Uganda. The interpretations of the results are interpreted using descriptive statistics. A small value of standard deviation means a lower degree of variability of individual response away from the average response while a more significant value of standard deviation indicates a higher degree of variability of individual response

from the mean. The questions and the summary of findings in terms of the Mean and Standard Deviation are presented in the table 7.

Table. 7 E-commerce adoption by SMEs in Uganda

Statements	Mean	Standard Deviation
The business buys stock on the internet in Uganda	2.83	.66
The business does marketing of its goods and services on the internet	3.50	.59
The business makes payment for goods and services supplied on the internet	2.75	.64
The business sends customer invoices using the internet	2.50	.81
Information concerning goods in transit is accessed on the internet	2.64	.51
Suppliers documents are accessed on the internet within SMEs	2.57	.50
Negotiations between the business and customers are done via the internet	1.26	.49
The business products are advertised on the internet	2.54	.42

Table 7 summarizes the response from different respondents regarding statements provided in the questionnaire. While assessing E-commerce adoption within SMEs respondents were asked to respond to the question whether their businesses bought stock on the internet and average (Mean =2.83) indicating that the majority of the respondents agreed with the statement. On whether marketing of their products was done on the internet on the average majority of those SMEs that used E-commerce indicated that it was true as the (Mean =2.50). However, the interview conducted on the same indicated that they advertise on both internet and other

media like papers and radios and televisions as the majority of their customers rarely used the internet.

On whether the business made payment of its suppliers on the internet the majority of respondents agreed (mean=2.75). They further indicated that it was costly to link up with customers abroad without the internet as it involved physical movement of people that involve air tickets and accommodation overseas. The interview further revealed that the adoption of Internet-based systems is driven by the need to become cost-effective. Besides that, it is evident that most operations in SMEs are done online in order to cost cut some of the operations revealed to be done online include making payments to suppliers of goods and services, sending customers invoices for those that use internet, also accessing information regarding goods in transit, exchange of suppliers documentation, conducting of negotiations is effectively done online and internet advertisement is less costly.

The interview findings also revealed that in Uganda adoption of E-commerce operations was still low as the majority of the customers do not have access to the internet on which E-commerce is done. However, they further indicated that of recent there had been some improvement in the use of E-commerce in Uganda as influenced by the globalization. In conclusion to the E-commerce adoption among SMEs, there is still low adoption of E-commerce in the operations of SMEs as compared to other developed economies. However, because of globalization and open economy of Uganda whereby business community in Uganda it has become inevitable for most SMEs to adopt e-commerce. To some, adoption of E-commerce is not done by will but they are compelled to because of the need to survive. The benefits of E-Commerce adoption within SMEs in Uganda.

#### 4.3.2 The benefits of E-commerce adoption within SMEs in Uganda.

Interest on the benefit of E-commerce adoption was the second objective in this study and the results from the field data collection is as presented in the table 8.

Table 8: Benefits of E-Commerce adoption within SMEs in Uganda

Statements	Mean	SD
E-commerce helps SMEs to remove geographical limitations	2.81	.43
E-commerce helps SMEs to gain new customers from all over the world	2.91	.10
E-commerce lowers costs for rent as there is no need for big space	2.61	.074
Increases the capacity of business to handle many customers	2.87	.784
E-Commerce shortens the business lead time	2.68	.962
E-commerce saves on the number of employees /human resource costs	2.28	.110
E-commerce lowers business marketing costs /advertisement	2.09	.658
E-commerce improves customer service	2.72	.211
E-commerce increased the speed of customer order processing	2.61	.088
E-commerce quickens customer negotiations with the business	2.21	.074

Table 8 above presents the summary of the findings, on E-commerce helps SMEs to remove geographical limitations (Mean=2.81, SD=.43). This implies that on an average majority of respondents agreed that E-commerce removes geographical limitation within SMEs in Uganda. On whether E-commerce helps SMEs to gain new customers from all over the world (Mean=2.91, and SD=.10). The response to the

statement that E-commerce lowers costs for rent as there is no need for big space (Mean=2.61 and SD=.074). On whether it increases the capacity of business to handle many customers (Mean=2.87 and SD=.784) whether E-Commerce shortens the business lead time (Mean=2.68 and SD=.962).

On whether E-commerce saves on the number of employees /human resource costs (Mean=2.28, and SD=.110). Response on E-commerce lowers business marketing costs /advertisement (Mean=2.09 and SD=.658) on whether E-commerce improves customer service (Mean=2.72, and SD=.211). E-commerce increased the speed of customer order processing (Mean=2.61 and SD=.088). Whether E-commerce quickens customer negotiations with the business (Mean=2.21, SD=.074). Based on the study findings as revealed above E-commerce provides many benefits to the small and medium enterprises in Uganda.

The interview conducted with top management revealed that E-commerce has enormous benefits it offers to the business irrespective of type and nature. Among the key identified benefit is making the business more efficient in serving its customers a situation that improves customer satisfaction, than it would be the case in transacting business involving physical movements. One top management official Mr Mukasa of Biyinzika farmers Uganda limited indicated that his business cut almost 30% of its operation costs because of going online. This confirms that E-commerce is of great importance to SMEs not only in Uganda but in many places of the world.

#### **4.3.3 The Barriers to E-Commerce adoption within SMEs in Uganda**

The 3rd objective of this study was to identify the barriers of E-commerce adoption within SMEs in Uganda. The results from the field exercise are as reflected in the table 9.

Table 9. Barriers to E-Commerce Adoption by SMEs in Uganda

Statements	Mean	SD
E-commerce requires a huge initial investment in the business (purchase of technology)	2.68	.67
Sometimes the legitimacy and authenticity of E-commerce sites are doubtful	1.63	.67
The E-commerce system is not suitable for perishable commodities	2.48	.68
There is limited use of the internet in Uganda	2.72	.89
There is always some systems interruptions with internet based systems which cause system inefficiencies	1.20	.64
It attracts high costs to a business-like staff training/purchase of technology and software	2.72	.59
The E-commerce systems have high-security risk because of hackers	2.48	.52
The investment in E-commerce has a lower return on investment	2.32	.51

Table 9 shows a summary of the response on the barriers to E-commerce adoption. On whether E-commerce requires a substantial initial investment in the business (purchase of technology) (mean=2.68, and SD=0.67). This means that on the average majority of respondents were agreeing that one of the barriers to huge investment required initially for E-commerce acts as a barrier to E-commerce investment. On whether the legitimacy and authenticity of E-commerce sites are doubtful (Mean=1.63, and SD=.67). This means this is not a barrier to E-commerce adoption in Uganda. The E-commerce system is not suitable for perishable commodities (Mean=2.48 and SD=.68). Another barrier to E-commerce adoption is the generally limited use of the internet in Uganda (Mean=2.72 and SD=.89). On whether there were always some systems interruptions with internet-based systems which cause system inefficiencies (Mean=1.20 and SD=.64). This

means that E-commerce adoption is not limited by system interruptions. On whether high costs to a business-like staff training/purchase of technology and software (Mean=2.72, and SD=.59). On average the majority of respondents agreed that it was a barrier to E-commerce adoption. Majority of respondents agreed that the E-commerce systems have high-security risk because of hackers (Mean=2.48 and SD=.52) and on whether the investment in E-commerce has a lower return on investment (Mean=2.32, and SD=.51).

The interview with the managers in SMEs revealed the following factors as well, one respondent that identified that fact that majority of the targeted customers for most SMEs do not use the internet, therefore, it becomes hard for the SMEs to use E-commerce. This was also identified together with limited connectivity to the internet. They further indicated that with E-commerce the contract that results therefrom is hard to be enforced. Some business owner has an internal belief that marketing on the internet is not effective; that is why they are hesitant to adopt E-commerce. Many respondents indicated that the limited knowledge of employees within SMEs concerning E-commerce models and applications sometimes had constrained adoption of E-commerce.

### **The measures of SMEs expansion in Uganda**

Identifying the measures of SMEs expansion in Uganda was among the objectives of the study and the response on the same was as shown in the table 10

Table 10. Measures of SMEs expansion in Uganda

<b>Statements</b>	<b>Mean</b>	<b>SD</b>
The sales volume has been increasing in our business	2.67	.23
The number of customers served has been increasing over time	2.77	.78
Our market share has been increasing over time	2.11	.81

Table 10 shows the measures used by SMEs to know their business expansion and these include sales volume (Mean=2.67, and SD =.23), which means that an increase in sales volume reflects the business expansion and a decrease of the

same indicates a reduction in business. On whether the number of customers was used as a measure of business expansion (Mean=2.77, and SD=.78). This indicates that a number of the business customer can show business expansion. However, on average many were not sure on whether market share was used as a measure of business expansion.

### **The relationship between E-Commerce adoption and SMEs expansion**

Under this section, the relationship between E-commerce adoption and SMEs expansion is determined using Pearson's Correlation Coefficients. The coefficient of correlation can vary from a positive one (indicating a perfect positive relationship), through zero (indicating the absence of a relationship), to a negative one (indicating a perfect negative relationship). As a rule of thumb, correlation coefficients between .00 and .30 are considered weak, those between .30 and .70 are moderate, and coefficients between .70 and 1.00 are considered high. The results are shown in Table 11.

Table 11. Correlation Coefficients of the Study Variables

Variables	E-commerce adoption in SMEs	SMEs expansion
E-commerce adoption	1	
SMEs expansion	.756***	1

**\*\*\* Correlation is significant at the 0.01 level (2-tailed)**

The 5<sup>th</sup> objective was to examine the relationship between e-commerce adoption and SMEs expansion. The table above it indicates that the correlation coefficient between E-Commerce adoption in SMEs and SMEs expansion in Uganda .756\*\*\* which implies that there is a strong positive relationship between E-commerce adoption and SMEs expansion. Therefore, if Kyaligonza wants to enjoy the benefits of the expansion of its fashion shop, it should adopt the E-commerce.

## 5 CASE COMPANY

### 5.1 Introduction

Kyaligonza Fashion Company derived its name from Daphne Kyaligonza, the founder of Kyaligonza Fashion House. The company blends vibrant **Kitenge** (an African Print design) fabrics and prints with modern silhouettes to create innovative garments and products. Unlike most of the fashion and design clothing lines in Uganda, Kyaligonza company limited prides its existence with a human resource of professional staff that received formal training in fashion designs in various specialities from different University. The proprietor of the company Kyaligonza, has expanded her business by sharing her training and techniques with young Ugandan and Congolese women whom she now employs and works with jointly with. Though she is aware of the fierce competition in this industry, she is confident that her designs will continue to stand out and gather much demand. More information on the company can be found at the following link: <https://www.facebook.com/Kyaligonzafashion/>

### 5.2 The product

As mentioned in the introduction, Kyaligonza mainly deals in the traditional Ugandan dress. These traditional outfits are mostly worn during traditional ceremonies such as introduction parties, giveaways, coronation ceremonies and many others where it is improper to dress up in casual clothes. Some include the Kanzu, which looks similar to a tunic and is mostly composed of a white or cream fabric, then there is the Gomesi/Busuuti, Omushanana, Suuti, which is worn by the women of western Uganda, Grass skirts and the Kikoyi, a multi-coloured piece of cloth that has cultural attachment to several tribes.

Figure 7 below shows samples of Kyaligonza's products



Figure 7. Kyaligonza's products

### **Desire for expansion**

The founder is currently seeking outside investment so that she can start exporting her beautiful creations throughout the world which she believes will throw a positive light on Uganda as a country and promote more business in the Ugandan fashion industry. Most countries in the world have an outfit that distinguishes them from people of other nationalities. For example, a man wearing a quilt will be assumed to be Scottish. Clothing is part of culture because it defines who people are. By selling to a wide market, Kyaligonza believes they will be exporting the Ugandan identity thus doing their part in promoting the country globally but at the same time increasing their bottom line.

### **5.3 Reasons for considering E-commerce**

Kyaligonza is conscious about the power of E-commerce and the contemporary fashion modifications that exist today. It is to this effect that most of the attires made by the company have a touch of traditional Ugandan art which is blended with exotic foreign designs they believe will enable the product to capture a global market's interest. Kyaligonza believes, that E-commerce will create a competitive advantage for the company on a global scale as it enables them to target the Ugandan and Congolese market niche as well as the diaspora.

## **6 CONCLUSIONS**

### **6.1 Recommendations**

Going by the findings from the study, there is no doubt that E-commerce is essential to the performance of SMEs and a country's economic growth. There are different barriers that can explain the limited adoption of E-commerce within SMEs in Uganda. Therefore, the framework to improve adoption is called to center much on the removal of those constraints as well as working towards developing innovations that can promote E-commerce in Uganda.

#### **6.1.1 In general**

Basing on the above conclusions resulting from the analysis of data collected from the interviews and the questionnaire, the recommendation is to initiate and speed up the process of E-commerce adoption in Kyaligonza and any other SMEs as it has clearly been seen that E-commerce can answer their quest for expansion, make them more efficient in terms of reducing their operation costs and smoothing the supply chain. However, for this to be a reality there should be efforts to address the barriers to SMEs adoption of E-commerce in Uganda either by the government, NGOs and any other concerned parties. The government should increase its investment in ICT related infrastructure or reduce taxes on information related equipment. Once this is done, it will reduce the high costs of E-commerce installation to SMEs thus improving e-commerce adoption.

For general benefit, Enterprises Uganda should sensitize small and medium enterprises owner and management about the many benefits they can realize from embracing E-commerce technology. This would help in improving the adoption of technology. The situation that can improve business expansion which would improve on employment and increase tax revenue to Uganda. Small and medium enterprises owners should form an umbrella organization that would improve their

bargaining power. This would enable them to have a combined effort to acquire a joint E-commerce server as minimizes costs of installation.

The government should eliminate foreign infrastructure barriers through regional integration. This would help in creating the E-commerce infrastructure in the country a situation that would help in improving E-commerce adoption among the SMEs in the country

### **6.1.2 Specific to Kyaligonza**

Basing on the finding of the survey and literature available on E-commerce, the recommendation is to initiate and speed up the process of E-commerce adoption in Kyaligonza. Below is the development that Kyaligonza can follow as a guide in Implementing E-commerce

#### **Development of E-commerce in case Company.**

##### **Strategic Planning**

Introduction of a project or a department to a business requires a strategic plan. Kyaligonza needs to sit and use the findings of this research to create a plan on how they are going to implement the E-commerce adoption into their business. This will look at the approach they are going to take, the people who are going to be responsible, the budget required, the timeline and all other resources that will be required to achieve the success of this endeavour.

##### **Partners Selection**

Kyaligonza will need to identify the different E-commerce service providers to partner with in the implementing of the different steps of developing E-commerce in a business. These will include,

1. The Hosting Company and Software development companies like Yo! Uganda, Technobrain Uganda, Laboremus Uganda, Jentroy Uganda, Infinity Computers, Omnitech limited, Hotlite, Datacare and ICT Consults. Most of these will also provide web hosting as well as Machant software, website development software and all the software required for starting an online shop. Malcolm (2018)
2. The internet service providers (ISP) for business these being Smile communications, Warid, and Uganda Telecom, Roke telecom, Date net to mention but a few (Okwii, 2014).
3. The IT service providers like NCR that can provide the hardware and maintenance
4. Uganda has several of the above service providers so Kyaligonza will have several to choose from. However custom designed solutions might prove expensive as we have seen in the literature review, so Kyaligonza can also decide to partner with foreign companies with open source software to get these services, for example, Shopify, Volusion, 3dcart, BigCommerce and so forth.

### **Means of Payment**

Running an E-commerce system requires Kyaligonza to decide on how they will accept payment online. Accepting payment online requires Kyaligonza to decide on the merchant account where money will be deposited when the business transactions are concluded. This is, however, a temporary account where the money is held pending crossing to the Kyaligonza bank account. Another requirement for accepting payment online is selecting an efficient payment gateway. This helps Kyaligonza to process debit cards, credit cards and many other payment methods available online. This is dependent on the type of customers; the local customers may be given the option of paying physically those without E-commerce resources like the internet.

Examples of available online means of payment in Uganda are;

- Visa cards,
- Mobile Money pay,
- Payway Machines,
- PayPal

## **Website and Online Shop Design**

Designing an E-commerce website involves many disciplines in the design and maintenance of websites. The different areas of web design cover web graphic design, the interface design, and the authoring part, including standardized code and proprietary software, user experience design and search engine optimization skills. Some of the key points that need to be born in the mind of Kyaligonza online shop manager are to resolve the user's challenge in the multichannel landscape. This, however, requires an understanding of how customers interface with Kyaligonza online shop.

The web developer should consider or discuss some of seamless and cohesive user's experiences as users interact with organizations over time and across channels. This requires discussion of common barriers for success and how to position your organization to overcome them.

The features on the website should meet the clients at their respective locations and allow them to transact easily. Some of the features on the website include the

- Shopping Cart.
- Payment Gateway Integrations
- Order management
- Security
- Scalable Infrastructure
- Mobile compatibility
- Reports
- Communications

## **Training of users**

Skills needed to be successful in E-commerce include marketing, accounting, finance, strategy, pricing, and analytics. Other skills that can help your E-commerce business be successful include design and programming skills. A well-designed website or mobile app can help increase the chances of a user purchasing from the business. After designing the e-shop, Kyaligonza will have to organize training for its employees to familiarize them with the running of the E-shop and help them develop the skills mentioned above.

## **Logistics**

In a virtual shop, there is a need to improvise an appropriate means of delivering customers goods in time. Under here the company should consider courier companies that have established a record of quick and safe delivery of goods. The company should consider those specialized firms delivering customers goods for E-commerce. Adopting those specialized companies has the advantage of even using their services to offer cash on delivery, which is a preferred payment mode all over the world. Some of the common delivery companies online include Delhivery.com and Chhotu.in. DTDC Courier & Cargo has also launched DotZot.in, a service exclusively for e-retail.

There are many online items that go into making a successful online shop. Kyaligonza needs to consider these critically in order to build a successful online shop. This requires the shop to contact online experts for advisory services. Even if shopping in Kyaligonza is to happen online on the web site developed, there are many physical elements that need to be done to enable all online shopping to happen. Whether online or not a shop needs to plan for logistics in order to facilitate the smooth transaction to happen. There are mainly three types of logistics needed that is stock logistics, postage and maintenance logistics.

Stock logistics, before selling the product the physical goods need to be stored well until a transaction for it happens. Even after selling the commodity need to move from the seller to the buyer. Depending on the type of product the storage needs to

be planned well but for the case of Kyaligonza where the products sold are non-perishable. Therefore, even with E-commerce, a physical store for commodities need to be in place.

Postage Logistics; in the selling price there must be an incorporation of both postage and packaging fees in the commodity pricing structure. Also, the cost may cover administration costs. Under this type of logistics, there should be a consideration of time to incorporate all the above in the cost structure. However, some companies practice outsourcing to some distribution centres who price such services. This can work out as a logistically more effective solution that saves on both time and expenditure.

Maintenance Logistics; an online shop requires maintenance which ensures that sales continue to flourish in the current time and into the future. For example, Kyaligonza should have to produce or order more stock to replenish levels as commodities are sold. The E-Commerce website also (online shop) needs to be managed and maintained. This is done by adding new items on the web, and answering online customers quells.

### **Review of the E-commerce performance and Customer response**

After analyzing how the performance of a business can be influenced by the adoption of E-commerce in this study and finding that not all businesses that adopt E-commerce benefit or see an increase in performance, the need for regular reviews becomes more evident. For Kyaligonza to remain aware of the progress of E-commerce and keep track of the trends, it will have to conduct regular reviews of the functionality of the website, performance in terms of sales, the efficiency level of the internal operations, as well as regular market surveys to study customer response to the online shop. They will also need to engage their customers regularly and study their needs carefully, which will aid them in increasing customer satisfaction. This can help in increasing or motivating customers to buy more of the shop items as well as maintaining a well-functioning system internally.

## **System Management**

In Kyaligonza online website it is recommended that after designing its online shop it should be well maintained and updated regularly to keep it in good performing form. In modern times, if a website is noticed by users as being out of date it will mean that even the company running it is outdated as an out of date websites tend to rank low on search engine results. External factors can also affect a website and search engine rankings. In instances of lack of full website management, the company also misses out on all the website visitor records which help an organization to notice where changes need to be done. For example, a system may require uploading new blog posts, updating website software used frequently, the web site requires editing information on it in case of changes like menus, operation hours and information concerning new employees if any change was made. Other items of system management include posting new messages on the website.

## **Review of the E-commerce performance and customer response**

After analyzing how the performance of a business can be influenced by the adoption of E-commerce in this study and finding that not all businesses that adopt E-commerce benefit or see an increase in performance, the need for regular reviews becomes more evident. For Kyaligonza to remain aware of the progress of E-commerce and keep track of the trends, it will have to conduct regular reviews of the functionality of the website, performance in terms of sales, the efficiency level of the internal operations, as well as regular market surveys to study customer response to the online shop. They will also need to engage their customers regularly and study their needs carefully, which will aid them in increasing customer satisfaction. This can help in increasing or motivating customers to buy more of the shop items as well as maintaining a well-functioning system internally.

## **6.2 Areas for further study**

Based on the observed low rate in E-commerce adoption during this research process, there is an urgent need for further research that can ascertain variations in E-commerce adoption based on industry differences, business size differences and complexity of products in SMEs. This way, the SMEs can have more detailed and specific information on which to base their decisions.

## BIBLIOGRAPHY

- Adekunle et al. 2008. Impacts of globalization on e-commerce adoption and firm performance: A cross country investigation, Center for research on information technology and organization, University of California, Irvine.
- Aden.A. 2018 Business to business: breaking down the business to business model,<https://www.disruptiveadvertising.com/business/business-to-business/>
- Admini 2018. A look at eCommerce and business culture in Uganda. *The Insider*. [online] Available at: <https://theinsider.ug/index.php/2018/10/05/a-look-at-ecommerce-and-business-culture-in-uganda/>.
- Ahmad.M and AzahJahari.N 2005 what drives electronic commerce across cultures? Across-cultural empirical investigation of the theory of planned behavior? *Journal of electronic commerce research*, vol. 3, No. 4, pp. 240-253.
- Amin, M.Efuetngu 2005. *Social Science research: conception, methodology and analysis*. Kampala: Makerere University Press.
- Ankunda O. 2010. Uganda: SME sector forms the engine for growth. [Ref. 15 May 2019]. <http://alafrica.com/stories/2010055130365.html>
- Apphawks 2019. Ecommerce Testing: How to test an E-commerce Website and Application. [Ref. 15 May 2019] <https://apphawks.com/blog/ecommerce-testing-how-test-ecommerce>
- Baldwin et al. 2001. Does this site deliver? B2B e-commerce services for developing countries. [Ref. 15 May 2019] [www.gapresearch.org/production/publications.html](http://www.gapresearch.org/production/publications.html)
- Beard R. 2014. Customer Satisfaction. [Ref. 15 May 2019] <http://blog.clientheartbeat.com/why-customersatisfaction-is-important>
- Botha, N. and Atkins, K. 2005. An assessment of five different theoretical frameworks to study the uptake of innovations. Paper presented to the 2005 New Zealand Agricultural and Resource Economics Society Conference, Nelson, New Zealand, August 26-27, 2005.
- Business-sweden.se. 2016. [online] [Ref. 15 May 2019] <https://www.business-sweden.se/contentassets/98f6c436350848cdac6b58d574f40e79/ict-and-digitalisation-east-africa.pdf>.

- Businge. J. 2017. SMEs are Uganda's engine for growth. The independent. [online] Available at: <https://www.independent.co.ug/profile-smes-ugandas-engine-growth/>
- Catalin Zorzini 2017. How to choose the right platform for your online shop. ecommerce platforms available here [Ref. 15 May 2019] <https://ecommerce-platforms.com/articles/choose-right-platform-online-shop>
- Codeless Platforms 2017. E-commerce process flow: Mapping your e-commerce process. [Ref. 15 May 2019] <https://www.codelessplatforms.com/blog/ecommerce-process-flow/>
- Codeless platforms Business Process Automation platforms. Undated. [Ref. 15 May 2019] <https://www.codelessplatforms.com/blog/ecommerce-process-flow/>.
- Dave Chaffey 2007. "E-business and E-commerce Management. Third edition Pearson Education Inc.P.9.
- Demates. D. 2019. 10 Best E-commerce platforms compared & rated for 2019. E-commerce CEO available here <https://www.ecommercenceo.com/ecommerce-platforms/>
- Dutta.S. & Segev, A, 2001 Understand B2B and the Web: the acceleration of coordination and motivation. Journal of Industrial Marketing Management, Vol. 32, pp. 553– 561.
- Essays, UK. 2018. Limitations of The Resource-Based View Management Essay. Retrieved from <https://www.ukessays.com/essays/management/limitations-of-the-resource-based-view-management-essay.php?vref=1>
- Export.gov. 2019. Uganda - eCommerce | export.gov. [online] [Ref. 15 May 2019] <https://www.export.gov/article?id=Uganda-eCommerce>
- Fatimah, 1999. Web-based B2B portals. Journal of Industrial Marketing Management, Vol. 32, pp.15– 23.
- Gotter. A. 2018. 5 factors to consider when choosing your E-commerce Hosting plan. Disruptive Advertising. [Ref. 15 May 2019] <https://www.disruptiveadvertising.com/business/ecommerce-hosting/>
- Hau-L.Lee and Seungjin Whang 2001. E-Business and supply chain integration, Stanford University page 2 viewed at [Ref. 15 May 2019] [https://www.uazuay.edu.ec/bibliotecas/e-business/E-Business and Supply Chain Integration.pdf](https://www.uazuay.edu.ec/bibliotecas/e-business/E-Business%20and%20Supply%20Chain%20Integration.pdf)

- Heizer. Y and Render. T 2001 'Social informatics: New perspective on social research about information and communication technologies', Prometheus, Vol.18, No. 3.
- Hoffman. U and Novak. O 1996. Business to business e-commerce and access to global markets: exclusive or inclusive outcomes? [Ref. 15 May 2019] [www.gapresearch.org/production/publications](http://www.gapresearch.org/production/publications).
- IFC 2002. E-commerce and e-business [Ref. 15 May 2019] <http://www.apdip.net/publications> (Viewed 09-6-2010)
- Imagine brands Kenya available at [https://www.google.com/search?q=Imagine+brands+kenya&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiHpsP-45riAhUvs4sKHaRSBO8Q\\_AUIDigB&biw=1920&bih=969#imgsrc=YDAuZfVSWt5A2M:](https://www.google.com/search?q=Imagine+brands+kenya&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiHpsP-45riAhUvs4sKHaRSBO8Q_AUIDigB&biw=1920&bih=969#imgsrc=YDAuZfVSWt5A2M:)
- Jessica Young 2019. Global E-commerce sales. [Ref. 15 May 2019] <https://www.digitalcommerce360.com/article/global-ecommerce-sales/>
- Kalakota .R. and Whinston .W.1996. Research Design: Qualitative, Quantitative and Mixed Methods Approach (2nd Ed.), SAGE, USA
- Kamoga. J. 2017. Uganda losses Shs.122bn annually to cyber-attacks. The observer. [online] [Ref. 15 May 2019] <https://observer.Ug/news/headlines>
- Kasoma. A. 2018. Jumia boss speaks out on social media tax. [online] [Ref. 15 May 2019] <https://businessfocus.co.ug/jumia-boss-speak-out-on-social-media-tax/>.
- Katua. T. Ngui. 2014. The Role of SMEs in Employment Creation and Economic Growth in Selected Countries. International Journal of Education and Research, [online] 2(12), p.462. [Ref. 15 May 2019] <https://www.ijern.com/journal/2014/December-2014/39.pdf>.
- Khan A. G. 2016. Electronic Commerce: A Study on Benefits and Challenges in an Emerging Economy. Global Journal of Management and Business Research: B Economics and Commerce, [online] 16(1). [Ref. 15 May 2019] [https://globaljournals.org/GJMbr\\_Volume16/3-Electronic-Commerce-A-Study.pdf](https://globaljournals.org/GJMbr_Volume16/3-Electronic-Commerce-A-Study.pdf)
- Kumar. V. and Raheja. G. 2012. International journal of computers & technology. Volume 3 no. 3, 2012, 447 | business to business (b2b) and business to consumer management. [Ref. 15 May 2019] <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.299.8382&rep=rep1&type=pdf>

- Laudon.C. K. and Trevor.C.G 2014. E-commerce 2014 business, technology. Society. 10th ed. Edinburgh Gate: Pearson Education Limited.
- Malcom. B 2018. List of top tech companies in Uganda. Jentroy Uganda blog. [Ref. 15 May 2019] <http://jentroy.com/blog/top-software-companies-kampala-2018/>
- Mansor Norudin and Abidin Ahmad Faisal Amir 2010. "The Application of E-Commerce Among Malaysian Small Medium Enterprises". European Journal of Scientific Research ISSN 1450-216X Vol.41 No.4 (2010), pp.591
- Mark Saunders, Philip Lewis, Adrian Thornhill. 2009. Research Methods for Business Students. 5th Edition Pearson Education Limited.
- Mugenda, O.M. and Mugenda, A.G. 1999 Research Methods: Quantitative and Qualitative Approaches. Acts Press, Nairobi.
- Mugenda, O.M. and Mugenda, A.G. (2003) Research Methods, Quantitative and Qualitative Approaches. ACT, Nairobi.support
- Mwangi .P. W 2011. access to finance and performance of small and medium enterprises a case study of selected smes in wandegeya, jiadefu supermarket, prime supermarket. [Ref. 15 May 2019] [http://www.cees.mak.ac.ug/sites/default/files/publications/mwangi\\_wangu.pdf](http://www.cees.mak.ac.ug/sites/default/files/publications/mwangi_wangu.pdf)
- Nanehkaran, Y. A. 2013. An Introduction to Electronic Commerce. International journal of scientific & technology research, 2 p.190. Retrieved from [www.ijstr.org](http://www.ijstr.org)
- OECD 2017. Enhancing the contributions of SMEs in a global and digitalised economy 2017, Meeting of OECD Council at Ministerial level Paris, 7-8 June 2017, Page 6 [Ref. 15 May 2019] <https://www.oecd.org/mcm/documents/C-MIN-2017-8-EN.pdf>
- Okwii. D 2014. Worthwhile Ugandan Internet service Providers (ISP) for small businesses. Degnited [Ref. 15 May 2019] <https://www.dignited.com/11276/5-worthwhile-ugandan-internet-service-providers-isp-small-business-owners/>
- Poole, M. S., & DeSanctis G. 2004. Structuration Theory in Information Systems Research: Methods and Controversies. In M. E. Whitman & A. Wozzycynski (Eds.), Handbook of Information Systems Research. Hershey, PA: Idea Group Publishing, pp. 206-249
- Rania Nemat 2011. Taking a look at different types of e-commerce. World Applied Programming. WAP journal. Vol (1), No (2), June 2011, 100–104. [www.waprogramming.com](http://www.waprogramming.com)

- Rogers, E. 2003. Diffusion of innovations. New York: Free Press.
- Rohaizat. R and Abu Bakar AHamid 2005. Technology Leap forging in Thailand: Issues for the support of e-commerce infrastructure, The Electronic Journal on Information Systems in Developing Countries, Vol. 16, No. 3, pp.1-20.
- Rohaizat. T and Hamid. T. 2004. Information technology parks of the Asia Pacific: lessons for the Regional Digital Divide M.E. Sharpe, New York.
- Samadi. B & Noguev. A & Yazdanifard.A. & Dr. Rashad & Mohseni. S & Menon.M. 2011. The Evolution and Development of E-Commerce Market and E-Cash. 10.1115/1.859858.
- Santos, J. and Brito, L. 2012. Toward a subjective measurement model for firm performance. BAR - Brazilian Administration Review, pp.95-117.
- Sewanyana G and Butsler H 2004. Adoption and usage of ICT in developing countries: Case of Ugandan firms [Ref. 15 May 2019] <http://cit.mak.ac.ug/downloads/annual> (viewed 30-06-2010)
- Shridar, J. 2018. What is data analysis and why is it important? [online] Make use of. [Ref. 15 May 2019] <https://www.makeuseof.com/tag/what-is-data-analysis/>
- Suttle, R. 2019. Different Types of Business Strategies. [online] Smallbusiness.chron.com. Available at: [Ref. 16 May 2019] <https://smallbusiness.chron.com/different-types-business-strategies-4634.html>
- The Asia Foundation 2001. the role of culture in interface acceptance, in Howard, J. Hammond and G. Lindegaard (ed). Human Computer Interaction, Chapman and Hall, London.
- The Public Procurement and Disposal of Public Assets PPDA 2010. (Amendment) Bill 2010. Printed by UPPC, Entebbe.
- Vandermerwe U 2000. the adoption of information technology: a foundation of E-commerce development in Thai culture in TeerasakThanasakit (ed). E-Commerce and Culture Values, Group Publishing, December 2002, pp.17-50
- Varon. L. 2018. Now Tech: Commerce Service Providers, Q2 2018. Forrester. Abstract.
- Vrana T 2006. Strengthening Small and Medium Enterprises (SMEs) [Ref. 15 May 2019] <http://www.undp.or.ug/projects/34>(Viewed 15-6-2009)
- Wallace. T. 2019. How to create, setup, and launch a profitable online store. BigCommerce [Ref. 15 May 2019] <https://www.bigcommerce.com/blog/how-to->

[create-online-store/#learn-how-to-create-your-own-online-store](https://www.bigcommerce.com/blog/how-to-create-online-store/#learn-how-to-create-your-own-online-store)  
<https://www.bigcommerce.com/blog/how-to-create-online-store/#learn-how-to-create-your-own-online-store>

Wanyama. T 2007. The role of Academia in fostering Private Sector Competiveness in ICT Research. International Journal of Computing and ICT Research, ISSN 1818-1139, Vol.1, No.1, p. 58.

Wernerfelt, B. 1984. A Resource-Based View of the Firm. Strategic Management Journal 5(2), 171- 180

Wood. A. M 2019. What is web hosting exactly? Everything you wanted to know (But were afraid to ask) Whoishostingthis.com. [Ref. 15 May 2019]  
<https://www.whoishostingthis.com/resources/web-hosting/>

Zillur. Rand Bhattachryya S.K. 2002. "E-tailing of Services: An Indian Scenario", Singapore Management Review, Vol. 24, No.1, pp 67-79.

Zorayda. W 2003. an Information Contribution. E-commerce in E-Uganda.  
<http://www.i-network.or.ug/index2.php> (Viewed 09-6-2010).

Zulkifli. R 2001. Nigeria SMEs Participation Electronic Economy: Problems and the Way Forward vol. 12, no. 3.

## **APPENDICES**

APPENDIX 1. Questionnaire form

APPENDIX 2. Interview questions

APPENDIX 3. E-Commerce implementation road map

## APPENDIX 1. Questionnaire form

Dear respondents,

This questionnaire is intended to facilitate the study on how E-commerce affects SMEs in Uganda. Therefore, as a target respondent, your responses are significant and will be treated with the utmost confidentiality.

Thank you very much for your valuable time.

**SECTION A: BACKGROUND INFORMATION**

**BIODATA** (Please do provide the following information. Tick the appropriate category)

01	Gender	Male .....1 Female.....2	Enter the correct code <input type="text"/>
02	Level of education	PHD.....1 Master's Degree.....2 Bachelor.....3 Diploma .....4 Certificate.....5 Secondary.....6 Primary .....7	Enter the correct code <input type="text"/>
03	Years spent working in the SME	0-4 years .....1 5-9 years .....2 0-14years.....3 15 and above.....4	Enter the correct code <input type="text"/>
04	Age of respondent		-----
05	Category of respondents	Manager (owner).....1 Customers .....2	Enter the correct code <input type="text"/>

Use (x) or Tick (√) in the questionnaire boxes to indicate your preference/choice.

1	2	3
Disagree (D)	Not Sure (NS)	Agree (A)

No		D	N S	A
	<b>E-commerce adoption within SMEs in Uganda</b>			
1	The business buys stock on the internet in Uganda	1	2	3
2	The business does marketing of its goods and services on the internet	1	2	3
3	The business makes payment for goods and services supplied on the internet	1	2	3
4	The business sends customer invoices using the internet	1	2	3
5	Information concerning goods in transit accessed on the internet	1	2	3
6	Suppliers access documents on the internet within SMEs	1	2	3
7	Negotiations between the business done via the internet	1	2	3
8	The business advertises products on the internet	1	2	3
	<b>Benefits of e-commerce adoption</b>			
9	E-commerce helps SMEs to remove geographical limitations	1	2	3
10	E-commerce helps SMEs to gain new customers from all over the world	1	2	3
11	E-commerce lowers costs for rent as there is no need for big space	1	2	3
12	Increases the capacity of business to handle many customers	1	2	3
13	E-Commerce shortens the business lead time	1	2	3
14	E-commerce saves on the number of employees /human resource costs	1	2	3
15	E-commerce lowers business marketing costs /advertisement	1	2	3
16	E-commerce improves customer service	1	2	3

17	E-commerce increased the speed of customer order processing	1	2	3
18	E-commerce quickens customer negotiations with the business	1	2	3
	<b>Barriers to E-Commerce Adoption Within SMEs In Uganda</b>			
19	E-commerce requires a substantial initial investment in the business (purchase of technology)	1	2	3
20	Sometimes the legitimacy and authenticity of e-commerce sites are doubtful	1	2	3
21	The E-commerce system is not suitable for perishable commodities	1	2	3
22	There is limited use of the internet in Uganda	1	2	3
23	There are always some systems interruptions with internet-based systems which cause system inefficiencies	1	2	3
24	It attracts high costs to a business-like staff training/purchase of technology and software	1	2	3
25	The E-commerce systems have high-security risk because of hackers	1	2	3
26	The investment in E-commerce has a lower return on investment	1	2	3
	<b>Small and Medium Enterprises Expansion</b>			
27	The sales volume has been increasing in our business	1	2	3
28	The number of customers served has been increasing over time	1	2	3
29	Our market share has been increasing over time	1	2	3

## APPENDIX 2. Interview questions

5. How does business buy stock for E-commerce in Uganda?
6. How does the business do the marketing of its goods and services on the internet?
7. Does the business make payment for goods and services supplied online?
8. How does the business manage customer invoices in E-commerce?
9. Is Information concerning goods in transit accessed on the internet?
10. Are suppliers' documents accessed via the internet within SMEs?
11. Are negotiations between on behalf of the business done via the internet?
12. Are business products advertised on the internet or traditional media?

### **Benefits of e-commerce adoption**

13. Did E-commerce help the business to remove geographical limitations?
14. Did E-commerce help the business to gain new customers from all over the world?
15. Did E-commerce lower the business' costs for rent?
16. Has there been an Increase in the capacity of the business to handle many customers?
17. Has E-Commerce shortened the business lead time?
18. Did E-commerce save on human resource costs in the business?
19. Has E-commerce lowered the business's marketing /advertisement costs?
20. Has E-commerce improved customer service in the business?
21. Did E-commerce increase the speed of customer order processing in the business?
22. Has E-commerce quickened customer negotiations for the business?

**Barriers to E-Commerce Adoption Within SMEs In Uganda**

23. Does E-commerce require a substantial initial investment in the business (purchase of technology)?
24. Are the legitimacy and authenticity of E-commerce sites doubtable?
25. Is E-commerce system being suitable for perishable commodities?
26. How is the use of the internet in Uganda?
27. Does the business get systems interruptions with internet-based systems?
28. How are the costs of the train staff and purchase technology and software?
29. Do E-commerce systems have a high-security risk because of hackers?
30. How is the return on investment in E-commerce?

**Small and Medium Enterprises Expansion**

31. Have the business's sales volume increased since the implementation of E-commerce?
32. Is there been an increase in the number of customers served since the implementation of E-commerce?
33. Has there been a market share increase since the implementation of E-commerce?

APPENDIX 3. E-Commerce implementation roadmap

