An Analysis of Factors Affecting the Adoption of Business-to-Consumer E-Commerce by SMEs in Developing Countries:

Case Study Zimbabwe

A Dissertation Presented to

the Department of Information Systems

by

Precious R. Mashanda

MSHPRE002

February 2012

In partial fulfilment of the requirements for the Masters degree in Information Systems

To my beloved son Chiko and husband.

Acknowledgements

My great appreciation goes to everyone who supported me during the completion of this research. In particular, I would like to thank the following individuals:

My supervisor, Dr. Eric Cloete, for his unwavering support and his patience throughout the study and writing process.

My mother, father and sisters, for constantly asking when I would graduate. This was a great motivation indeed.

The organizations and their employees who contributed during the collection of data.

My colleagues at PathCare (IT) and my supervisor Joan Grobbler for being patient with me during the research study.

Last but not least, I would like to thank my husband for his financial support and for being both a mother and a father to our baby Chiko, and Chiko for tolerating my absence.

Finally, thanks to my hardworking young sister Chiedza for being a mother to my baby while I do my research.

Confidentiality statement

The contents of this dissertation are only open to examiners, lecturers and students of the University of Cape Town.

Declaration

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

2. I have used the APA (American Psychological Association) for citation and referencing. Each contribution to- and quotation in this thesis from the work(s) of other people has been attributed, and has been cited and referenced.

3. This dissertation is my own work.

4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

Signature:……

Precious R Mashanda (MSHPRE002)

Abstract

Most researchers indicate that electronic-commerce (e-commerce) offers viable solutions for businesses trying to meet the challenges of a changing environment. However, the few available studies concerned with Small and Medium Enterprises (SMEs) in developing countries show evidence of delays, and failure to adopt e-commerce solutions in those countries. In the past, little research has been done to identify the reasons for this. This study seeks to explore the factors that influence a decision to adopt Business-to-Consumer (B2C) e-commerce by SMEs in developing countries, using Zimbabwe as a case study. The 'Tailored Technology-Organization-Environment' model proposed by Tornatzky and Fleischer (1990) was proposed for this study. The exploratory qualitative research uses a single case study approach and takes an interpretive stance. Data was collected from eight SMEs through semi-structured interviews and document analysis. The general inductive approach to qualitative data analysis by Thomas (2003) is used as the main technique to analyse data.

Although there is evidence of wide growth in Internet use among SMEs in the country, findings revealed that most SMEs that have adopted B2C e-commerce in Zimbabwe are still in the initial stages of adoption. Several barriers to the adoption of the technology were identified. The barriers were divided into technological, environmental and organizational as suggested by Tornatzky and Fleischer (1990). Findings indicate that environmental factors make a huge impact on the adoption of B2C e-commerce in the country when compared to technological and organizational factors. The most dominant issues were unfavourable conditions due to the current economic and political status of the country, unreliable network infrastructure and the unreliability of electrical power in the country. Although they cannot fully utilise B2C e-commerce services, SMEs in the country showed a great appreciation of the potential benefits offered by this technology. Research findings indicate that organizations using B2C e-commerce enjoy benefits like cost reduction, security and convenience. External competition and the need to keep up to date with current technologies are the main motivational factors for adopters.

Zimbabwe has been going through a rough patch for the past years, and the situation had received less attention from researchers. Therefore, this study seeks to cover this gap. The researchers argues that, without a clear understanding of the different factors affecting the success of e-commerce the implementation of e-commerce will remain an issue. This study adds to the existing literature on the adoption of e-commerce among SMEs in developing countries by illuminating those factors influencing the adoption and implementation of B2C e-commerce by SMEs in Zimbabwe. This study is intended to be useful to SMEs and supporting organizations in their efforts to augment the adoption of B2C e-commerce technologies, especially those operating in countries with a unique situation like Zimbabwe.

List of acronyms

3G	Third Generation
AIPPA	Access to Information and Protection of Privacy Act
B2B	Business-to-Business
B2C	Business-to-Consumer
B2G	Business-to-Government
C2C	Consumer-to-Consumer
EASSy	East African Submarine Cable System
E-commerce	Electronic commerce
E-business	Electronic business
GDP	Gross Domestic Product
GNU	Government of National Unity
ICT	Information and Communication Technology
IDT	Innovation Diffusion Theory
IMF	International Monetary Fund
IP	Internet Protocol
IS	Information Systems
ITDG	Intermediate Technology Development Group
MICT	Ministry of Information and Communication Technology
MSME	Ministry of Small and Medium Enterprises
NEPAD	New Partnership for Africa's Development
POTRAZ	Postal and Telecommunications Regulatory Authorities of Zimbabwe
RBZ	Reserve Bank of Zimbabwe
ROI	Return On investment
TAM	Technology Acceptance Model
TOE	Technology-Organization-Environment
SEDCO	Small Enterprises Development Corporation
SME	Small and Medium Enterprise
SMS	Short Messaging Service
ZESA	Zimbabwe Electricity Supply Authority
ZWD	Zimbabwean Dollar

Table of contents

List of figures

List of tables

Chapter 1: Introduction

When e-commerce was first introduced, Business-to-Consumer (B2C) companies were the original pioneers. The dot-com boom of the late 1990s saw Internet corporations such as Yahoo, Amazon and eBay go rapidly from obscurity to the e-commerce spotlight (Zwass, 2008). "Despite the losses of so many businesses when the dot-com bubble burst, no serious business analyst disagrees that e-commerce is steadily transforming how business is done, hence changing the business environment globally" (Payne, 2001, p. 2). Business-to-consumer commonly referred as B2C e-commerce is defined as "business operations where telecommunications networks are deployed for communication and product or service delivery between businesses and individual customers" (Tangpong, Islam & Lertpittayapoom, 2009, p. 3). B2C e-commerce mainly focuses on business transactions between businesses and consumers. Consumers in this modern world value convenience and the quality of goods and services at a lower cost (Duncombe & Heeks, 2001).

1.1 Problem statement

E-commerce presents a lot of opportunities and benefits to firms in developing countries (Richard, Hinson, Heeks, Molla & Mbarika, 2010, p. 2). Despite the potential benefits and the wide growth of e-commerce (MacGregor & Kartiwi 2010; MacGregor & Vrazalic, 2005; Riquelme, 2002) indications are that only large organizations have reaped the benefits, with SMEs adoption remaining at a relatively low level. This is particularly the case in many developing countries (Kapurubandara & Lawson, 2006). Several studies note that, SMEs have been credited with massive contribution to the growth of developed economies in the world (Jasra, Khan, Hunjra, Rehman & Azam, 2011; MacGregor & Vrazalic, 2005; Ojukwu, 2006). In the same vein, "the Information and Communication Technologies (ICT) and particularly the Internet have played their own part in those economies" (Ojukwu, 2006, p. 47). SMEs are often the cornerstones on which the economic growth and stability of a country rests (Kabanda & Brown, 2010; Jasra et al., 2011). In developing countries, the SME sector is viewed as, "a major source of income, a breeding ground for entrepreneurs and a provider of employment" (UNIDO Report, 2003, as cited in Jasra et al., 2011, p. 275). There

is, therefore, a need to support the growth of this sector so that it contributes more meaningfully to national economic development.

Technology and innovation is often described as the catalyst for change. Internet, e-commerce and e-business have grown dynamically and many developing nations are in danger of being left behind in this new and growing, worldwide market (Economic Commission for Africa [ECA], 2000). Governments in developing nations are eagerly looking toward a digital future but their view is obstructed by the challenges faced in modernizing certain vast enterprises (Pan, Zulfiqar, Lee & Huang, 2001, p. 1010). Lawrence and Tar (2010) indicate that "the obstacles to reaping the benefits brought about by e-commerce are often underestimated" (p. 24). Internet access is still very costly in most developing countries. Despite the reduction on personal computer (PC) prices during recent years, they have still remained beyond the reach of most individual users and enterprises (Odedra-Straub, 2003). Most developing countries are characterised with a shortage of skilled personnel, poor transport facilities, and non-existent of secure payment facilities (Odedra-Straub, 2003).

1.2 Research purpose

Zimbabwe has faced challenges in attempting to penetrate the ICT world since 2000. It is not clear whether the resulting failures are related to government policy, limited resources, ICT or corporate management (Zunguze, 2009). This study therefore seeks to clarify these challenges. In their study to determine factors affecting consumers' willingness to take part in e-commerce activities, Azam and Shah (2007) identified concerns about privacy, security and cost as a major factor affecting potential online customers. This study attempts to explore factors influencing adoption and implementation of B2C e-commerce by SMEs in Zimbabwe.

1.3 Objectives and research questions

The aim of this study is to explore and describe factors influencing the adoption of B2C e-commerce by SMEs in Zimbabwe. The study has enabled the researcher to identify various

reasons for the delays and failures in the adoption of B2C e-commerce by SMEs in Zimbabwe as well as indentify e-commerce adoption levels for SMEs in the country. The objective of this study is divided into four sub-objectives exploring and describing (1) Factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe, (2) The impact of government policies, economic and political conditions on the growth of B2C e-commerce among SMEs in Zimbabwe, (3) The current e-commerce adoption level for SMEs in Zimbabwe, (4) SMEs' perception of the adoption and implementation of B2C e-commerce. The objective has been achieved by investigating the following research question.

> *What are the factors affecting the adoption and implementation of B2C e-commerce by SMEs in Zimbabwe.*

To facilitate a detailed exploration of the overall research question, the question was broken down into manageable questions as follows:

- What are the key factors affecting B2C e-commerce adoption in SMEs?
- How has government policies, economic and political conditions in the country affected the growth of B2C e-commerce in SMEs?
- What is the e-commerce adoption level for SMEs in Zimbabwe?
- What perception do SMEs in Zimbabwe have towards B2C e-commerce?
- What factors drive SMEs in Zimbabwe into e-commerce adoption?

1.4 Relevance of the research

Despite the growing number of studies on the adoption of B2C e-commerce by SMEs, literature suggests the need to advance the understanding of key factors experienced in different contexts around the world. The literature shows that a number of studies have been conducted in both developed and developing countries. However, very few studies have been conducted on developing countries in the sub-Saharan region. In their study to identify challenges faced by organizations in the adoption of a technology, Kapurubandara and Lawson (2006) indicate that the environment in which the organization operates is a very important factor to consider. Currently, Zimbabwe has got a unique environment

compared to other developing countries. The country has been going through a gradual economic and political evolution for more than a decade, and like any other sectors the ICT sector has been affected (Tafirenyika, 2010). According to Mazango (2008), the country has received less attention from researchers in part due to the recent tension between the state and private operators.

Addressing those factors influencing the adoption of e-commerce by SMEs in developing countries can be of great value to SMEs, the public as well as the government. SMEs can consider how best to utilize the advantages of e-commerce to promote growth and improve efficiency in their businesses. The proposed research exposes some of the issues in government policies, which hinder the adoption of e-commerce by SMEs in the country. The research suggests possible solutions that ensure that the policies passed are appropriate to the needs of the businesses, feasible and implementable on the ground. This might improve the growth of B2C e-commerce among SMEs in Zimbabwe. The results of this study will add to the existing body of knowledge on B2C e-commerce adoption in developing countries and provide a starting point for future researchers.

1.5 Overview of the thesis

The rest of the dissertation is organised as follows:

Chapter 2: provides a literature survey covering different aspects of e-commerce adoption by SMEs in developing countries and a brief description of the nature of ICT in Zimbabwe. *Chapter 3:* presents a thorough discussion of the research methodology used in the study. This covers the research approach, philosophy, paradigm, research strategy, different techniques used for data collection and data analysis, expected results, issues of access and ethics and lastly reliability and validity concerns will be addressed. *Chapter 4*: presents the results of the study. *Chapter 5*: provides a discussion of the research findings. *Chapter 6:* presents a conclusion, recommendations for SME best practice, limitations including suggestions for future research.

Chapter 2: Literature review

This chapter discusses current knowledge of different aspects of B2C e-commerce adoption by SMEs in developing countries, and a brief description of the nature of ICT and SMEs in Zimbabwe. Key terms are briefly defined, namely 'e-commerce', 'B2C e-commerce', 'SMEs', and 'developing countries'. E-commerce adoption level, e-commerce in developing countries, benefits, barriers, drivers and risks involved with the adoption of B2C e-commerce are also discussed in this chapter. The current and future state of ICT in Zimbabwe is examined. Lastly, gaps are identified in the literature and a research model is presented.

2.1 E-commerce

There are various definitions of e-commerce adopted by researchers. For the purpose of this study, e-commerce is defined as any form of business transaction where buyers and suppliers connect electronically to enhance business efficiency through lowering transaction and communication costs (Kalakota & Whinston, 1997; Rhodes, 2003; Richard et al., 2010). Going beyond buying and selling, e-commerce includes activities that directly support commerce through electronic connections. These connections may require components ranging from hardware elements such as routers, firewalls, servers and software products like HTML editors, browsers, and groupware, to network elements like wireless, cable, satellite networks and network services, including the Internet (Piris, Fitzgerald & Serrano, 2004; Storey, Straub, Stewart & Welke 2000).

E-commerce transactions can be defined according to the partners involved in the transaction. Transactions may be between businesses and consumers (B2C), between businesses (B2B), between customers (C2C) or between businesses and government (B2G) (Addo, Chen & Leu, 2003). B2C e-commerce is highly visible due to the strong marketing presence of on-line retailers such as Amazon and eBay (Melián-Alzola & Padron-Robaina, 2007).

2.1.1 E-commerce in developing countries

There are two schools of thought when it comes to the economic relevance of e-commerce for developing countries The first school believes that e-commerce is an opportunity in the sense that it creates relative advantages for organizations in developing countries (Kassie, 2004). Developing countries are generally characterised by poor financial resources and anything that reduces costs offers an obvious advantage (Riyadh, Akter & Islam, 2009). It is cheaper to develop a web site than to set up a retail store catering to the same market. E-commerce enables companies in developing economies to exploit economies of scale through creating new market opportunities beyond the domestic economy (Kassie, 2004). On the other hand, the second school believes that e-commerce is becoming a firm feature of the rapidly changing commercial environment and the adoption of e-commerce is a prerequisite for success in this world of technology (International Monetary Fund [IMF], 1997).

2.1.2 E-commerce adoption level

One of the research objectives mentioned in the first chapter is to determine the level of e-commerce adoption in Zimbabwean SMEs. Identifying various reasons why SMEs are at a particular stage and not the other will help to clarify factors affecting the adoption of e-commerce among SMEs in the country. In this section two model were proposed to present the different adoption levels. The two models highlighted various factors that might affect the progression. These models however focused on the technological and organizational factor without paying particular attention to environmental factors which are a major issue in countries with a unique environment like Zimbabwe.

To determine the level of e-commerce adoption in any given organization, Selim (2008) adapted 'the e-adoption ladder' initially developed by (UK-DTI, 2000 as cited in Selim, 2008) in a study on e-commerce in small businesses in the UK as shown in Figure 2.1. The e-adoption ladder shows the progression of e-commerce adoption. The model has, however, received criticism from Zappala and Gray (2006) for being too linear to describe processes that are often non-linear and very complex. The ladder lacks an explanation of the dynamic

processes that drive SMEs from one step to the other (Zappala & Gray, 2006). Zappala and Gray (2006) also argue that the model cannot adequately explain and predict the adoption of e-commerce by SMEs on its own.

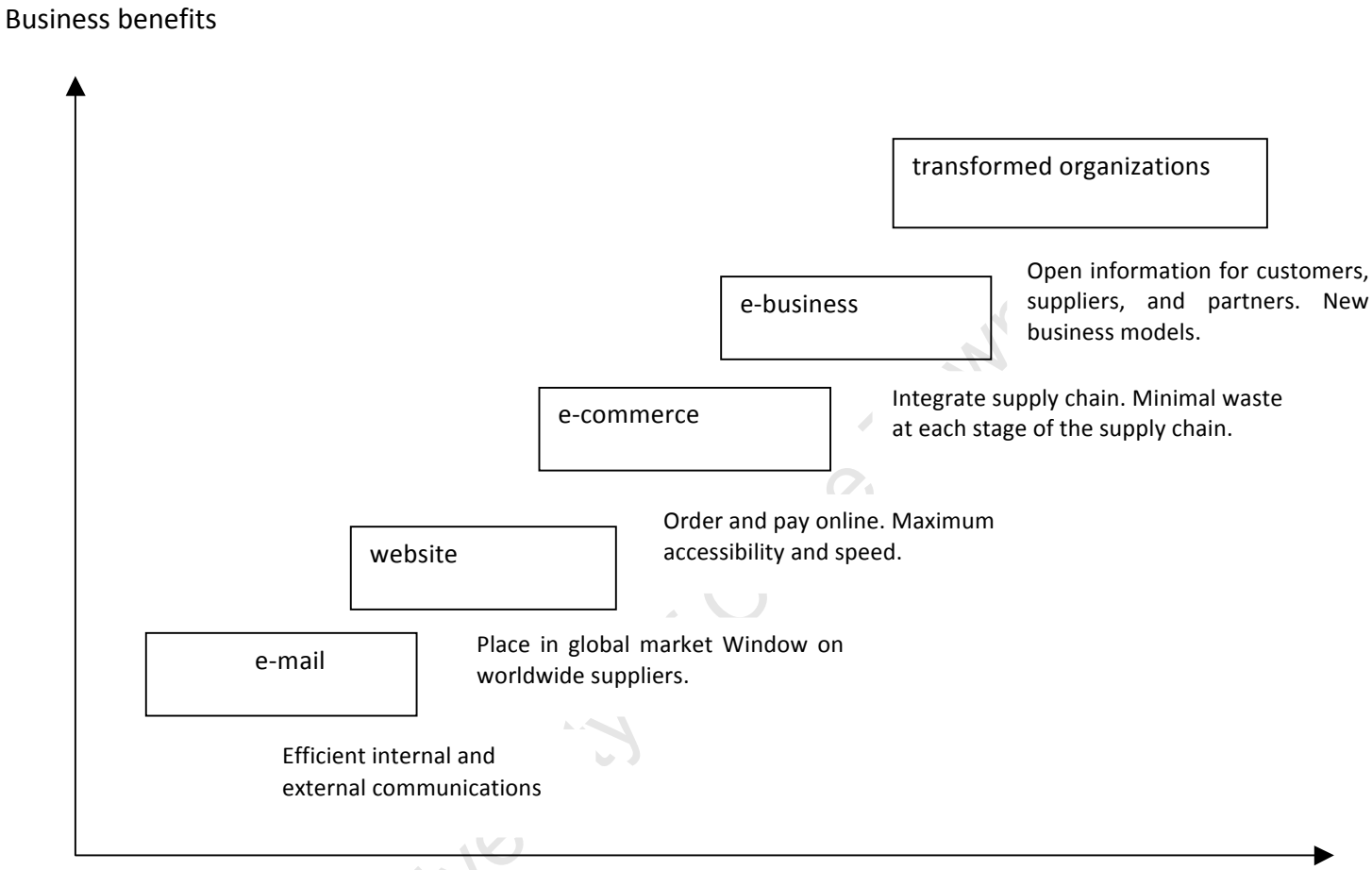

Figure 2.1: UK-DTI E-Adoption Ladder

Adapted from UK-

According to the ladder scheme, organizations fall into different levels of e-commerce adoption. Business efficiency is enhanced as an organization moves up the ladder. UK-DTI (2000 as cited in Selim, 2008) expanded on each of the 5 stages that a firm may advance through as summarised in Table 2.1.

Stage of adoption	Explanation
e-mail	Use is made of e-mail text messages between business and consumers, or businesses and suppliers, or within the organization. E-mailing enables both internal and external communication. E-commerce focuses on external e-mail.
website	Customers are provided with online access to company products and services via a web site. Marketing information, stock levels and prices may be found on the web site. Customers can check the availability of products or services online.
e-commerce	There is online interaction between a firm and its customers. Online activities include but are not limited to issuing and receiving invoices and electronic payments.
e-business	Use is made of e-commerce to support the business relationship between a customer and a supplier, for example through the provision of interactive order progress tracking or online support. Integration of the supply chain links suppliers, manufacturers, and the delivery function, therefore improving efficiency and minimizing waste.
transformed firm	The ultimate level reached is the integration of all these activities with the internal processes of a firm. The focus is customer service orientated.

Table 2.1: E-adoption stages

Source: Selim (2008)

To simplify the e-commerce adoption ladder, Zappala and Gray (2006) adapted the British Library 'staircase of Internet engagement' developed by Allcock, Webber and Yeates (1999) as part of their study on SMEs' use of the Internet as an information and learning resource. The staircase in Figure 2.2 shows different stages that a firm adopting e-commerce will go through, and explains those factors that may lead to growth or drawback in the process.

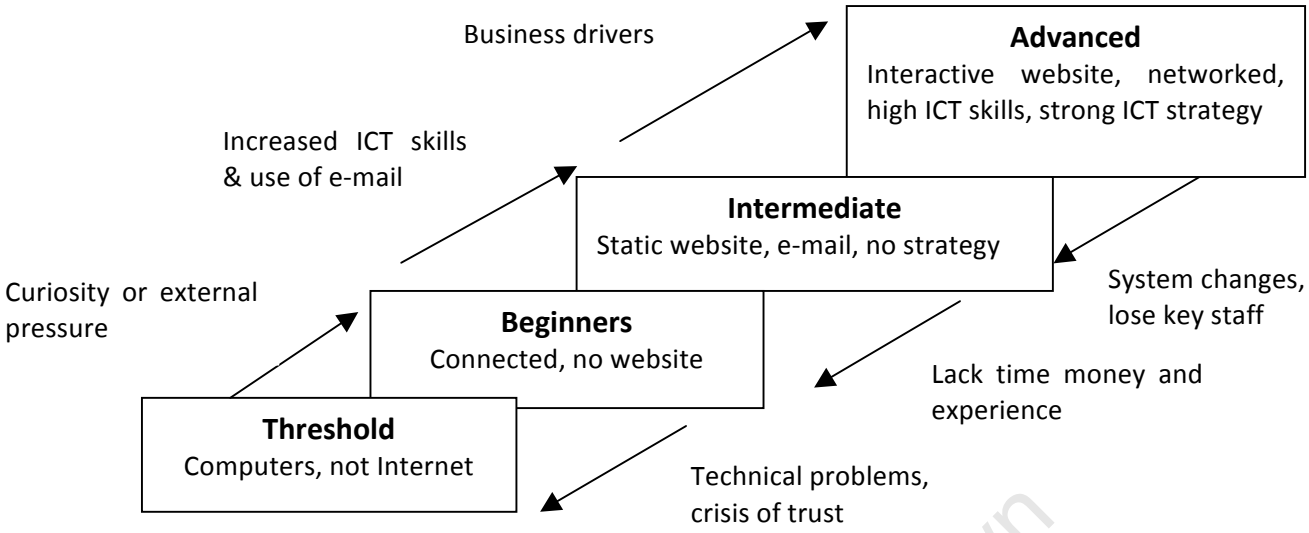

Figure 2.2: British Library staircase of Internet engagement

Source: Zappala and Gray (2006)

The British Library staircase model indicates that SMEs can move up or down the staircase depending on various factors, which include challenges, business needs, expectations and information strength (Zappala & Gray, 2006).

2.2 B2C e-commerce

B2C e-commerce involves elimination of 'the intermediary' who previously played an important role in traditional commerce (Rowley, 2002). The sector is expected to expand at "the expense of the traditional retailing business and eventually become a dominant mode of business-to-consumer transactions" (Tangpong et al., 2009, p. 6). The most crucial aspect of B2C e-commerce is the fact that customers in the supply chain are individuals not companies. When B2C e-commerce started, it was mostly perceived as online retail stores. Expanding this concept, we now see that B2C e-commerce services include real estate sites, travel services, online banking, and online auctions. When mentioning B2C e-commerce, one of the first companies that people think of is the B2C e-commerce giant Amazon (Melián-Alzola & Padrón-Robaina, 2007).

The technology offers benefits to SMEs in developing countries at lower levels of adoption such as the use of SMS via mobile phones, but fewer opportunities at the higher level like selling goods and services online. Although transaction volumes for B2C are growing fast, the Internet is unlikely to become a key sales channel in any industry (Duncombe, Heeks, Kintu, Nakangu & Abraham, 2005). There are many aspects to B2C e-commerce, and the opportunities are far greater in some sectors than in others. Duncombe et al. (2005) list "telecom services, consumer electronics, travel, automotive products and financial services as good prospects for B2C e-commerce growth" (p. 12). The authors further state that, early adopters of e-commerce enjoy more benefits of e-commerce and have higher chances of surviving in a competitive marketplace compared to latecomers who can suffer significant erosion by their competitors.

2.2.1 Benefits of B2C e-commerce to SMEs

Literature suggests that the greater the perceived benefits the higher the possibility of e-commerce adoption. Perceived benefits should be considered as one of the factors that influence technology adoption in firms (Alam & Noor, 2009). B2C e-commerce eliminates intermediaries, and the benefits of removing these intermediaries are that business transactions become cheaper and more efficient. There is a reduction in inventory and property costs, and maintenance. E-business encourages equal opportunity for all B2C companies, as there are fewer barriers to market place entry (Alam & Noor, 2009; Richard et al., 2010; Rowley, 2002). Benefits of B2C e-commerce include reduced transaction costs and increased opportunity to participate in international trade with access to new markets (Molla & Heeks, 2007).

B2C e-commerce can provide substantial benefits to SMEs via improved efficiencies and increased revenues. Businesses can gain access to better quality information through B2C services thus empowering them to make informed decisions. Most importantly, B2C e-commerce can give a competitive advantage. It can help a business to strengthen its market position and open up new business opportunities with the potential to improve profits (Alam & Noor, 2009; Molla, 2005). Various researchers identified the following benefits:

Cost reduction benefits:

• *Reduced travel costs:* Businesses can substitute journeys through the use of e-mail, mobile phone and other.

• *Reduced marketing and distribution costs:* Online publishing enables businesses to reach a wider market at a lower cost.

• *Reduced sales costs:* The Internet provides unprecedented opportunities for businesses to reduce the costs of trade locally and even more, across borders.

• *More efficient supply chain management:* Businesses can eliminate the need for middlemen leading to lower transaction costs, reduced overhead, reduced inventory and labour costs.

Market benefits:

• *Greater reach*: B2C e-commerce enables businesses to reach customers anywhere in the world.

• *Increased brand awareness:* It offers new avenues of promotion for products and services.

• *Improved customer service:* SMEs can provide more responsive order taking and after-sales service to customers.

• *Increased market awareness:* SMEs can easily get access to information pertaining to competition and changes in the market, leading to product or service innovation, and quality improvement.

Other competitiveness benefits:

• *Increased efficiency:* B2C e-commerce can increase transaction-processing speed.

• *Continuous trading:* There can be a 24-hour per day, 7-day per week sales service, thus increasing convenience for customers.

2.2.2 B2C e-commerce motivational factors

A number of positive factors are fueling the growth of B2C marketplace and e-commerce. Since most companies are actively using an e-commerce or e-procurement product or service, the market segment that promises to provide the majority of future growth are SMEs. Reasons why businesses adopt B2C e-commerce vary according to business size, industry focus, geographical location, and product or service line focus (Young & Ridely, 2003). Based on the literature survey, the major reason why businesses adopt B2C e-commerce is its ability to sell products and services through a highly efficient and cost effective channel. Some of the factors that lead to B2C e-commerce adoption include the ability for a business to interact with customers in locations beyond their reach without incurring costs of establishing and managing a traditional channel (Kassie, 2004; Piris et al., 2004).

In their research to investigate factors that motivate or hinders e-commerce adoption Keeling, Vassilopoulou, McGoldrick and Macaulay (2000) indicate that e-commerce adoption is influence by pressure from buyers, owners or managers belief that adopting e-commerce can boost sales and reduce costs, open opportunities to new markets and gives a competitive age over competitors in the industry. E-commerce is becoming a fact of the rapidly changing business environment. To be successful in this world businesses need to be connected (IMF, 1997).

The following motivational factors were identified by researchers:

- The need to effectively compete in local and international sectors.
- Globalization of the production and supply of goods and services.
- Customers need and expect better services so businesses strive to meet customer demands.
- Adaptation to new technologies, and an overall need for technological upgrading.

2.2.3 Barriers to B2C e-commerce adoption in SMEs

The section presents an outline of the recent literature on the barriers to the adoption of e-commerce in SMEs. Various researchers investigating barriers to the adoption of e-commerce by SMEs identified different factors which most of them categorise into three categories namely: owner/manager characteristics, firm characteristics and Return On investment (Kapurubandara & Lawson, 2006). The factors are explained in the following sections.

2.2.3.1 Owner/manager characteristics

Kapurubandara and Lawson (2006) argue that owner/manager plays a crucial role in decision making in SMEs. Therefore it can be assumed that a number of factors hindering the adoption of e-commerce in SMEs relate to owner/manager characteristics (Kapurubandara and Lawson, 2006; Kirby & Turner, 1993). SME owners are not aware of the technology and its potential benefits, which is a major barrier to the adoption of e-commerce (Lacovou, Benbasat and Dexter). Business owners need to understand and appreciate the potential benefits of adopting e-commerce services for them to be in a position to accept the technology (Kapurubandara & Lawson, 2006). A low level of computer literacy in the owner or poor knowledge on how to use the technology may result in a business being less likely to adopt e-commerce (Cloete, Courtney & Fintz, 2002; Kapurubandara & Lawson, 2006; Kirby & Turner, 1993; Lacovou et al., 1995; Matula & Brackel, 2007

2.2.3.2 Firm characteristics

There are number of factors related to the organization characteristics that affect the adoption of e-commerce by SMEs. The amount of technology currently in use in the organization, such as PCs with modems and the use of e-mail can make adoption easier (Lacovou et al., 1995). In addition, the nature and environment in which SMEs operate has a great impact on whether an organization will adopt e-commerce services. SMEs operating in rural areas are less likely to adopt e-commerce because of the level of e-readiness of the people in the area and, at times, because of poor infrastructure to support the services. Thong

and Yap (1995) argue that, if an organization has large amounts of data and transactions, this is likely to influence its decision to adopt e-commerce as this can help streamline operations and offer process efficiencies within the organization. Businesses dealing with products that are closely associated with digitisation are more likely to adopt B2C e-commerce than their counterparts (Tangpong et al., 2009) are. On the other hand, some studies viewed industry sector another major barrier to e-commerce adoption. According to Duncombe et al. (2005) telecommunications services, consumer electronics, travel, automotive products and financial services are good prospects for B2C e-commerce growth. While Kapurubandara and Lawson (2008) consider firm size and targeted markets as major determinate of e-commerce adoption. Dube, Chitura and Runyowa (2010) say that e-commerce may not be suitable to the way in which businesses and customers conduct business.

2.2.3.3 Return on investment

The lack of time, financial and personnel resources in SMEs hinders the adoption of e-commerce by the sector. Due to the limited resources SMEs are not able to make trials with the technology (Kapurubandara & Lawson, 2006). Kauffmann (2005) mention that the limited access to financial resources by SMEs is affecting the growth of the sector. The author also states that SMEs raise capital through retained earnings and informal savings and loan associations, which are unpredictable, not very secure and have little scope for risk sharing because of their regional or sectoral focus. Due to the high risk of default among SMEs and inadequate financial facilities, access to formal finance has become poor (Kauffmann, 2005).

2.2.4 Barriers to B2C e-commerce adoption in developing countries

Previous studies on e-commerce in developing countries reveal that barriers faced by SMEs in developing countries can be totally different from those faced by SMEs in developed countries (Kapurubandara & Lawson, 2006). SMEs in developing countries face a number of unique challenges that are specific to them or sometimes more pronounced than they will be in developed countries (Kapurubandara & Lawson, 2006). Some of the barriers faced by SMEs in developing countries include poor telecommunications infrastructure, low literacy

level among consumers, lack of skilled personnel to develop and support e-commerce sites, Poor transport system, and poor banking facilities, slow computer and Internet growth and low incomes (Dube et al, 2010; Kapurubandara and Lawson, 2007; Lacovou et al., 1995; Matula & Brackel, 2007; Molla, 2005). Different barriers are categorised and explained in the following sections.

2.2.4.1 ICT infrastructure

According to Tangpong et al. (2009) availability of technology infrastructure determines the likelihood of e-commerce adoption among SMEs and individuals. There is unreliable and poor Internet connection due to poor telephone communication and erratic power supply in most developing countries (Lawrence and Tar, 2010).

2.2.4.2 Socio cultural conditions

Kapurubandara and Lawson (2008) mention that, in some countries, cultural barriers can contribute a significant effect to the adoption of e-commerce in SMEs. In countries like India and Sri Lanka, people consider shopping as a social event and the face-to-face interaction with the seller is an important experience.

2.2.4.3 Security, trust and confidentiality concern

Most researchers identify trust as a major determinant in e-commerce adoption. They argue that trust is difficult to establish between partners in e-commerce than in traditional commerce. Because online services and products are not immediately verifiable trust is more important in e-commerce than in traditional commerce (Gefen & Straubb, 2004; Lawrence & Tar, 2010). B2C e-commerce has failed to create the level of trust that is normally found in "face-to-face" transactions. Due to lack of trust, businesses as well as consumers need the assurance of similar protections in the online world to those that exist in the physical world (Rowley, 2002). Lawrence and Tar (2010) argued that "confidence and trust are essential requirements for secure electronic trading" (p. 28). To expand the digital economy more attention should be given in promoting confidence in electronic transactions. They should be assurance that shoppers communications are secure, their personal data is protected and that they will in fact receive the goods or services for which

they have paid (Kirby & Turner, 1993). In addition, this growth requires the establishment of reliable and secure payment infrastructures to avoid fraud and other illegal actions (Mohamad & Ismail, 2009).

2.2.4.4 Individual awareness

In their study on barriers to e-commerce adoption in developing countries Hunaiti, Masa'deh, Mansour and Al-Nawafleh (2009) identified unawareness among individuals as a major factor that hinder the adoption of e-commerce. According to the authors, it is important for individuals to have access to services and at the same time know how to use them. Molla (2005) states that lack of knowledge about the use and potential benefits of ICT can hinder the growth of e-commerce. In an exploratory study to determine the use of the Internet in a small business in New Zealand, Abell and Lim (1996 as cited in Chitura, Mupemhi, Dube and Bolongkikit, 2008) identified lack of awareness on the part of the customer or supplier as the main inhibitor in the adoption of technology in small businesses. Sometimes customers are not connected to the Internet or are too concerned with privacy and security issues.

2.2.4.5 Economic and political conditions

The growth of e-commerce is highly dependent on the cost of the telecommunication infrastructure. Thus, the overall technology infrastructure development of a country is determined by the economic and geographical conditions (Lawrence & Tar, 2010). The economic condition therefore is a major drive for e-commerce adoption (Lawrence & Tar, 2010; Molla, 2005). The GDP and income per capita shows the economic condition of a country. Lawrence and Tar (2010) argued that, the establishment of technology infrastructure in most developing countries is beyond their ability. As a result, e-commerce growth in countries with unfavourable economic conditions is relatively slow (Lawrence & Tar, 2010). On the other hand, countries with unstable political conditions commit less time to ICT development (Matula & Brackel, 2007).

2.2.5 Classification of barriers to e-commerce Adoption

Kapurubandara and Lawson (2006) classified barriers to e-commerce adoption into internal and external barriers. The authors developed a model through which they present various categories of barriers faced by organizations as outlined in Figure 2.3.

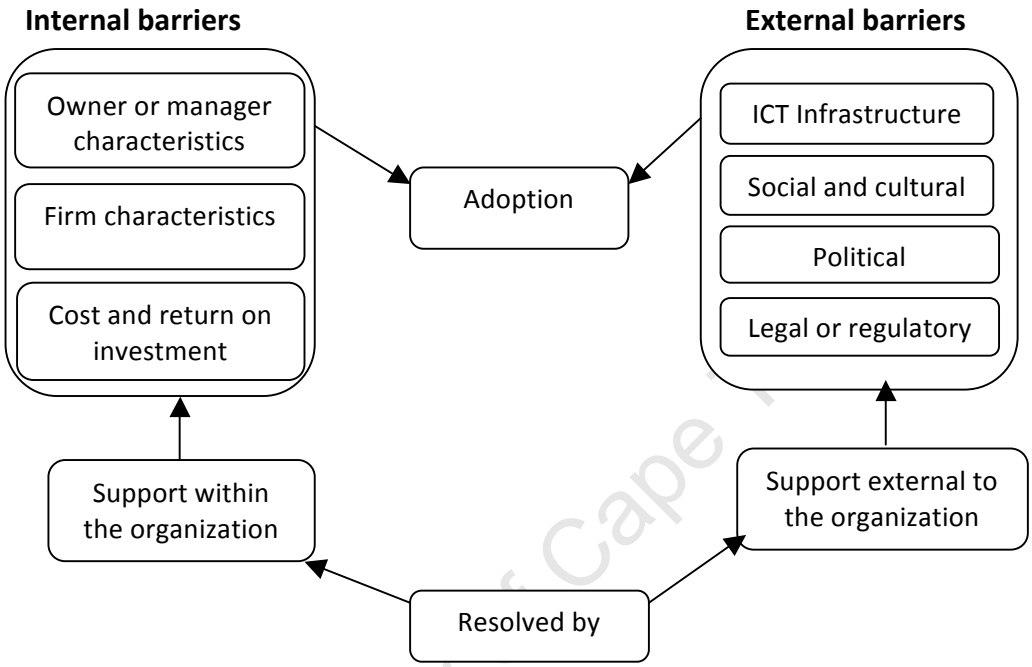

Figure 2.3: Conceptual Model - Barriers to e-Commerce Adoption

Source: Kapurubandara and Lawson (2006)

Internal barriers

Internal barriers are factors that are controlled within the organization by the business owners or operators themselves.

External factors

External barriers are factors that cannot be resolved within the organization; usually the government and responsible ministries are responsible for these factors. Some external barriers can be addressed by sharing expenses, resources and facilities (Molla, 2005). Businesses might adopt e-commerce to maintain a competitive advantage. According to Dedrick, Goodman and Kraemer (1995), most of the external factors do not have a direct

influence on technology adoption. Figure 2.4 shows how the different factors are linked to each other.

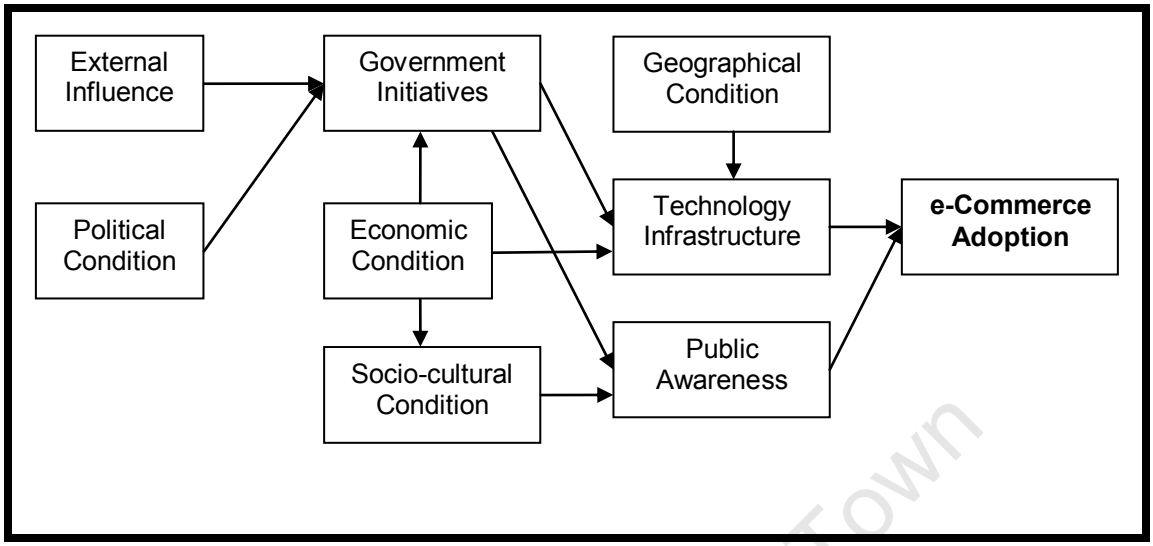

Figure 2.4: External Barriers to e-Commerce Adoption

Source: Dedrick et al. (1995)

According to Dedrick et al. (1995), the political and economic conditions in a country as well as the influence from other country mighty determined whether the government takes initiatives to the adoption of technology. On the other hand, the economic conditions in a country can shape people's background and the background in turn determines the awareness level that have a direct impact on the technology adoption. The technology infrastructure is influenced by the economic condition as well as government initiatives.

2.2.6 Risks involved in SMEs adopting B2C e-commerce

There are great potential benefits gained from e-commerce adoption but there are also pitfalls. Risks involved in using e-commerce include but are not limited to business opportunity costs, financial costs, and the dangers of failure (Gefen & Straubb, 2004). It is important for businesses to take note of these risks before adopting B2C e-commerce in order to minimise them. Gefen and Straubb (2004) identified the following risks involved with e-commerce adoption:

Extra cost involved

Adoption of B2C e-commerce brings an increase in costs before the benefits can be realised. There will be other additional costs of maintaining the existing system if a business decides to take up a parallel conversion.

B2C e-commerce can divert attention away from offline activities

Some SMEs may pay more attention to online activities resulting in offline activities suffering, this may affect revenue which comes from those offline activities.

B2C e-commerce implementation can fail completely

There is risk of the new technology failing after a business has invested a lot of money. Businesses must always make provision for such a risk.

2.3 SMEs

The small- and medium-sized enterprise sector has become important in most economies and is considered the lifeblood of modern economies. According to Kontelnikov (2007), there is no unique definition for SMEs. They are defined differently from country to country depending on the country's level of development (Jasra et al., 2011). SMEs are normally classified based on the size of the business, profits, and number of employees (Cloete et al., 2002). The official definition of SMEs in Zimbabwe includes both formal and informal enterprises, and is positioned against estimates of the size of the informal economy. Just like the rest of the world, the number of employees, total assets, sales and investment levels are commonly used yard-sticks. According to Mazango (2008), SMEs are engaged in various activities including village handcraft makers, restaurants, computer software, shops, and many sophisticated skills that drive different markets. Researchers Machona (2006) and Zunguze (2008) define SMEs in Zimbabwe according to the number of employees in the organization. Small organizations have a range of 2 to 100 employees whereas medium enterprises have a range of 100 to 250 employees.

The importance of SMEs has grown over the years and they have become the backbone of any country's economy, especially in developing countries (Alzougool & Kurnia, 2008). They are generally considered flexible, adaptive and innovative firms and these characteristics

make them a good fit for e-commerce. SMEs represent 90% of the total number of firms across the world on approximate and they have a significant role in creating employment opportunities (Alzougool & Kurnia, 2008). Kotelnikov (2007) found that "in 2006, there were about 140 million SMEs around the world employing at least 60% of the total work force".

2.4 Developing countries

Riyadh et al. (2009) define developing countries as countries that lack strong amounts of industrialization, infrastructure, and sophisticated technology, but are beginning to build these capabilities. Public utilities in these countries are often limited to wealthier parts of major cities. Most African countries fall under developing countries, however, this study focuses on Zimbabwe a developing country in the Southern region of Africa.

2.5 Zimbabwe

Zimbabwe is a landlocked country in the sub-Saharan region of Africa. Its neighbouring countries are South Africa, Botswana, Zambia and Mozambique. The country has been facing wider variety of challenges for the past decade than any other time since independents (Machona, 2006). The government has been struggling with "high rate of inflation in the world, sanctions, poor governance, and unresolved political impasse and low levels of democracy" (Machona, 2006, p. 62).

2.5.1 The SME sector in Zimbabwe

According to Kapurubandara and Lawson (2006) SMEs are important to the economy of every country be it developed or developing. SMEs play an crucial role in the development of the economy and Zimbabwe is no exception. Despite being recognized as the key to economic growth, the SME sector in Zimbabwe remains grossly under-funded and unsupported (Mambo, 2010). Ever since the government adopted multi-currency system, the government SME sector has been left struggling (Mambo, 2010). Since the introduction of the multicurrency regime, the government, however has not set aside any financial or material programme under which the sector can develop (Mambo, 2010, para. 7). Like most African countries, Zimbabwe is characterised by a weak public sector, poor SME policies and

corruption (Machona, 2006, p. 63). Kayizzi-Mugerwa (2001, as cited in Machona, 2006) pointed out that African governments need to create a favourable working environment for SMEs and the public sector. SMEs and the public sector are failing to cope up with the ever changing domestic policies. "The Zimbabwe government is yet to recognise that they cannot afford to be the sole driver of economic growth without the intervention of SMEs and the private sector" (Machona, 2006, p. 63). The core organizations responsible for the growth of SMEs in Zimbabwe are the ministry of SMEs and the Small Enterprises Development Corporation (SEDCO).

2.5.2 The current state of ICT in Zimbabwe

Despite the limited fixed-line infrastructure, Internet usage in Zimbabwe has continued to rise. In an environment with strictly controlled traditional media, citizens have turned to the Internet for independent information and communication. However, limitations on international bandwidth have affected development of the sector. New fibre optic links are now being deployed to improve international connectivity via neighbouring countries with access to international submarine fibre optic cables (Kelly & Cook, 2011). A major boost to Zimbabwe's ICT infrastructure is the impending establishment of the East African Submarine Cable System (EASSy), which is a submarine optical fibre system running along the east coast of Africa to which Zimbabwe will have access. The project is facilitated by the e-Africa Commission, in partnership with a host of telecommunication companies in Africa. The Commission is an initiative of the New Partnership for Africa's Development (NEPAD) (Tafirenyika, 2010). Table 2.2 and 2.3 shows the status of ICT infrastructure in Zimbabwe in 2010.

Telecommunications Infrastructure	
Type of infrastructure	**Number of infrastructure**
Mobile Switching Centres	9
Fixed Network Trunk Switches	2
Base Stations	880
International Gateways	5
Radio Terrestrial	2
Fibre Optic Links To Regional Countries	5

Table 2.2: Telecommunications infrastructure

Source: Tafirenyika (2010)

Industry Structure	
Type of operator	**Number of licences**
Mobile	3
Internet access	11
Public data operators	2
Internet service providers	17

Table 2.3: Industry structure

Source: Tafirenyika (2010)

Table 2.2 and 2.3 illustrate the level of infrastructure and the structure of the IT sectors. Figures from the tables indicates that Zimbabwe still got poor and few infrastructure and also the sector have a very low number of players.

In 2009 Zimbabwe was among the top ten Internet-using countries in Africa (Internet world stats, 2009). Figure 2.5 shows the Internet usage pattern for Zimbabwe from 2000 to 2009.

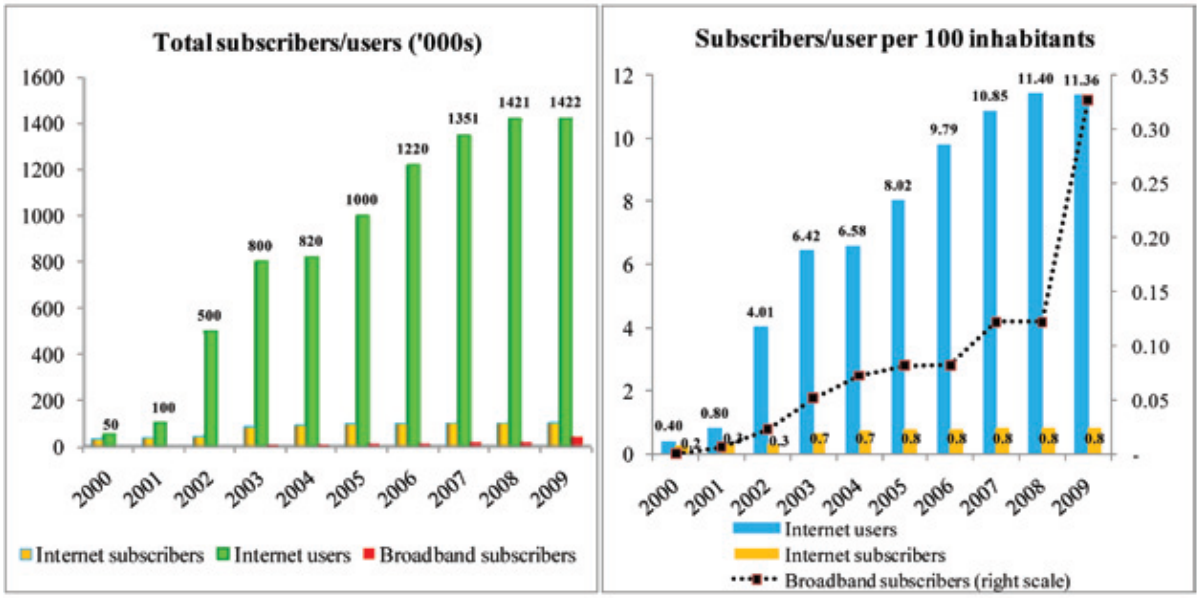

Figure 2.5: Zimbabwe Internet users from 2000-2009

Source: Internet world stats (2009).

Figure 2.5 show that the number of internet users and subscribers has been increasing gradually since 2000. The growth of internet use dropped between 2007 and 2008.

Zimbabwe's hyperinflationary economy has meant that the cost of mobile services has increased by 1,000% or more – at times on a monthly basis - and has reached millions of ZWD per minute. Ironically, the average bandwidth usage in the country was among the highest in the world during this time and networks were congested. This was because many users appeared to have access to foreign currency, or other assets, and tariffs were extremely low when converted into hard currency (Ministry of Information Communication Technology, 2005). About ten years ago, Zimbabwe had the second fastest growing ICT sector in sub-Saharan Africa after South Africa, but years of neglect have meant that the sector did not receive adequate support despite the availability of policies crafted to support the industry. Figure 2.6 shows the rate of subscriber growth between 2000 and 2009, when the country was undergoing massive political and economic shake-ups.

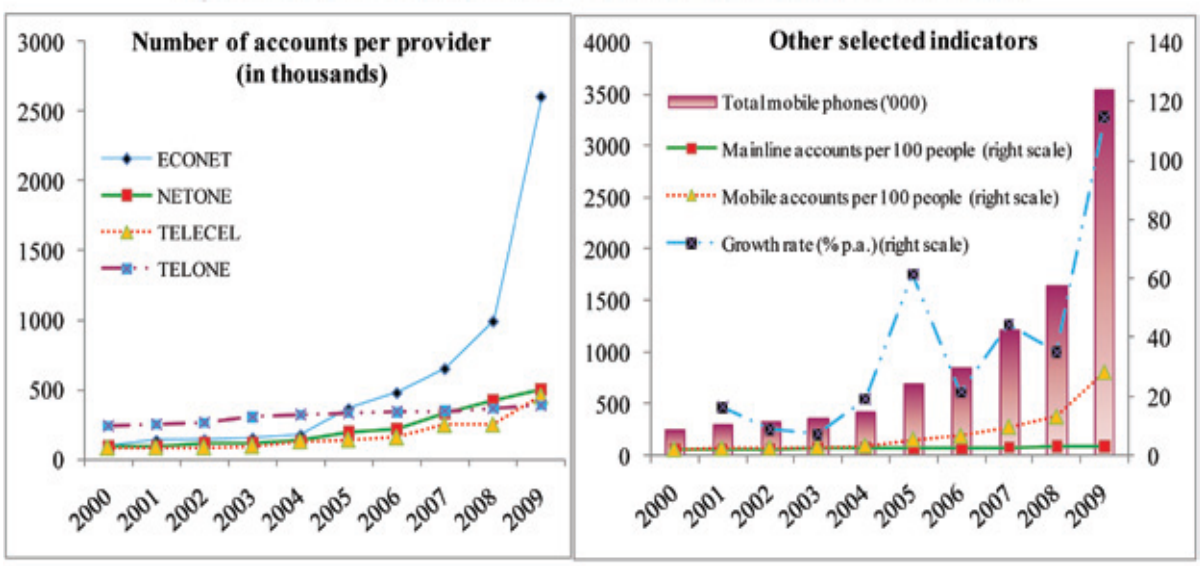

Figure 2.6: Growth in subscriber accounts with main service providers

Source: Internet world stats (2009).

There are three mobile service providers in Zimbabwe, namely Netone, Econet and Telecel, and one fixed line provider, TelOne. From 2000 the growth of mobile subscribers was growing slowly and between 2005 and 2006 the number of subscribers dropped. The number of subscribers increased four times since 2009 when the Government National Unity (GNU) assumed office (Smith, 2010). Despite the increase in the number of cell phone subscribers, local firms confirmed that they are still facing challenges to attract foreign investors who worry that the political truce will not last (Smith, 2010).

2.5.3 The future of ICT in Zimbabwe

After breaking all inflation records, experiencing a chronic shortage of capital and international political isolation, Zimbabwe's ICT sector is showing signs of recovery (Kwinika, 2009). Its neighbouring countries are doing their best to help restore the country's ICT industry. According to Kwinika (2009), KENNA Consulting, a South African private limited company tasked with assisting Zimbabwe to restore its ICT infrastructure, gave their assurance that the future of the industry is still viable and lucrative. The company Chief Executive Officer praised the current market of Zimbabwe saying that "So far, confidence is slowly being restored in the Zimbabwean market and a good number of South African

investors are beginning to see reasons to invest in Zimbabwe" (Kwinika, 2009).

According to Kwinika (2009) the government has endorsed this view, publicly stating that the ICT sector is critical towards improving people's standards of living through the smooth flow of communication using Internet, mobile phones, use of third generation (3G) and telephones. To ensure growth in the ICT sector the Ministry of Information and Communication Technology (MICT) drew up a 2010-2014 strategic plan. The plan's objective is to prepare the country for the coming decade to regain the missed opportunities and neglected advantages of the past decade of national challenges (MICT, 2010). The plan provides a roadmap for transforming Zimbabwe into an ICT hub with a vibrant and sustained economic structure. One of the aims in the plan is to ensure that networks are available and affordable anywhere and anytime.

The Zimbabwean Government has appreciated the importance of ICT in development. As a result, it is now committed to developing and improving new and existing physical infrastructure for all sectors of the economy by implementing and integrating an equitable framework for expedited ICT development (MICT, 2010). The government is looking forward to increased bandwidth for enhanced speed and efficiency, while expanding access to rural communities. In addition, the government wants to promote domestic production of ICT to meet international standards and local needs (MICT, 2010).

2.5.4 Zimbabwe ICT policy

Established in 2005, the Zimbabwe ICT policy attempts to narrow the digital divide through improving education and public awareness about ICTs. It is concerned with the expansion of basic and supportive communication infrastructure, which will improve penetration in all economic sectors, and improve access for all communities. By developing relevant local content in vernacular, it will establish a business culture open to the new ICT based economic dispensation (MICT, 2005).

This ICT policy is an integrated infrastructural, social, economic, environmental, legal and institutional framework that provides strategic direction and guidance for sustainable national development through the development and application of ICT (MICT, 2005). The

support and leadership from the highest levels of both government and stakeholders reaffirms Zimbabwe's commitment to mainstream science and technology in general, and ICTs in particular, in the national development agenda.

2.6 Identified gaps

Given the importance of the topic and the uniqueness of Zimbabwean context, it is a pity that no study has been found so far, to explore on various factors affecting the adoption of B2C e-commerce in developing countries with unique governmental influences like Zimbabwe. Literature survey reveals that there have been few studies carried out on the adoption of B2C e-commerce by SMEs in developing countries. The few studies conducted in developing countries mainly focus on identifying barriers to the adoption of e-commerce without exploring how these factors affect the adoption of the technology. Findings from other developing countries are not directly transferrable to other developing countries with a situation like that of Zimbabwe. According to Molla and Licker (2005), there is limited understanding of what drives e-commerce adoption among businesses in developing countries. The non transferability and the limited knowledge of the drivers of e-commerce among businesses in developing countries necessitate this study. This study aimed at bridging the identified gaps: exploring and describing the factors hindering the adoption of e-commerce in Zimbabwe. This will facilitate an in-depth understanding of these factors.

2.7 Technology Adoption Models

As e-commerce is a multi-disciplines area (Kalakota & Robinson, 2001), the investigations of its practice had been viewed from several perspectives especially strategic management, information systems, as well as entrepreneurship. A number of theories emerged to underpin the previous researches. From the literature, the most commonly used models are Diffusion of Innovation Theory (DTI) by Rogers (1995) followed by Technology Acceptance Model (TAM) by Davis (1989). This proves that most researchers put more emphasis on upstream issues of e-commerce, like “e-readiness, e-commerce adoption and e-commerce diffusion” (Molla & Heeks, 2007). The two theories are well-established innovation theories that are potentially able to provide explanation of the adoption issue. Together with

Technology Organizational Environment (TOE) model, the three models are highly applicable in predicting adoption behaviour of the firm in considering new technology (Mohamad & Ismail, 2009). Some of the theories applied in some cases include Theory of Reasoned Action (TRA) by Ajzen and Fishbein (2001), Unified Theory of Acceptance and Use of Technology by Venkatesh, Morris, Davis, G.B and Davis, F.D (2003), Theory of Planned Behaviour (TPB) by Ajzen (2001). In some rare cases, multiple theories are used to explain a scenario.

The Theory of Reasoned Action predicts behaviour and the actual results of the behaviour in different circumstances. TRA has been a widely studied model in social psychology literature (Davis, 1989). The fundamental principle of TRA is that norms, beliefs and attitudes are important in understanding behavioural intention to perform an action (Ajzen & Fishbein, 1975).

The Theory of Planned Behaviour is an established social psychology theory which explains that a number of significant attitudes influence behavioural intention (Ajzen, 1991). The TPB is an extension of the TRA. The TRA was criticised because it failed to describe conduct of individuals who had little power or control over their behaviour (Joubert, 2006).

Venkatesh et al. (2003) reviewed eight accredited acceptance and adoption theories and merged significant constructs from the different theories to form the Unified Theory of Acceptance and Use of Technology (UTAUT). The model takes into account moderators such as age, gender, experience and voluntariness of use which contribute to a better understanding of the complexity of technology acceptance by individuals (Carlsson.C, Carlsson.J & Hyvonen, 2006).

2.7.1 Technology Acceptance Model (TAM)

Technology Acceptance Model which was derived from the Theory of Reasoned Action denotes an important theoretical contribution towards understanding Information Systems usage and acceptance behaviour (Malhotra & Galletta, 1999). The model has been the basis of many technology adoption and diffusion research, the two important independent variables of actual use of technology are:

Perceived ease of use- this is the degree to which a person believes that using a particular system would be free of effort (Davis, Bagozzi & Warshaw, 1989).

Perceived usefulness- the degree to which a person believes that using a particular system would enhance his or her performance (Davis et al., 1989).

Figure 2.7 shows the TAM model.

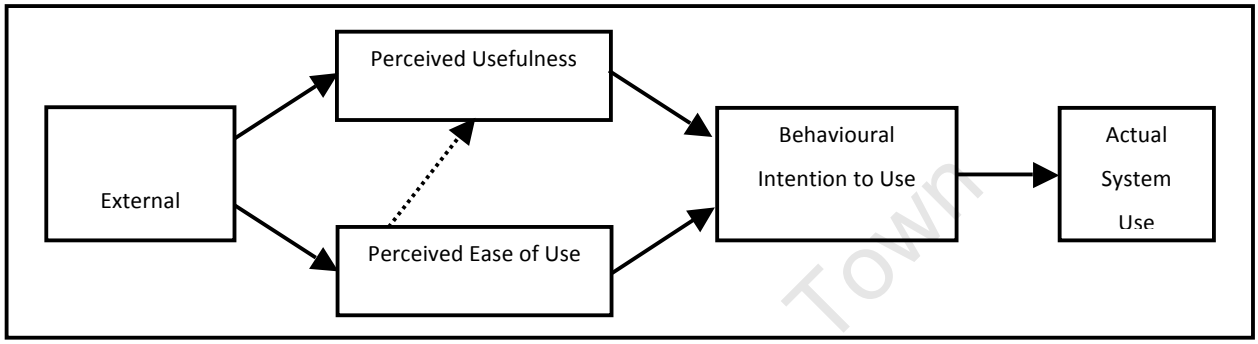

Figure 2.7: Acceptance Model

Source: Davis, 1989

TAM was developed to explain and predict particular IT usages. The model has been used by many researchers in studying adoption and diffusion of various IS technologies. The model suggests when users are presented with a new technology there are a number of factors which influence their decision as to whether to use it or not (Davis et al., 1989).

TAM has been one of the most frequently used model in the e-commerce context and various studies have used the framework as a basis to understand users' intention to engage in e-commerce. Research on e-commerce shows that both 'perceived ease of use' and 'perceived usefulness' exert significance influence on behavioural intention and consequently towards use of technology (Hung, Ku & Chang, 2003). However, it should be noted that this model has also been criticized by various researchers for not including other important factors such as perceived cost and perceived credibility which may influence technology acceptance (Hung et al., 2003).

2.7.2 Innovation Diffusion Theory (IDT)

This is a multidisciplinary theory commonly associated with research on new technology (Rogers, 1995). The theory has two key concepts, diffusion and innovation.

Innovation-Is defined as an idea, practice or object that is perceived as new by an individual or another unit of adoption (Rogers, 1995).

Diffusion-The process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 1995).

Figure 2.8 shows the 5-stage process which diffusion of new technologies takes place within.

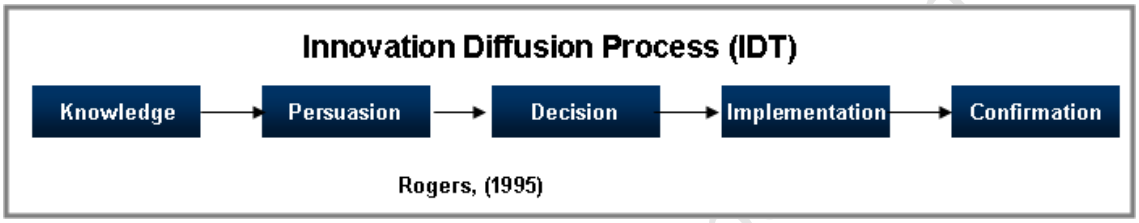

Figure 2.8: Innovation Diffusion Process

Source: Rogers, 1995

In his Innovation Diffusion Theory (IDT), Rogers (1995) identified and explained five main characteristics that determine the rate of diffusion of an innovation as follows:

Relative Advantage

The degree to which an innovation is perceived as being better than the technology it succeeds. Authors like Agarwal and Prasad (1999) equate this characteristic with the TAM model's perceived usefulness.

Compatibility

The degree to which an innovation is perceived to be consistent with the existing values and needs of adopters.

Complexity

The degree to which an innovation is perceived as being difficult to use and understand. The characteristic is usually equated to TAM's perceived ease of use.

Trialability

The degree to which an innovation may be experimented with on a limited basis before acceptance or rejection.

Observability

The degree to which the results of an innovation are visible to others, for example the extent to which other users can learn about a technology from others.

Most researchers concluded that relative advantage, complexity and compatibility are the most probable determinants of adoption (Mallat, 2005).

2.7.3 Technology-Organization-Environment theory

The Technology-Organization-Environment (TOE) model proposed by Tornatzky and Fleischer (1990) presents different factors that determine the likelihood of technology adoption within a firm. In their model the authors argue that the decision to adopt a technology by a firm is not only based on technological considerations, but also depends on the organizational and environmental context. The TOE model tries to enhance the Innovation Diffusion Theory (IDT) by Rogers (1995) who viewed determinates of technology adoption from a technological standpoint only.

Chapter 1 specified the objective of this research as to explore and describe various factors leading to delay and failure in the adoption of B2C e-commerce by SMEs in Zimbabwe. The TOE model in figure 2.10 offers a clarification on different aspects to assist in achieving the objective. Due to the nature of the political and economic conditions in Zimbabwe for the past years, the TOE model was found to be more appropriate, especially when investigating how environmental conditions influenced the adoption of technology in the country. The TOE model has been tailored to ensure its applicability to the situations under study as shown in figure 2.9.

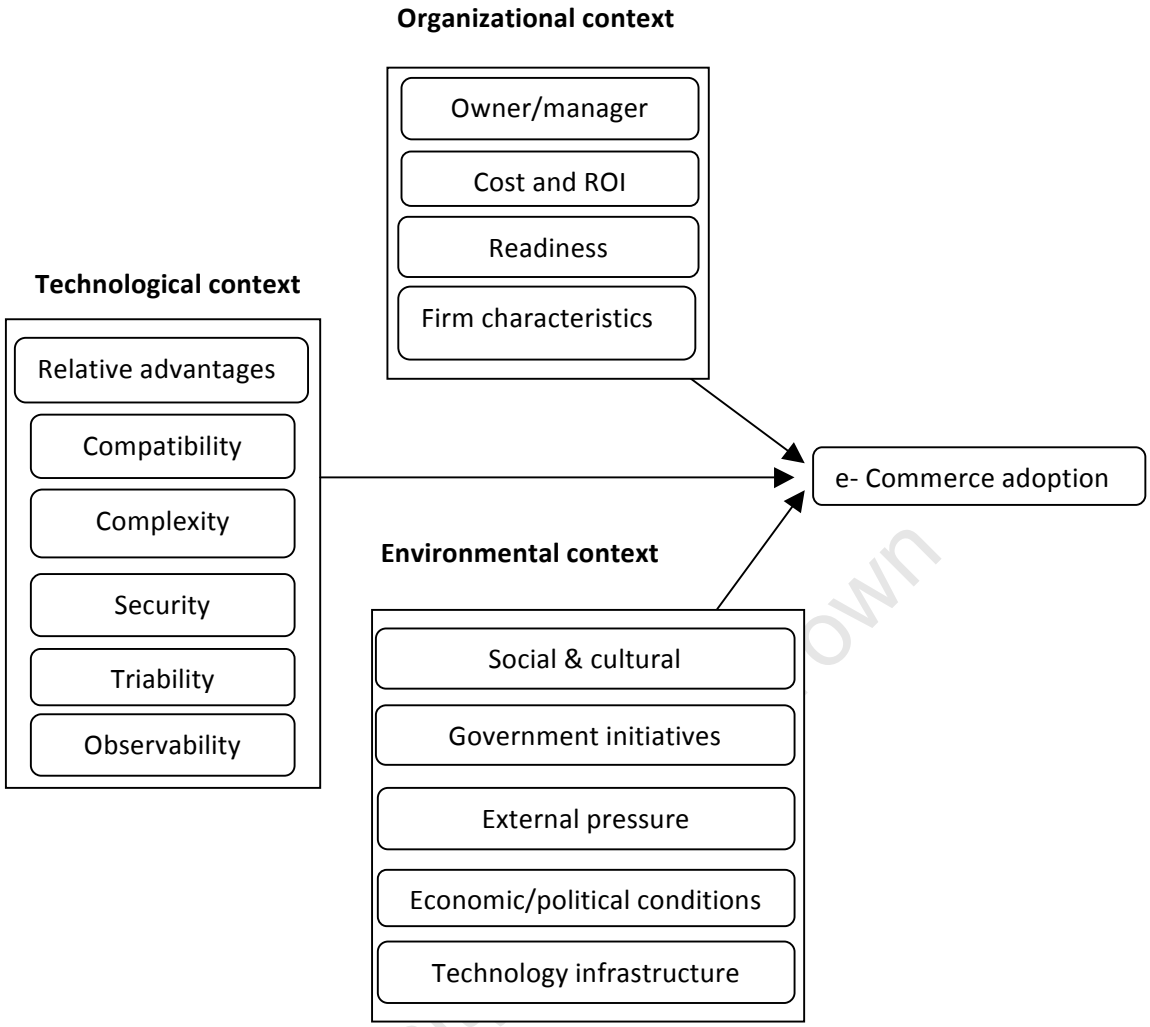

Figure 2.9: Technology–Organization–Environment (TOE)

Source: Tornatzky and Fleischer (1990)

2.7.3.1 Technological context

The technological context describes both existing and new technologies relevant to the firm. This can refer to prior technology usage, as well as number of computers in the firm, both factors that determine the ability of a firm to adopt e-commerce and other technology initiatives. The explanation of various factors was presented in section 2.7.2.

2.7.3.2 Organizational context

These are factors that emerge within the organisation itself. In the barriers to e-commerce adoption model Kapurubandara and Lawson (2006) refer the factors as internal barriers. A description of the organization, covering firm scope, firm size and managerial beliefs. A full

outline of these factors is done in sections that follow.

Owner/ manager characteristics

This looks at the owner's characteristics like the literacy level, appreciation of the technology and its benefits. The adoption of e-commerce services relies greatly on the business owner's acceptance (Kapurubandara & Lawson, 2006). Lacovou et al. (1995) indicate the owners' lack of awareness of the technology and perceived benefits as major barriers to the adoption of e-commerce.

Firm characteristics

Firm characteristics encompasses, firm size, age, targeted market, business nature and level of technology adoption. The factors can have a positive or negative impact to the adoption of technology by an organisation depending on there nature.

Cost and Return on Investment (ROI)

Before adopting e-commerce services SMEs compare the money that has to be invested in the adoption process and the expected benefits of adopting the technology i.e. Return On Investment (ROI). Because of their size, SMEs are likely to experience a low ROI over short periods.

2.7.4 Environmental context

This focuses on the areas in which the firm conducts its business operations. Concern is given to external factors in the industry that might influence the firm, such as government incentives and regulations. Kapurubandara and Lawson (2006) refer to these barriers as external. A full explanation of these factors is provided in the following sections.

Political condition

The political situation is a key factor for e-commerce growth. It is less likely that a government will give sufficient attention, if any, to e-commerce development in a country with an unstable political situation.

Government initiatives

This is an important aspect of the adoption of e-commerce and other ICTs in general. Government initiatives come in different forms, such as promotion of ICT usage, education and the establishment of an adequate regulatory framework for e-commerce. This can include taxation and tariffs for revenue generated through e-commerce, as well as intellectual property protections (Molla, 2005). These initiatives are affected by many factors, for example the country's political condition, economic condition, and external influence from other countries.

Economic conditions

The economic condition is also widely recognized as a major driver for e-commerce adoption. The GDP and income per capita are common indicators of the economic condition of a country. Since e-commerce relies on some technology, infrastructures that are relatively expensive for many developing countries (i.e. countries with unfavourable economic conditions) are not likely to be involved in e-commerce (Dedrick et al., 1995).

ICT infrastructure

The success of e-commerce relies heavily on a number of technology infrastructures. Telecommunication infrastructures, for example are required to connect various regions within a country and across countries (Lawrence & Tar, 2010; Molla, 2005). ICT infrastructure mainly refers to "networks, cables, wireless links or satellite dishes, as well as other important elements such as optimal use of these physical assets (interconnection of different networks or the management of the frequency spectrum) and their maintenance" (Africa Partnership Forum, 2008, p.7). The cost of accessing the infrastructures also influences the growth of e-commerce and it relies on efficient logistic infrastructures within a country. Its growth further requires the establishment of reliable and secure payment infrastructures to avoid fraud and other illegal actions (Mohamad & Ismail, 2009). The overall technology infrastructure development of a country relies heavily on the economic and geographical conditions of the country.

Geographical condition

The geographical condition of a country can be a motivation or barrier to technology infrastructure development. In countries that consist of many small islands, technology infrastructures can be difficult to develop. On the other hand, the need for having such infrastructure is also significant for effective communication and trading among the widely spread parts (Kabanda & Brown, 2010).

Socio-cultural condition

The adoption of e-commerce also depends on the cultural and social environment. In some countries, people consider shopping to be a recreation, and therefore, B2C e-commerce is difficult to nurture (Zwass, 2008). Likewise, the level of education, the availability of IT skills, the level of penetration of personal computers and telephones within the society affects the growth of e-commerce (Alzougool & Kurnia, 2008).

Public awareness

A lack of awareness of the use and potential benefits of ICT can also hinder the growth of e-commerce (Kapurubandara & Lawson, 2006; Molla, 2005). In most developing countries, many people are only aware of limited e-commerce applications such as chat, e-mail and browsing websites (Alzougool & Kurnia, 2008). As a result, many organizations have not considered exploiting the potential of e-commerce to improve their business operations.

External influence

Other countries also influence the growth of e-commerce in a country. For example, the reputation of credit card frauds in some countries led to blockages of several IP addresses by a number of commercial sites from different countries. This situation can cause those countries to be expelled from global business transactions, which limits the usefulness of e-commerce (Azam & Shah, 2007).

Chapter 3: Research design and methodology

Yin (1994) described a research design as a blueprint of the research. The main purpose of a research design is to ensure that the evidence addresses the initial research questions. This chapter discusses the research process and different methodologies appropriate to IS research as well as the specific methodology adopted in this study. It also describes the pilot survey, design of research instrument (interviews), data collection and data analysis methods. The chapter also describes how validity and reliability issues were addressed in the study.

3.1 Research process

Every research project follows a sequence of interrelated activities that together constitute a research process (Zikmund, 2000). This study followed the research process in Figure 3.1.

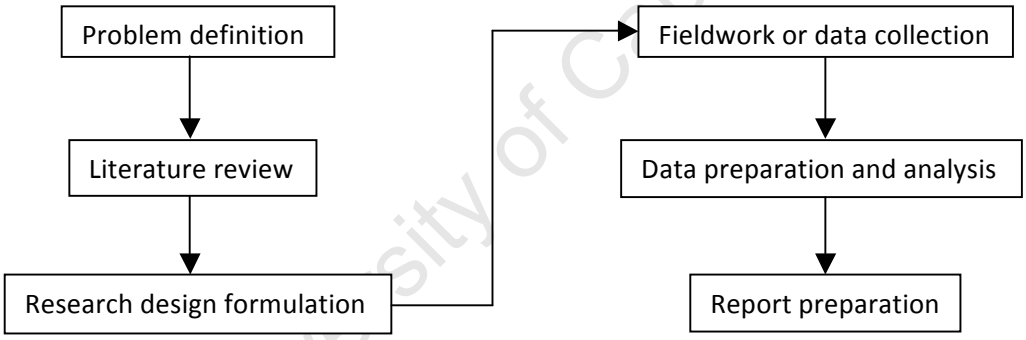

Figure 3.1: Research process

Source: Malhotra (1996)

3.2 Philosophical assumptions

Research philosophies highly depend on the researcher's thoughts pertaining to knowledge development and reflection, thus they have become an area of key interest in the IS field (Orlikowski & Baroudi, 1991; Saunders, Lewis & Thornhill, 2003). Orlikowski and Baroudi (1991) identified that the applied philosophy can influence the research questions at the same time the research questions shape the assumptions being examined. Saunders et al. (2003) argued that the way in which researchers choose to develop knowledge has effect on

how research is done. Qualitative or quantitative research is centred on essential assumption relating to ontology epistemology, and methodology. These assumptions are described as follows:

Ontology

From its point of view, ontology describes the study of nature and its exposure to reality (Crotty, 1998). According to Orlikowski and Baroudi (1991), the beliefs may exist separately from human interference or interaction in the existence of human logic and objective phenomena. The two views that clarify ontology as suggested by Crotty (1998) are realism and objectivism (p.10). In consideration of realism, realities exist free of the mind whereas objectivism, derives its name from objects as its name imply and is unconscious of its surrounding. The two assumptions are as interrelated, i.e. when researchers assume reality they have to detach themselves from it in order to get the actual truth of the given situation and its operations

Epistemology

According to Hirschheim (1992), it epistemology is believed to be an assumption of knowledge attainment. Its main objective is to form the foundation for decision making processes that involve legitimacy and adequacy of appropriate forms of knowledge (Crotty, 1998). Epistemology is mostly concerned with the views of knowledge understanding, nature, source and processes, like the association of the inquirer and the known (Baptiste, 2001, p.6).

Methodology spells out the plan of action linked by a certain choice to achieve an objective (Crotty, 1998). It makes out how a research will be performed inclusive of the research method, approaches, data collection and analysis techniques (Saunders et al., 2003). As a result, the choice of a philosophical assumption mainly depends on the IS community.

3.3 Research Methodology

According to Crotty (1998), a research methodology consists of techniques or procedures applied in the collection and analysis of data. The process is done in line with the research

question, the research model as well as the objectives of the research. The following sections presents an in-depth discussion of the purpose of the research, approach, time frame, strategy, data collection and analysis techniques, instrument, target and sample population.

3.3.1 Research purpose

The nature of the problem under study determines whether the research is exploratory, descriptive or explanatory (Zikmund, 2000). Exploratory research is concerned with identifying the real nature of the research problem and the variables related to the problem (Orlikowski & Baroudi, 1991). It is characterised by a high degree of flexibility and gives valuable insight, resulting in a firm grasp of the essential character and purpose of specific research surveys, and encourages the development of creative research strategies (Orlikowski & Baroudi, 1991). Descriptive research focuses on the description of the variables in the problem (Orlikowski & Baroudi, 1991) whereas; explanatory research attempts to specify the nature of the functional relationship between variables (Poon & Swatman, 1999). In their view, Marshall and Rossman (1999) perceive exploratory and descriptive research as suitable strategies that build rich and descriptions when the phenomenon under study is not well understood.

Given the lack of empirical studies on B2C e-commerce in Zimbabwe, exploratory and descriptive approaches were considered the most appropriate for this study. An exploratory approach is used to investigate and gain a clear understanding of the different factors that influence the adoption of e-commerce by SMEs in Zimbabwe. As the study was conducted in a country that is undergoing economic recovery, exploratory research was perceived the most suitable due to its flexibility. The descriptive aspect of the study seeks to reveal how these factors have affected the adoption of B2C e-commerce by SMEs.

3.3.2 Research paradigm

Orlikowski and Baroudi (1991) categorised IS research into three different paradigms which are:

1. Positivist, which is at times referred to as conventional or scientific;
2. Interpretive, which is also likened to constructivist paradigm; and
3. Critical.

The paradigm followed in a study depends on the research questions and the nature of the problem under study (Orlikowski & Baroudi, 1991). Therefore, different researchers adopt different paradigms and methods they may consider suitable for a particular research (Myers, 1997; Orlikowski & Baroudi, 1991). Each paradigm has its own strengths and weaknesses and opting for one paradigm does not necessarily mean the rest are weak. A combination of one or more paradigms in a single research may bring new and creative ideas (Hirschheim & Klein, 1994)

Critical is concerned with human empowerment and the improvement of the world (Cavana, Delahaye & Sekaran, 2001, p.10). The paradigm enables the acknowledgment of opportunities for realising human potential (Alvesson & Willmott, 1992). Alvesson and Willmott (1992) propose that social reality is established historically and people construct and reconstruct by varying social and economic conditions. On the other hand, Klein and Myers (1999) argue that the opportunity to enhance their conditions may be limited by a number of forms of social, cultural, natural laws, resource restrictions and political control.

Positivist research is deductive in nature and takes the assumption that reality is objectively given and is described according to quantifiable properties that do not take into consideration the observer and the research instrument (Myers, 2009). According to Lee (1999) the positivist approach is derived from natural sciences. The epistemological viewpoint of positivism assumes that the event under study can be measured empirically while assuming neutrality in the observer (Shanks, 2002). Positivist researchers are independent observers who separate themselves from an event to forecast certain actions

without subjective opinions (Myers, 1997; Orlikowski & Baroudi, 1991).

Interpretive research assists researchers to understand human thought and action in social and organizational contexts better than the other paradigms (Klein & Myers, 1999). The adoption of a subjective outlook in interpretive research assists in obtaining a more realistic outcome and multiple interpretations (Orlikowski & Baroudi, 1991). There are no predefined dependent and independent variables in an interpretive research, but rather focuses on human sense making in emerging situation (Kaplan & Maxwell, 1994). The approach considers people and the objects they create. The interpretive approach does not assume objectivity and the interaction that takes place with the event under investigation. According to Lee (1991), the methods proposed by the natural sciences are both unsuitable and insufficient for investigating social events.

This study therefore adopted an interpretive paradigm as it sought to understand and make sense of the different factors that are affecting the adoption of e-commerce by SMEs in Zimbabwe. The paradigm allows the researcher to make multiple interpretations from the research problem, thus giving a better understanding of the situation under study. With an interpretive stance, important factors might come up, revealing unanticipated findings.

3.3.3 Research approach

Two methodological approaches can be used in case studies: quantitative and qualitative. Depending on the information under investigation, a qualitative or quantitative approach is used (Lekvall & Wahlbin, 1987). Qualitative research is an unstructured, exploratory research methodology based on small samples that provide insights and understanding of the problem setting (Malhotra, 1996). Strauss and Corbin (1990) indicate that qualitative research is used to uncover and understand what lies behind a problem of which little is known. Quantitative research on the other hand, seeks to quantify data and apply some form of statistical analysis (Malhotra, 1996). According to Yin (1994), the methodology aims to provide a fair treatment of evidence, produce a convincing, analytical conclusion and eliminate alternative interpretations.

Qualitative research was adopted for this research as the study sought to gain an in-depth understanding of different factors that influence the adoption of e-commerce by SMEs in Zimbabwe. It was also used because there are no previous studies identified on the barriers to e-commerce adoption in Zimbabwean SMEs. The qualitative research method is suitable for an in-depth study of the human phenomena and behaviour through involvement with participants (Myers, 2009).

3.3.4 Approach to theory

According to Alvesson and Skoldberg (1994), there are three different approaches to theory namely inductive, deductive and abductive. The inductive method is commonly used when there are few or no theories in the field under study, with the purpose being to form a new theory. The deductive approach involves the drawing of conclusions perceived as valid if they follow logically from an argument. The approach is used when there are already established theories; literature is used as a foundation for the new research. In the abductive approach, the research starts from the empirical facts, as in the inductive approach but does not reject theoretical pre-conceptions. In the case of this study, there was a predefined theory and research is based on existing literature hence, a deductive approach was followed.

3.3.5 Research strategy

Yin (1994) identified five research strategies, namely case study, survey, ethnographic, experiments and action research. Different conditions determine which strategy is to be used. These conditions can include the research question posed, the extent of control a researcher has over actual behavioural events and the degree of contemporary as opposed to historical events in the study (Yin, 1994). Table 3.1 shows different research strategies and the conditions under which they can be used.

Strategy	Form of research question	Requires control over behavioural events	Focuses on contemporary events
Experiment	Who , why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Action research	Who, what, where, how many, how much	No	Yes/No
Ethnographic	How, why	No	No
Case study	How , why	No	Yes

Table 3.1: Relevant situations for different research strategies

Source: Yin (1994)

This study seeks to explore the reasons for a delay and the failure to adopt e-commerce by SMEs in Zimbabwe. The study focuses on contemporary events and the researcher has no control over behavioural events. A case study was discovered to be the most appropriate research strategy for this study.

3.3.6 Research instrument

Measurement of error is one of the most common problems in research. To ensure accuracy and validity, Molla (2005) stresses that researcher should use a sufficiently validated instrument and one that has been applied to similar phenomena. Research instruments are tools used to collect data for research studies (Molla, 2005). In this study, interviews and documents were used for data collection. The focus of interviews was informed by the literature review and theory discussed in Chapter 2.

3.3.7 Research timeframe

As this research sought to investigate the factors that hinder the adoption of e-commerce by SMEs and to understand how these factors have affected the growth of e-commerce in Zimbabwe, a cross sectional time horizon was more appropriate for this research. A cross sectional timeline is more preferable to a longitudinal one because of the limited time available to complete the study. Cross sectional studies gives researchers the ability to scrutinize empirical data at one particular point in time which makes delivery of the research results quicker than when a longitudinal timeline is employed (Hendricks, 2005). In addition, the effect of time may not alter the results of the study when it is a cross sectional timeline.

3.3.8 Target and sample population

Sample population consists of groups of people, events or elements of interest to be investigated (Cavana et al., 2001. The authors define a sample as a "subgroup or subset of the population". Sekaran (2003) indicates, "Sampling involves the selection of a certain number of elements in a population to study its characteristics for generalization purposes to the population as a whole" (p.266). Generalization "implies the application of research findings to different organizational scenario" (Cavana et al., 2001, p.31). In order to generalize results, a sample should be a good representative of the population. Saunders et al. (2003) argues, "Generalization can be improved by selecting a large sample" (p.155). Sampling assist researchers to reduce time spend on data collection as well as minimizing costs and produce instant results (Sekaran, 2003). The two types of sampling namely probability and non-probability are explained as follows:

In probability sampling, all elements have equal chances of being selected (Saunders et al., 2003; Sekaran, 2003). The technique is common with survey research. With probability, sampling statistical estimates can be carried out on sample characteristics of the population to accomplish the research objectives. There are different types of probability sampling techniques that are simple random, systematic, cluster, multi-stage and stratified random.

In non-probability sampling, the chance of an element to appear in the sample is not known.

This sampling technique is common with case study researches. According to Saunders et al. (2003), non-probability sampling does not take into consideration statistical inferences. The Non-probability sampling is common in convenience, judgement, snowball and quota sampling techniques.

This research sample consists of eight SMEs randomly selected from the country's capital city Harare. The city of Harare was conveniently sampled due to the researcher's proximity to the city. The researcher's home town is Harare and that made the visiting of these SMEs easy. In addition, a single city was selected to avoid travelling from one city to the other, which in turn reduce cost and save time. Convenient sampling is a non-probability technique which elements are selected on the basis that they are the easiest to obtain. The technique is used when there is very little variation in population (Saunders et al., 2003).

3.3.9 Data collection techniques

According to Yin (1994) data collection in case studies can be from six different sources, namely documents, interviews, participant observation, direct observation, archival records and physical artefacts. The choice of a source depends on the problem under investigation, and whether qualitative or quantitative data is being collected. Each source has its own strength and weaknesses. Table 3.2 presents the strengths and weaknesses of the different data sources.

Source of data	**Strengths**	**Weaknesses**
Documentation	-Can be repeatedly reviewed because of its stability. -Unobtrusive; not created as a result of the case study. -Broad coverage; long life span, many events and many settings.	-Ease of retrieval can be low -Reporting bias - reflects unknown author. -Access maybe deliberately blocked. -Access may be restricted due to privacy reasons.

Archive	-Precise and quantitative, same as above for documentation.	-Same as above for documentation.
Interviews	-Direct focus in case study -Provides perceived, underlying assumptions	-If questions are poorly structured, results may be biased. -Inaccuracy due to poor recall -Interviewers hear what they want to hear.
Direct observation	-Reality covers real time events. -Contextual covers events.	-Time consuming -Selective -Events may be difficult because they are under observation. -Expensive – many hours by human observers.
Participant observation	-Insightful into interpersonal behaviour and motives.	-Biased due to manipulation of events by the investigator.
Physical artefacts	-Insightful of cultural features and technical operations.	-Selective -Availability

Table 3.2: Strengths and weaknesses of data collection sources.
Source: Yin (1994)

There are two types of data namely primary and secondary. Primary data refers to information obtained from primary sources during research. Contrastingly, secondary data refers to information that has been previously obtained (already exists) and only needs to be extracted. This study uses both primary and secondary data. Primary data was collected through interviews and secondary data through collection of existing documentation and websites.

3.3.9.1 Interviews

Yin (1994) shows that interview questions can be either open-ended or closed. Open-ended questions give participants the freedom to give a detailed response in their own words. In contrast, closed questions limit responses and usually give participants alternatives to choose from.

The semi-structured, face-to-face interview is designed to qualitatively reveal participants' views on B2C e-commerce adoption. Participants were interviewed independently to identify inhibiting factors, supporting activities and e-commerce adopters' general experience. The sample consist four senior managers from four different SMEs. This group is deemed to have the power to initiate change in an organization. The rest of the sample consist four lower-level employees from different SMEs, who were chosen randomly. Participants were interviewed in a detailed manner and each interview lasted 15 to 20 minutes on average. Interviews were semi structured and, for confidentiality purposes, participants' anonymity was ensured. All interviews took place in participants' offices, tape recorded and carried out in English, the world official language.

The interviews were divided into four sections. The first section dealt with basic demographic information such as the firm's age, number of branches, number of employees, market scope and business nature. The second section provided information about the adoption and implementation of B2C e-commerce services. The section identifies the level of e-commerce use in different organisations. The third section sought to determine the perceived benefits of B2C e-commerce so as to identify whether SMEs are aware of the benefits offered by e-commerce and value them. The fourth section dealt with the nature of the challenges faced by SMEs in the adoption and implementation of B2C e-commerce. The section aim to identify challenges faced in the adoption e-commerce from the participant's point of view.

The key characteristics of participants are presented in appendix B

3.3.9.2 Document analysis

As part of the data collection the researcher carried out a thorough review of secondary data. Information about e-commerce in Zimbabwe was gathered from documents such as the government's ICT policy and the Postal and Telecommunications Regulatory Authority of Zimbabwe's (POTRAZ) policy. These documents provided a better understanding of the research problem and results. Websites of some SMEs were assessed in order to gain a broader view of the extent of technology use in the companies.

3.3.10 Data analysis techniques

Data analysis was conducted to verify if research questions and theories were supported (Sekaran, 2003). There are two types of data analysis namely: quantitative and qualitative. A qualitative analyses technique was used in this study. The two techniques are presented in the following sections.

3.3.10.1 Quantitative data analysis

Cavana et al. (2001) mention that the quantitative data involves getting data ready for analysis, testing goodness of data and finally the hypothesis (Cavana et al., 2001). In quantitative analysis data requires editing and cleaning up, screening for anomalies and effective handling of blank points.

3.3.10.2 Qualitative data analysis

Qualitative data analysis assists in understanding a phenomenon under study (Cavana et al., 2001). Qualitative approach gives researchers an opportunity to make their own interpretations about a problem from the available data. The general inductive approach for qualitative data analysis was used as the main technique to analyse data.

After each interview, the exchange was transcribed word for word in order to capture all the necessary details before information decay. Copies of data are retained for future reference. The researcher conceptualise and reduce the interview data by noting down the relevant concepts, textual phrases and quotes which relate to the major components of the research objectives and the interview outcome. The textual phrases of the participants will be laid

out under each participant's name, grouped under each concept in a tabular format and coded. These textual phrases will then be analysed and grouped under categories and concepts in a spreadsheet in Microsoft Excel 2010. Emerging key concepts and categories will be identified by studying the spreadsheet repeatedly until they are no more new concepts coming up. The spread sheet is studied repeatedly, revised and refined to obtain the correct meaning, themes and patterns fitting with the model proposed in the previous chapter. The interpretation and presentation of the results is conducted at last.

The main purpose of the general inductive approach was to allow findings to emerge from the frequently, dominant or significant themes inherent in raw data (Thomas, 2003). According to Thomas (2003), the purpose of using an inductive approach is to:

- Condense extensive and varied raw data into a brief summary format.
- Establish clear links between the research objectives and the summary findings derived from the raw data and to ensure these links are both transparent and defensible.
- Develop a framework or theory about the underlying structure of experiences and processes that are evident in the text.

The following are the underlying assumptions of the general inductive approach as described by Thomas (2003):

- Data analysis is determined by both the research objectives (deductive) and multiple readings and interpretations of raw data (inductive). Thus results are based on both research objectives and concepts emerging directly from the raw data.
- Different researchers are likely to produce different outcomes.
- A number of techniques can be used to assess the trustworthiness of the results. Independent replication of the research, comparing findings with previous research, triangulation within a project, research participant's feedback, and feedback from people using the research findings are all different techniques that can be used to assess the trustworthiness of the findings.

3.4 Validity and reliability assessment

There is a need for credibility in both qualitative and quantitative research. According to Muhammad. B, Muhammad. T. A and Muhammad. A (2008) the credibility of qualitative research is determined by the researcher's ability and efforts, and is comprised of validity and reliability (Golafshani, 2003). Credibility, trustworthiness and transferability are other terms that can be used to describe the validity and reliability of a research study (Muhammad et al., 2008). Patton (2001) states that validity and reliability are two factors that qualitative researchers should take into consideration when designing a study, analysing and judging the quality of the results. To address the issues of validity, reliability and the potential to generalise, researchers rely upon personal experience and the literature (Patton, 2001).

To ensure valid and reliable results McMillan and Schumacher (2006) suggest the use of more than one method of collecting and analysing data. The authors mention that valid and reliable results can be achieved by integrating multiple methods, such as, interviews, observation and recordings. Reliability and validity are conceptualized as trustworthiness, rigor and quality in a qualitative paradigm. That can be achieved by eliminating bias and increasing the researcher's truthfulness of a proposition about some social phenomenon, using triangulation (Golafshani, 2003). Validity and reliability are explained in detail in the following sections.

3.4.1 Validity

Validity determines whether the research truly measures what it was intended to measure or how 'truthful', the research results are (Golafshani, 2003). McMillan and Schumacher (2006) propose that validity describes the degree of congruence between the explanations of the phenomena and the realities of the world. To determine validity, researchers often ask a series of questions to test the research findings and they also look at previous research examples (Joppe, 2000).

3.4.2 Reliability

Joppe (2000) defines reliability as the extent to which results are consistent over time and are an accurate representation of the total population under study. The author further states that reliability measures the quality of a research instrument. A research instrument is considered to be of high quality if the same set of results can be produced in a similar study or when a set of questions are interpreted in the same way by most or all participants (Golafshani, 2003). From a qualitative perspective, reliability is not based on outsiders getting the same results, but on outsiders agreeing that, given the data collected, the results make sense (Lincoln & Guba, 1985).

3.5 Pilot study

A pilot study was conducted before the interview questions were finalised. The aim of the pilot study was to check for validity, reliability and clarity of the instrument. Specifically the aim was to eliminate poorly structured questions and those with ambiguous interpretations. The interviews were piloted online with two business owners of SMEs in Zimbabwe. Before the final interviews commenced, the interview questions were adjusted according to the outcomes of the pilot study and comments from the interviewees. From the pilot study, it was noted that interviewees needed explanation of some terms like 'B2C e-commerce' and how it differs from e-commerce in general.

3.6 Ethical and confidentiality concerns

Several measures were undertaken to guarantee the integrity of the data collected. The list of interview questions, ethics form and an introductory letter were approved by the University's ethics in research committee before the data collection process commenced. Participation in the interviews was voluntary and no individual was forced to disclose information. The data collected was only used for the purpose of this research. The participant's personal details were kept separately from the data collected and each company was given a pseudonym. Data collected was kept strictly confidential and no third party had access to the raw data. All data sources were destroyed after use.

3.7 Background and personal reflection of the researcher

The researcher has a strong academic background in Information Systems from Midlands State University in Zimbabwe where she completed an Honours degree. As her country of origin is Zimbabwe, she has basic knowledge of what is taking place 'on the ground' in the country. In addition, the researcher has first-hand knowledge of what the country has gone through during the past decade, which has been of great assistance in the research process.

3.8 Summary of research methodology

Table 3.3 shows a summary of the research design.

METHODOLOGY	APPROACH
Research question	An analysis of barriers to B2C e-commerce adoption by SMEs in developing countries
Research purpose	Exploratory and descriptive
Philosophical paradigm	Interpretive
Research model	Technology-Organization-Environment
Research strategy	Case study of Zimbabwe
Approach to theory	Deductive
Research instrument	Interviews
Data collection techniques	Qualitative • Semi-structured interviews • Documentation (company & government policies)
Data analysis techniques	Qualitative • General inductive approach to qualitative data analysis
Timeframe	Cross sectional

Table 3.3: Research methodology summary

Chapter 4: Data analysis and findings

A systematic presentation of the research findings is completed in this chapter. Theories and models discussed in previous chapters are tested by consolidating collected data, revealing findings and applying a critical analysis. The general inductive approach to qualitative data analysis was used as the main technique for data analysis. This was discussed in more detail in Section 3.3.10.2.

The chapter commences by describing the process of data analysis in section 4.1 and addressing how reliability and validity have been addressed in the study in *Section 4.2*. *Section 4.3* presents demographic analysis followed by *Section 4.4* that outlines e-commerce adoption level for SMEs. *Section 4.5* discusses B2C e-commerce perceived barriers. *Section 4.6* presents perceived benefits of B2C e-commerce. Finally the motivational factors of B2C e-commerce adoption are outlined in *Section 4.7.*

4.1 Analysis procedure

The interview transcripts were separately read and reread to discover multiple meanings of the text and label them as concepts. The researcher picked up themes and concepts that would provide the best explanation of the delay and failure in the adopt B2C e-commerce in Zimbabwe. Concepts were assigned to relevant categories created. The meaning of categories developed as the coding process progressed. The transcripts were reread until there were no new concepts identified. Multiple readings help the researcher to understand data as well as coming up with more themes. The final step was to establish links between categories. The researcher came up with a total of 47 concepts which frequent a total of 293 times for all transcripts. The concepts were categorized into 5 categories. Tables presenting categories, concepts and count of each concept are illustrated in Appendix D.

4.2 Reliability and validity testing

To ensure validity and reliability in this study the researcher adopted the triangulation strategy. The strategy was applied towards data gathering. Semi structured interviews together with document analyses were used to collect data. This was done to ensure that any flaws arising from interviews would be compensated for by the documents analysis. In addition to the triangulation method the researcher piloted the interview questions with two SME owners to check for flaws in the questions and questions were modified before interviews commenced.

4.3 Demographic analysis

This section describes the demographic variables of the sample used for this study.

4.3.1 Firm size and years in operation

Figure 4.1 shows the age and number of branches for each SME.

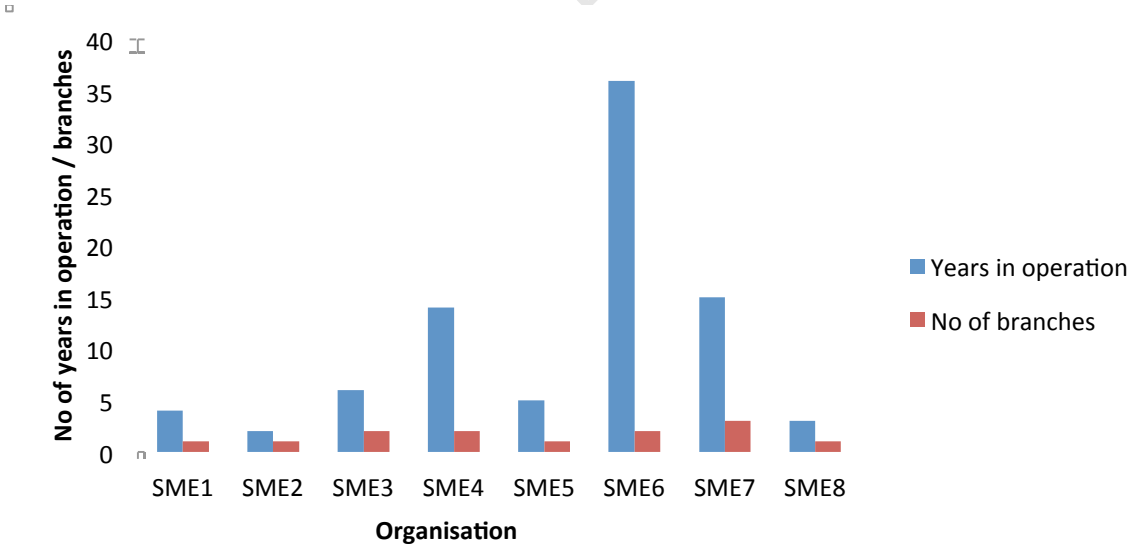

Figure 4.1: Firm size and years in operation

The majority of the SMEs have a single branch. SME7 has the highest number of branches with three branches. SME6 has been in operation the longest compared to the rest of the group. SME2 has the shortest operation period.

4.3.2 Number of employees per SME

Figure 4.2 shows the number of permanent employees for each organization.

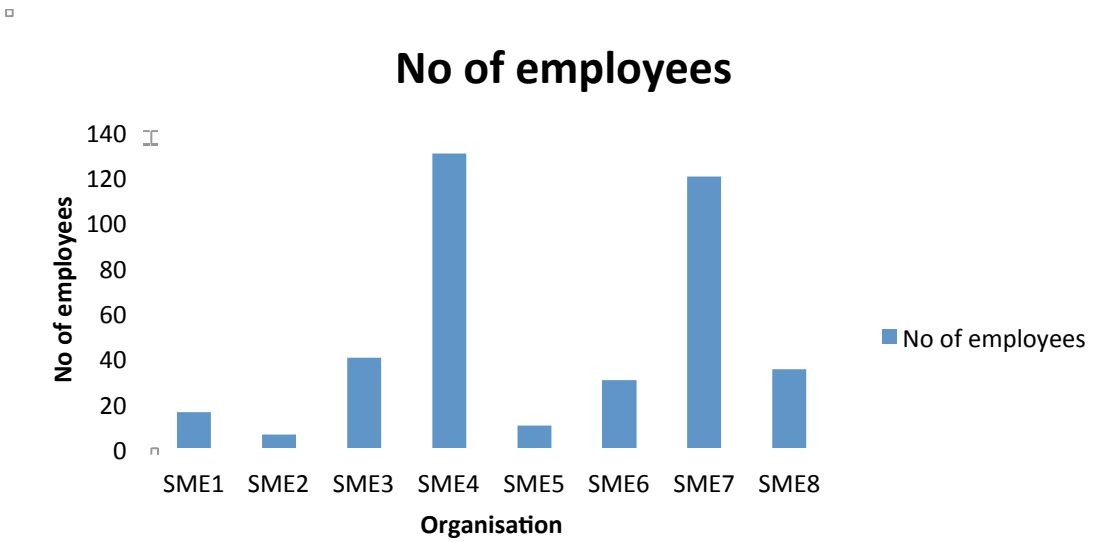

Figure 4.2: Number of employees per SME

In section 2.3, the number of employees in an organization was the major yard-stick used to define SMEs in Zimbabwe for the purpose of this study. Based on the definition proposed, the graph shows that 25% of the SMEs fall into the medium category and the rest are small organizations. SME4 has the highest number of employees with 130 and SME2 has the lowest number with 6 employees.

4.3.3 Market scope/industry sector

Table 4.1 shows the market segment and industry sector for each SME.

Company	**Industry sector**	**Market scope**	
		Domestic	**International**
SME1	Manufacturing	Yes	No
SME2	Travel and Tourism	Yes	Yes
SME3	Agriculture	Yes	No
SME4	Restaurants / Food & Beverage	Yes	No
SME5	Computer / IT	Yes	No
SME6	Agriculture	Yes	No
SME7	Travel and Tourism	Yes	Yes
SME8	Real Estate/ Property	Yes	Yes

Table 4.1: Market scope and industry sector

Market scope refers to the targeted individuals or customers. Table 4.1 shows that all SMEs are operating at a domestic level and only three out of a sample of eight are targeting both domestic and international markets.

4.4 E-commerce adoption level for SMEs

To assess the level of e-commerce adoption in Zimbabwean SMEs, the researcher used the e-adoption ladder proposed by UK-DTI (2000, as cited in Selim, 2008) together with the British Library staircase model proposed by Allcock et al. (1999). Participants were asked a set of questions designed to reveal, for example, the availability of Internet and whether or not they have a website. The organizations' websites were assessed, where applicable, to

gain a deeper insight into e-commerce adoption levels.

Table 4.2 shows the e-commerce adoption levels for SMEs in the research sample. A number of stages apply to e-commerce adoption. In the first, availability of Internet in the organization is crucial, in the second stage the use of e-mail for communication can be expected and in the third stage an organization can be expected to have a website. The fourth stage is when organizations begin to interact with customers online, customers can order goods and pay online. In the fifth stage organizations use e-commerce to support business relations and build customer loyalty. Finally the sixth stage is when organizations are fully engaged in e-commerce activities and their main focus is on improving customer services.

Adoption level	**SME1**	**SME2**	**SME3**	**SME4**	**SME5**	**SME6**	**SME7**	**SME8**
Availability of Internet	✓	✓	✓	✓	✓	x	✓	✓
E-mail	✓	✓	✓	✓	✓	x	✓	✓
Website	x	x	x	✓	✓	x	✓	✓
E-commerce	x	x	x	x	x	x	✓	✓
E-business	x	x	x	x	x	x	x	x
Transferred organization	x	x	x	x	x	x	x	x

Table 4.2: E-commerce adoption level

Table 4.2 shows that seven out of the eight SMEs have an Internet connection and make use of e-mail for both internal and external communication. Most participants confirmed that although they might have Internet in their organizations, the connection is slow and unreliable because they have usually opted for cheaper alternatives. One of the participants said:

> "W*ith the modern technology that is there, I will say we have Internet but not on a full time basis, like Econet has USB modems, Africom is doing the same thing. For a small*

organization you would rather opt for something like that to minimise cost rather than employing or getting a service that will cater for all the computers so we use, modems." [SME2]

The table also shows that only 50% of the participants confirmed that their organizations have websites and according to the participants half of these sites are non-functional. These SMEs abandoned their websites during the period of economic hardship. SMEs had other business activities to concentrate on rather than putting their efforts into maintaining websites with few visitors. One of the participants, who belongs to an organization that abandoned its website, said:

"*We have a domain but it has been down for a while, due the economic hardships we went through especially during 2008. Just before the dollarization we could hardly get cash and resources to cater for things like websites. Since then we haven't given much thought to it since we are yet to recover from the losses we made during the period*." [SME5]

The table shows that only 25% of the SMEs have implemented e-commerce.

Another manager confirmed that having an Internet connection is no longer an issue in Zimbabwe but the speed of the Internet remains a concern in the country. The manager said:

"*We did not face any challenges in securing the Internet though our Internet is very slow."* [SME1]

4.5 B2C e-commerce perceived barriers

In this study, B2C e-commerce barriers refer to factors that hinder the adoption of the technology in SMEs. Participants pointed out a number of factors as inhibitors to the adoption of B2C e-commerce.

4.5.1 Environmental context

These are factors that emerge outside the scope of an organisation. Kapurubandara and Lawson (2006) referred to these factors as external barriers.

4.5.1.1 Poor ICT infrastructure

Almost all participants complained that the technology infrastructure in the country is still very poor. This situation has led to the following challenges:

Poor and unaffordable bandwidth

According to responses, bandwidth in Zimbabwe is not affordable for small organizations. As a result most SMEs opt for cheaper options like USB modems which can only provide a limited and poor service. One SME manager said that:

> "W*ith the modern technology that's there, I will say we have Internet but not on a full time basis, like Econet has USB modems, Africom is doing the same thing. For a small organization you would rather opt for something like that to minimise your cost rather than employing or getting a service that will cater for all the computers so we use, modems."* [SME2]

Limited coverage

One of the managers whose organization uses the Econet line, mentioned limited coverage as one of the challenges she is facing as a result of opting for a cheaper connections.

> *"Well the first time we tried with Africom yes we had a challenge, because it was still a new product that was on the market, actually they had just launched the product so coverage throughout some areas wasn't 100%, like here in the offices it wasn't accessing anything so they were saying it's a black spot and other areas out of town, but when we tried with Econet it worked."* [SME2]

Unreliable and slow network

Despite having the most expensive bandwidth the country's network is still very slow. These

speed problems make it difficult for businesses and customers to perform online business transactions, as revealed in the quote below.

> *"I think the problem we have is the network, because at times it is very difficult to access information on the Internet because the network is very slow. I think if the network was fast everything will be faster as well so if they improve the network it means we can retrieve information from the Internet easily and faster, and that makes everything quicker, even for customers buying online. The network is just proving to be slow and at the same time because of its availability lately, a lot of people want to be on the Internet and our network cannot handle the large numbers.*" [SME3]

Another participant said the Internet in the country is very unreliable to the extent that they sometimes go for days or weeks with no Internet. This makes it impossible for them to do business online. The participant said:

> "*I think the main issue is the type of connection that we have, as in you can either connect through wireless, fibre or maybe digital cables. You find that Telone offers digital cables and half the time they are down or very slow and the wireless technologies at times they do not reach where you want them to be. At times they are intercepted so usually that the challenge that we have*." [SME5]

One of the participants confirmed that the level of their Internet use highly depends on its availability. Asked about the proportion of their offline and online activities the participant said:

> "*Due to the availability of Internet I would say its 70% offline/30% online.*" [SME8]

4.5.1.2 Erratic power cuts

Most participants referred to the issue of power cuts in Zimbabwe as a major concern when it comes to technology adoption. One emotional participant said the issue of power supply needs to be dealt with before they can even start talking about technology adoption in the country. According to him:

> "*Before people start preaching about technology adoption in this country, the government needs to deal with the issue of power supply first. There is unreliable power supply country-wide. We sometimes go for hours or even the whole business day without electricity so, tell me how can you do business online without electrical power? Our country needs to address this issue with urgency.*" [SME8]

There are regular power cuts in the country and most businesses and individuals are now relying on solar power and generators. Most of the telecommunication lines available in the country, such as fibre optic cable, can only work in the presence of electricity. For some the unavailability of power also means the unavailability of Internet. Some participants said they are very willing to participate in e-commerce activities but ZESA and Telecom companies are letting them down. Individuals and businesses sometimes lose their electrical gadgets due to regular power cuts. Participants made the following comments about the supply of electricity in the country:

> "*We rarely receive continuous power supply on a single business day, and talking about online business in Zimbabwe right now is just a dream*." [SME1]

> "*Most of the available technologies rely on the availability of electricity. If we look at Telone Internet lines we use here, when ZESA switch off electricity the Internet will be down as well. Telecel lines for example if there is no electricity that means there will be no network."* [SME5]

> *"I lost 2 PCs due to continuous power cuts"* [SME4]

4.5.1.3 Lack of public awareness

Lack of knowledge on the use and potential benefits of ICT can also hinder the growth of e-commerce (Molla, 2005). Participants confirmed that most of their customers are not aware of the technologies. As a result, it is of no use to implement B2C e-commerce services. The only technology most of them are aware of is chat and e-mail. One of the participants said the public is still holding on to the traditional way of buying because they are not aware of the existence of more modern ways. The participant recommends educating of the public

through the efforts of government and responsible ministries. Participants made the following comments about public awareness:

> *"I think it's not about the government as such but also the individuals they need to be educated.*" [SME8]

> *"Individuals lack knowledge, they don't know what e-commerce is or how they can use it."* [SME5]

> "*I think it's all to do with our background as well, especially for the middle-aged people, they did not learn computers, but in as much as they have not learnt they cannot ignore it because it's just technology they cannot do away with it."* [SME1]

4.5.1.4 Government initiatives, legislation and support

Most participants could relate to the slow adoption of e-commerce in their business to government legislation. However, some were very concerned about the Internet monitoring system in the country. Due to the political nature of the country, the government passed the 'Internet and Phone Bill', which monitors all incoming and outgoing information. This bill was supposedly drawn up in an effort to protect the country from terrorism. However, some participants felt that this law violates their privacy. One of the participants said:

> "*Ever since the Internet, phone bill was passed, I personally don't feel safe to be online. You are really not sure what kind of information these people are looking for.*" [SME5]

4.5.1.5 Political conditions

A participant said the country has been politically unstable for more than a decade, and the conditions are not conducive for ICT development. The government could not commit time to issues concerning technology because they were concerned with other things. Because of the political status of the country, the government only had the country's security at heart and as a result, they passed some legislation that made the establishment of new technology in the country a daunting task for service providers. Some of the participants who blamed the government's legislation for the slow development of technology in the

country said:

> *"I am not fully aware of the ICT policy but I believe the major hindering law that is the one which prohibits private players to spearhead major projects. This has been revealed as evidenced by the incoming of private companies like Econet.*" [SME7]

> "*The ICT ministry is still being hindered by the legislation available. They try but the legislation is too restrictive, thus some technologies are not yet available in our country. Due to the political situation in the country, the government could not ease the process of launching a new technology in the country. A lot of evaluations need to be done before one can launch a new technology*." [SME8]

> "*The government needs to gain trust in all new technology services to be launched before the service is launched. Talk of the BlackBerry Internet service launched by Econet wireless recently of which they were instructed to cease the service with immediate effect for some unknown reasons.*" [SME8]

4.5.1.6 Economic conditions

According to participants, the economic conditions in the country for the past decade made a huge impact on the adoption and implementation of B2C e-commerce especially for small organizations. The government, the public and businesses were affected by these economic hardships. One of the participants confirmed that their company did not have enough finances to cater for things like Internet and that buying a computer had been seen as a luxury in the business. The general public had also been affected by economic hardship and as a result, resources like Internet and computers were only available to a minority. Another participant confirmed that the government could not invest in technological infrastructure because money had to be channelled to other basic needs like food, water and electricity. Even though the government tried to provide electricity, they could not provide enough to sustain the whole country thus leading to the regular power cuts already noted. The following comments were made by some participants in connection with economic hardships:

"*We have a domain but it has been down for while due to lack of funds.*" [SME5]

"*The government had other issues to focus on rather than trying to assist us in implementing technology. The country did not have enough money to cater for that*." [SME4]

"*Most of our infrastructure equipment is imported from other countries and the inflation rate in the country made it difficult for the country to foot its bills.*" [SME4]

"*When we talk of the economic conditions maybe, people who have access to the Internet in the country are still few*." [SME1]

"*Internet and mobile phone services were too high and individuals and small organizations looked at the use of Internet services as a luxury."* [SME7]

4.6 Organizational context

These are factors that emerge within an organisation. In the barriers to e-commerce adoption model Kapurubandara and Lawson (2006) referred to these factors as internal barriers.

4.6.1.1 Owner/manager characteristics

According to Kirby and Turner (1993), the adoption of e-commerce services greatly relies on the business owner's acceptance. Business owners need to understand and appreciate the potential benefits of adopting e-commerce services for them to be in a position to accept the technology.

Some participants confirmed that they have enough knowledge about B2C e-commerce services and if time and resources allow, they are prepared to adopt the technology. Some of them are even trying hard to make use of B2C e-commerce activities although they are facing a number of challenges. One of the participants, a young owner of an SME with a positive mindset about technology, said:

> "*I do understand and appreciate the great advantages of using technology in our business but as I said before, the availability of Internet in our country is really drawing us back*" [SME5]

Another manager who appreciated the technology but lacked the technical 'know-how' said that he is prepared to adopt new technology when the time is right, that is when there are enough funds to cater for the implementation process. In addition, they saw the need for professional assistance during the implementation.

> "*I don't think there are challenges we will face as such, but maybe what we need as a company now is to get someone who is well professional in this area, who will tell us how to go about it. We are prepared to invest in this as a company we are ready to invest in this."* [SME1]

4.6.1.2 Lack of financial resources

Responses revealed that most SMEs do not have enough money to implement e-commerce services. One participant said there are no manufacturers of IT equipment in the country. Because all resources are imported from neighbouring countries, they become expensive just like the bandwidth. Due to their small size and limited funds, most SMEs are failing to establish reliable Internet connections. Some participants indicate that there are very few organizations that offer financial support to SMEs in the country and due to the high corruption levels, it has become difficult for them to access funds. The following statements confirmed this:

> "*There are no locally manufactured hardware and software and imported material is very expensive.*" [SME7]

> *"As a small organization you would rather opt for something like that to minimise your cost rather than employing or getting a service that will cater for all the computers.*" [SME2]

> *"We don't have enough funds to initiate such systems since we are operating on a small scale. People have become corrupt in this world and no matter how much the*

ministry tries, the funds are being channelled to other activities before they get to us." [SME1]

4.6.1.3 Firm characteristics

The adoption of e-commerce services in SMEs can be influenced by the amount of technology currently in use in the organization, the nature and environment in which SMEs operate (Lacovou et al., 1995). Almost all participants who participated in this study own a computer and have an Internet connection. This shows that SMEs are committing some of their time to technology issues. Only one participant stated that the nature of her work does not allow her to engage in e-commerce activities. This manager said they are targeting only a specific group of people and, for security reasons, they do not want to be exposed to the rest of the world:

"*If you are targeting specific people, specific groups, to minimize risk and for security reasons to be honest you don't want to be also exposed to everyone. Even the individuals that you don't want to contact you will start phoning you, any time and you feel it's actually exposing you more so we try by all means to focus on specific groups.*" [SME2]

4.6.2 Technological context

This refers to the level of technology use in the firm as well as factors that determine the ability to adopt a technology.

4.6.2.1 Security, trust and confidentiality concern

The greatest concern in many businesses when it comes to the issue of technology is that of security. Responses showed that almost all SMEs who participated in the interviews are concerned with the safety of their businesses online. One participant from an old, family-owned business personally did not trust technology and was not prepared to accept technology as a way of trade in his company. The manager understood the advantages of doing business online but to him being online was tantamount to exposing the company to intruders. His view was that everyone, including one's enemies, knows what one is doing

online at any given time. The following extract bears witness to his point of view.

> *"...by putting something on the Internet and five thousand million people get to know about it, where is the confidentiality. Do you really want the rest of the world to know that in your right ear you can't hear, do you really want the whole world to know that?"* [SME6]

> "*…you can get some little hacker dancing in your world…"* [SME6]

> "*...if this Wiki leaks thing can be leaked then the damage that is caused, one way or another whether testified or not its immaterial. The actual damage caused by the lack of confidentiality is tremendous business is losing its confidentiality, losing its intellectuality, it's also losing its personality.*" [SME6]

The participant from SME6 said that, the issue of trust that is built in face-to-face trading is lost in online trading. The participant said:

> "*How can I talk to you, number one if I have never met you and don't know who you are and what you do? You do need to explain yourself where you are coming from so that I've got an idea that idea of who I'm meant to be talking to.*" [SME6]

> "*I personally don't want to take money out of my pocket and give it to somebody I know nothing about. They can be full of beautiful bitches' nice images, lovely images, we can do this we can do that, but the ethics of business, the morality of it is seriously being eroded. So, which is great, disadvantages or advantages?*" [SME6]

4.6.2.2 Relative advantages

Some participants confirmed that e-commerce could strengthen their ability to venture into global markets as well as stand competition in such markets. One of the participants made the following comment:

> *"With online business it is easy to reach both international and domestic clients."* [SME7]

Some believe that online business can help them to reduce transaction cost. The following extract reveal this:

> "*…otherwise you can imagine these days with the traffic jam and the high fuel cost and everything else. If they can access the business through the Internet I think that will also be cheaper and efficient for everyone."* [SME1]

4.6.2.3 Compatibility

This refers to the degree to which the technology aligns with existing business values and needs. Some participants confirmed that there line of business does not allow them to make use of B2C e-commerce. This was revealed in the following statement:

> "*If you are targeting specific people, specific groups, to minimize risk and for security reasons to be honest you don't want to be also exposed to everyone. Even the individuals that you don't want to contact you will start phoning you, any time and you feel it's actually exposing you more so we try by all means to focus on specific groups.*" [SME2]

4.6.2.4 Observability

This refers to the extent to which one can learn about a technology from others. One of the participants from an organisation that has started implementing e-commerce confirmed that they got the idea from another company in the same industry. Asked where they got the idea of online business the participant made the following comment:

> "*Easy Ticket engaged us*" [SME7]

Another real estate company confirmed that they got the ideas from other business. The following extract reveals this:

> "*It was an idea from other real estate businesses.*" [SME8]

4.7 Perceived benefits of B2C e-commerce

Although they are not fully utilizing e-commerce services, most SMEs showed a great appreciation of the advantages offered by B2C e-commerce services. Both adopters and non-adopters cited the following benefits:

4.7.1 Cost reduction

The major benefit enjoyed by adopters of B2C e-commerce is the reduction of transaction costs through elimination of the middleman in the distribution channel. One of the participants, who had a very good knowledge of the technology, praised B2C e-commerce for its ability to reduce business costs if fully and properly used, especially for those who are in the retail industry. According to him, with B2C e-commerce one can do business with no physical retail outlets. All one needs is a storage room to keep one's stock and reliable transport for the distribution of goods.

> *"I think if fully utilised, the technology can take us far as business. Online trading can allow you to operate business from home and forget about paying rental costs. People can place orders online and all you need is somewhere to keep your goods and transport to deliver goods to your clients.*" [SME8]

The elimination of travelling costs for consumers when online shopping was also cited by some participants. One participant said if B2C e-commerce services are utilised customers no longer need to physically visit the company's retail outlets for shopping, instead the shopping is done in the comfort of their homes. This saves money as well as time due to the hassle of driving long distances or on congested roads. The participant said:

> *"It will be easy for customers to see the product range we have online, otherwise you can imagine these days with the traffic jam and the high fuel cost and everything else. If they can access the business through the Internet I think that will also be cheaper and efficient for everyone."* [SME1]

4.7.2 Security

Some participants said B2C e-commerce is safer than traditional commerce and, if the opportunity is presented to them they would definitely use it. With online trading, people no longer need to carry around large amounts of cash instead everything is done electronically without involving any cash transactions. This was confirmed in the statement below:

> "*…at times you don't have to carry around large amounts of cash, with online trading you know you are just carrying your cards with you. You do not have to move around with cash, this reduces the chances of being snatched. I think it's better, it's just that our technology is moving very slow but if it was faster I'm sure we will be using the technology*." [SME3]

4.7.3 Convenience and efficiency

B2C e-commerce makes things easy for both businesses and customers. One of the participants said you do not have to wait for trading hours to do your shopping with online trading.

> *"...it's quite effective to be honest, you have instant response."* [SME2]

> "Y*ou can do your transaction rapidly, some of them can even be done from home or where ever you are as long as you have an Internet connection. You can prepare someone's quotation at 10pm and send it, it is very efficient…"* [SME5]

4.8 B2C e-commerce motivational factors

These driving forces refer to factors that push firms into utilising B2C e-commerce services. The need to upgrade to current technology and the need to fight competition in the market were the two major factors identified by both SMEs who are already using B2C e-commerce services in their organization, and those who are looking towards adopting it.

4.8.1 The need to be up to date with technology

Because we are living in a world of technology, businesses need to be up to date with current technologies. This can help them to build customer loyalty, improve customer services as well as fit into the global market. Participants said technology is moving very fast and as businesses, they need to take advantage of its services. The following statements confirm this:

> "*I think what motivates is the modern times we are in. We have no choice you know the world has become a global village, so we need to be accessed by everyone in the world and it can only happen through the use of e-commerce*." [SME1]

> *"The driving force is the need to network with our customers from wherever they are at any given time.*" [SME7]

4.8.2 Competition

Some participants said they adopted B2C e-commerce services because some companies who were in the same line of business had done so. Most of the firms who are adopting the technology are doing so because of their competitors. The need to withstand competition through improved customer services is the driving force behind this. One of the participants from a real estate company said:

> "*It was an idea from other real estate businesses.*" [SME8]

Another one from a travel and tour business confirmed that their trading partners introduced them to the technology.

> "*Easyticket engaged us.*" [SME7]

4.9 Summary

This chapter discussed the demographic nature of the SMEs and their e-commerce adoption levels. Results show that most SMEs are at the second stage of the e-commerce adoption ladder with a few SMEs struggling at the third level. The third level is the highest level that

SMEs in Zimbabwe have reached so far. SMEs are moving both up and down the adoption ladder and this is due to various negative and positive factors. Barriers to the adoption of B2C e-commerce were identified as environmental/external, organisational/internal or technological. organisational barriers emerge from the organization itself and external emerge from outside the organization. organisational barriers indicated by participants were owner/manager awareness, security and confidentiality concerns as well as the firm's characteristics. Economic and political conditions, unreliable/poor network, unavailability of power in the country, limited network coverage, unaffordable bandwidth and a lack of awareness among members of the public were also identified as organisational barriers. Benefits enjoyed by adopters are reduced transaction costs, greater security, efficiency and convenience. The need to stay up-to-date with technology and fit into the global market as well as create customer loyalty and the need to fight competition were the factors that motivated adopters to implement B2C e-commerce.

Chapter 5: Discussion and Interpretations

This chapter explains the meaning and importance of the major findings of the study. Findings are related to previous research and links between findings are identified. Similarities and differences are justified and recommendations are made. The chapter is presented as follows:

Section 5.1 discusses the level of e-commerce adoption for SMEs in Zimbabwe while Section 5.2. discusses the key factors that hinder the adoption of B2C e-commerce while, Section 5.3 presents the benefits offered by B2C e-commerce services. Lastly, Section 5.4 elaborates factors that motivate businesses to adopt B2C e-commerce.

5.1 E-commerce adoption level

Finding

There is a wide growth of internet in Zimbabwe but non of the SMEs have fully adopted B2C e-commerce, very few SMEs in the country are at the early stages of B2C e-commerce adoption while the majority are yet to consider the use of the technology.

Research question Answered

What is the e-commerce adoption level for SMEs in Zimbabwe?

Discussion

Findings of this study reflect that almost all SMEs have internet connection in their organizations. The most common reason cited for the wide use of Internet and e-mail is the need to adapt to new technologies and meet customer demands. Allcock et al. (1999) states that organizations adopt e-commerce in order to meet business needs.

According to the UK-DTI (2000, as cited in Selim, 2008) e-adoption ladder, e-commerce is defined as the online interaction between a firm and its customers for the placement of an order. Online activities include issuing or receiving an invoice and an electronic payment. However, responses from SME7 and SME8 and their websites assessment show that both organizations are not utilising e-commerce to its full capacity. In fact none of the organizations are at e-business and transferred organization level. Websites for SME7 and SME8 are only used to place orders, advertising and query logging and no financial

transactions are done on line. Although they have reached this level, their responses show that most of them are struggling to maintain this state. The major issue mentioned by the participants is poor quality of Internet services. One participant said:

> "*I think the main issue is the type of connection that we have, as in you can either connect through wireless, fibre or maybe digital cables. You find that Telone offers digital cables and half the time they are down or very slow and the wireless technologies at times they do not reach where you want them to be. At times they are intercepted so usually that's the challenge that we have*." [SME5]

5.2 Barriers to e-commerce adoption in SMEs

5.2.1 Environmental context

The difference in environmental factors for developed and developing countries, for example the available of infrastructure and social cultural issues does not support generalizability of findings derived from developed countries to developing countries (Kapurubandara and Lawson, 2006; MacGregor and Kartiwi 2010). SMEs in developing and developed countries face uniquely different challenges. To understand the delays and failure to adopt e-commerce by organizations, the environment in which businesses operate plays a vital role (Kapurubandara, 2009; Kapurubandara & Lawson, 2006).

5.2.1.1 Poor ICT infrastructure

Findings

The lack of proper ICT infrastructure in the country has affected the adoption of B2C e-commerce adoption by SMEs.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

Molla (2005) indicates that the success of e-commerce heavily relies on the availability of a technology infrastructure. Telecommunication infrastructures are required to connect

various regions and parts of the country. E-commerce adoption can be delayed by poor telecommunications infrastructure which includes poor Internet connectivity, lack of fixed telephone lines for end user dial-up access, and the underdeveloped state of the Internet Service Providers (Kapurubandara & Lawson, 2006). Tangpong et al. (2009) identify that the availability of Internet allows businesses and individuals to engage in e-commerce activities. In their study to identify barriers to e-commerce adoption in developing countries, Lawrence and Tar (2010) indicate that most developing countries are characterised by unreliable and poor Internet connection due to poor telephone communication and erratic power supply.

Through this research, it was confirmed that Zimbabwe is characterised by poor technological infrastructure, which results in an unaffordable, poor network in the country. The poor technological infrastructure is a result of a weak economy and unfavourable political conditions. Findings reveal that there is no adequate Internet to enable the adoption of B2C e-commerce. Most participants view regular power cuts in the country as the greatest challenge faced in implementing and adopting e-commerce. Inadequate electrical supply in the country is mainly due to poor economic conditions. The regular power cuts in the country has led to unreliable Internet throughout the country.

5.2.1.2 Public awareness

Findings

The lack of technology awareness of the public has reduced the likelihood of B2C e-commerce adoption by SMEs.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

Hunaiti et al. (2009) identified individual awareness as an important factor in the implementation of e-commerce. Customers need to have access to services and at the same time know how to use them. This is supported by Molla (2005) who states that lack of knowledge about the use and potential benefits of ICT can also hinder the growth of e-

commerce. In an exploratory study to determine the use of the Internet in a small business in New Zealand, Abell and Lim (1996 as cited in Chitura, Mupemhi, Dube and Bolongkikit, 2008) identified lack of awareness on the part of the customer or supplier as the main inhibitor in the adoption of technology in small businesses. Sometimes customers are not connected to the Internet or are too concerned with privacy and security issues. This study finds that a lack of public awareness and the unavailability of Internet are some of the factors affecting the growth of B2C e-commerce among SMEs in Zimbabwe. Businesses cannot make use of B2C e-commerce services when their customers are not aware of and cannot use the technology. Findings reveal that the public's lack of awareness of the Internet is mainly due to poor economic conditions. The Internet is available only to a small minority due to its high cost. In addition, the government has failed to provide facilities like 'Telecenters', which would have provided Internet to the general public, due to a lack of funds.

5.2.1.3 Economic and political conditions

Findings

The lack of funds in the country has affected the adoption of B2C e-commerce by SMEs.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

The cost of accessing the telecommunication infrastructure also influences the growth of e-commerce. The overall technology infrastructure development of a country relies heavily on economic and geographical conditions. The economic condition is also widely recognized as a major driver for e-commerce adoption. The GDP and income per capita are common indicators of the economic condition of a country. Since e-commerce relies on a technology infrastructure being in place, this makes it relatively expensive for many developing countries (Lawrence & Tar, 2010; Molla, 2005). Consequently, countries with unfavourable economic conditions are less likely to be involved in e-commerce (Lawrence & Tar, 2010). The economic condition also affects the socio-cultural condition of a country. Alternatively,

the political situation is a key factor for e-commerce growth. In a country with unstable political conditions, it is less likely that the government will pay attention to ICT development (Matula & Brackel, 2007).

The study findings reflect that the economic and political situation in the country has affected the adoption of B2C e-commerce in several ways. Firstly, because of the poor economy the government has had to ensure that there are adequate basic services in place as a primary concern. The government has viewed technology as a luxury and not as a necessity. The ICT sector in the country has been neglected for more than a decade leading to poor technological infrastructure (Kapurubandara & Lawson, 2006; Kapurubandara & Lawson, 2008). The poor technological infrastructure in turn has led to an unaffordable and unreliable network. Due to the lack of funds in the country, the government could not provide adequate electrical power to cater for the whole population. Technology gadgets make use of electrical power and the unavailability of electricity in the country made it impossible for SMEs to implement many forms of technology. The poor economy has also affected public awareness thus, only the privileged few have had access to the Internet or been able to use it. The government has not been able to provide the public with 'Telecenters' due to lack of funds.

Participants indicated that, because of the political situation in the country, the government had to pass some legislation in the best interests of the country's safety. Some of the legislation passed has created an environment, which is not favourable for the growth of e-commerce. Legislation like the Internet and Phone Bill violates the confidentiality rights of Internet and phone users. This was confirmed in the study of Zimbabwe media index by Machingura (2009) where the author indicates that Internet services in the country are "subject to government interference, especially via the Interception of Communications Act or through surveillance of activity at Internet cafés" (p. 400).

5.2.1.4 Government initiatives, legislation and support

Findings

Lack of government support as well as unfavourable legislation hinders the growth of

technology in the country, which in turn reduce the likelihood of B2C e-commerce adoption by SMEs.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

This is an important aspect in the adoption of e-commerce and ICT in general. Government initiatives can come in different forms, for example, promotion of ICT usage, education and the establishment of adequate regulatory framework for e-commerce, including taxation and tariffs for revenue generated through e-commerce, as well as Intellectual Property Protections (Molla, 2005). Government initiatives are limited by factors such as the country's political condition, economic condition, and external influences from other countries. Regulatory issues, ineffective policies, increased state involvement, absolute universal services, obligations and weak undefined regulations can reduce the chances of e-commerce adoption within SMEs (Zunguze, 2008). According to Gwabanayi (2011), there are claims that the country's licensing framework is holding back ICT expansion plans by players in the country. ICT providers complain about the delays in the issuing of licences by the regulator. This agrees with one of the participants' claims who states that the unavailability of most recent technologies in the country is due to tough regulatory process. Therefore, this calls for the government to ease the process of launching new technologies. In addition, the findings revealed that in an effort to protect the country, the government passed some legislation that created an unfavourable environment for the growth of technology in the country.

Bhalla, Davies, Chitiga-Mabugu and Mabugu (1999) mention that there is no dearth of organizations supporting SMEs in Zimbabwe. Small Enterprise Development Corporation (SEDCO), Ministry of SMEs, Chamber of Commerce Small Business Support Unit and Zimbabwe Enterprise Development Programme are some of the sectors that offer support to SMEs. The lack of support for the growth of SMEs in the country is due to lack of coordination within the organizations (Bhalla et al., 1999). Reflecting on this point, one of

the participants confirmed that, funds are set aside for SMEs by the ministry but due to the high level of corruption in the country, the funds are being channelled to other activities.

5.2.2 Organizational context

Cloete (2002) and Cloete et al. (2001) highlighted several organizational factors that affect the adoption and implementation of e-commerce which include lack of time to investigate options, lack of information options, lack of access to computers, lack of access to hardware and software, limited knowledge of e-commerce models and methodologies. This study found that these factors are still barriers to the adoption and implementation of B2C e-commerce by SMEs in Zimbabwe. The factors were classified into owner/manager characteristics, lack of financial resources and firm characteristics.

5.2.2.1 Owner/manager characteristics

Findings

The growth of technology in an organization relies on the owner or managers' acceptance and knowledge.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

As key decision makers and the most influential people in an organization, owners/managers have an important part to play in successful implementation of e-commerce (Kirby & Turner,1993), A study by Matula and Brackel (2007) indicates that a knowledgeable and skilled IT staff is crucial for successful implementation and adoption of e-commerce. In addition, the level of computer literacy of the owner and lack of knowledge on how to use the technology also determines the likelihood of e-commerce adoption (Kirby & Turner, 1993; Lacovou et al., 1995). However, the results of this study reveal that most owners/managers had no IT skills, nor did they understand B2C e-commerce services and its benefits. Some of them stated that they require IT specialists to give them advice on how to implement the technology while some did not believe that e-commerce could offer

comparative advantages. The adoption of e-commerce services greatly relies on the business owner's acceptance hence, business owners need to understand and appreciate the potential benefits of adopting e-commerce services for them to be in a position to accept the technology. From the findings of this study, perceptions and attitudes of most SMEs towards B2C e-commerce were strongly favourable except for a few who lack confidence in online activities and are not ready to implement the technology.

5.2.2.2 Firm characteristics

Findings

Some firm characteristics limit the chances of B2C e-commerce adoption.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

The level of technology currently in use in an organization, for instance PCs with modems and the use of email can make adoption easier (Lacovou, et al., 1995). Almost all SMEs who participated in the study had Internet in their organizations. Tangpong et al. (2009) indicate that B2C e-commerce for products that are not closely associated with digitisation is less likely to be accepted by individuals. Consumers usually prefer to purchase this type of product through traditional retail channels. On the other hand, some studies viewed industry sector as one of the most important factors in assessing a firm's ability to adopt e-commerce. Duncombe et al. (2005) identified telecommunications services, consumer electronics, travel, automotive products and financial services as good prospects for B2C e-commerce growth. While Kapurubandara and Lawson (2008) consider firm size to be a major determinate of e-commerce adoption.

The Kapurubandara and Lawson (2006) model asserts that the firm's target market will determine the external pressure around it including its likelihood to adopt e-commerce services. Firms that target international customers are likely to face tough competition. The social background, literacy level and affluence of the firm's target market can have a great impact on the adoption of the technology. A firm targeting people from a poor background

is less likely to adopt e-commerce services. In their study to identify benefits and barriers to e-commerce adoption by SMEs in Gweru (Zimbabwe) Dube, Chitura and Runyowa (2010) identified that the way in which businesses and customers conduct business may not be compatible with the technology. The incompatibility issue was confirmed in this study finding where one of the participants mentioned that their line of business restricts them from using B2C e-commerce services to support business. In addition, the demographic analysis of SMEs in Zimbabwe revealed that SMEs are relatively small and mainly target local customers who generally have no access to the internet and poor background of ICT.

5.2.2.3 Lack of financial resources

Findings

SMEs do not have enough funds to finance B2C e-commerce implementation.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

According to Kauffmann (2005) the growth of SMEs in Africa is hampered by their limited access to finance. Their main sources of capital are retained earnings and informal savings and loan associations, which are unpredictable, not very secure and have little scope for risk sharing because of their regional or sectoral focus. Access to formal finance is poor because of the high risk of default among SMEs and due to inadequate financial facilities (Kauffmann, 2005). The findings of this study indicate that SMEs do not have enough funds to invest in the implementation of B2C e-commerce due to the economic hardships in the country. Participants also mentioned that the unavailability of locally manufactured technology and equipment makes it expensive for them to acquire the necessary technology for e-commerce adoption.

5.2.3 Technological context

5.2.3.1 Security, trust and confidentiality concern

Findings

Businesses are concerned about safety online therefore, they have not gained confidence in

online business.

Research question answered

What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?

Discussion

It is more difficult to establish trust between partners in e-commerce than in traditional commerce. Yet trust is more important in e-commerce than in traditional commerce since online services and products are not immediately verifiable (Gefen & Straubb, 2004; Lawrence & Tar, 2010). B2C e-commerce has failed to create the level of trust that is normally found in "face-to-face" transactions. Because of the lack of trust, businesses as well as consumers need the assurance of similar protections in the online world to those that exist in the physical world (Rowley, 2002). In order to expand the digital economy there is a need to promote confidence in electronic transactions. Shoppers must have the assurance that their communications are secure, their personal data is protected and that they will in fact receive the goods or services for which they have paid (Kirby & Turner, 1993). Research findings reveal that SMEs feel that e-commerce exposes them to intruders. Information about an organization is open to the world and organizations are uncomfortable with the fact that they do not know who is using their information and for what purpose.

5.3 Benefits of B2C e-commerce

Findings

B2C e-commerce reduces trading cost, is secure and offers a convenient and efficient way of doing business.

Research question answered

What perception do SMEs in Zimbabwe have towards B2C e-commerce?

Discussion

Alam and Noor (2009) mention that the greater the perceived benefits of a technology the higher the chances of the technology being adopted. Richard et al. (2009) identify the

following benefits of adopting B2C e-commerce: cost reduction, access to new markets and continuous trade. The research findings show that SMEs believe in the comparative advantages offered by B2C e-commerce. Participants identified cost reduction through the elimination of intermediaries as the major benefit offered by B2C e-commerce services. E-commerce gives organizations access to new markets, both domestic and international (Alam & Noor, 2009).

Findings reveal that SMEs in Zimbabwe know and appreciate the potential benefits of B2C e-commerce. Participants mentioned that online transacting is safer than offline transacting because there is no need to carry cash. They also confirmed that online transacting offers a convenient and efficient way of doing business.

5.4 B2C e-commerce motivators

Finding

The major reasons why SMEs in Zimbabwe adopt e-commerce is the need to stay strong in the global competition and to be up to date with current technology.

Research question answered

What factors drive SMEs in Zimbabwe into e-commerce adoption?

Discussion

Keeling et al. (2000) investigated factors that motivate and inhibit e-commerce adoption in SMEs. The researchers indicate that e-commerce adoption is motivated by pressure from buyers, the belief that adopting e-commerce can increase sales and reduce costs, give access to new markets and a belief that e-commerce gives an advantage over competitors in the industry. E-commerce enables companies in developing economies to exploit economies of scale and through creating new market opportunities beyond the domestic economy (Kassie, 2004). These arguments are supported by the study findings in which prospective and current adopters perceive cost reduction and access to new markets as a benefit of B2C e-commerce adoption. E-commerce is becoming a fact of the rapidly changing business environment. Being connected will become a prerequisite to success in this world of technology (IMF, 1997). This school of thought is supported by the following research

findings. Asked why they had decided to use B2C e-commerce in their organization, one of the business owners said that they had no choice but to be in line with current technology. The following comment was made by the participant:

> *"Because of the modern times we are in. We have no choice, you know the world has become a global village, so we need to be accessed by everybody in the world and it can only happen through the use of e-commerce."* [SME1]

5.5 Summary of the chapter

The research findings have been discussed and interpreted to show the practical and theoretical contributions they have made. Table 5.1 presents the summary of findings and answered questions.

Research question answered	**Findings**
What is the e-commerce adoption level for SMEs in Zimbabwe?	• Despite wide growth of Internet in Zimbabwe, SMEs have not fully adopted the technology; very few SMEs in country are at the early stages of B2C e-commerce adoption while the majority are yet to consider the use of the technology.
What are the key factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe?	• Poor ICT infrastructure • Lack of electrical power supply in the country • Unfavourable economic and political conditions • Government legislation and lack of external support • Consumer lack technology awareness • Incompatibility of business operations and the technology • Security, trust and confidential concern
How has government policies, economic and political conditions in the country affected the growth of B2C e-commerce in SMEs?	• Due to the economic hardships the government had to commit the little it had to basic needs rather than ICT development • For political reasons and for the best interest of the country's security, the government pass regulations which are not favourable for the growth of ICT. • The government policy made the process of establishing a new technology in the country a daunting task, • Monopoly in the telecomm industry, the government controls everything; they don't allow private investors to play any role as far as control of the IT sector is concerned.
What perception do SMEs in Zimbabwe have towards the adoption of B2C e-commerce?	• B2C e-commerce reduce cost, is convenient, secure and efficient • B2C e-commerce can expose the company information to intruders
What factors drive SMEs in Zimbabwe into e-commerce adoption?	• The need to be competitive in the global market • The need to be up to date with technology

Table 5.1: A summary of findings and research questions answered

Chapter 6: Conclusion and recommendations

This chapter will present a conclusion and limitations of the research as well as give practical and theoretical recommendations. Section 6.1 gives a conclusion of the research while section 6.2 presents research limitations. Recommendations are presented in section 6.3.

6.1 Conclusion

This exploratory study looked at factors affecting the adoption of B2C e-commerce by SMEs in Zimbabwe. The study attempted to expose factors that inhibit implementation and adoption of B2C e-commerce. The Technology Organization Environment (TOE) model was proposed for the research.

SMEs are commonly viewed as the backbone of the economy in both developed and developing economies. At the same time, the emergence of B2C e-commerce has changed the way in which organizations conduct business. Literature reveals that organizations using B2C e-commerce have gained more opportunities and advantages. Yet despite these advantages, findings from this study show evidence of a delay and failure in the adoption of B2C e-commerce by SMEs in Zimbabwe. Although there is evidence of a wide growth of Internet use among SMEs in the country, very few of them are fully utilising B2C e-commerce services. In fact most SMEs are still in the early stages of e-commerce adoption.

The study identified various factors leading to a slow diffusion of B2C e-commerce among SMEs in the country. Some of the barriers identified are specific to Zimbabwe and some are more pronounced than they would be in other developing countries. The most dominant issue is unfavourable economic and political conditions in the country, which underlies most inhibitors like poor technological infrastructure, erratic power cuts, lack of public awareness e.t.c. Due to poor technological infrastructure in the country the network is very slow and unreliable with a limited coverage. It was discovered from the analysis that the country does not have enough time or funds to commit to ICT development. Lack of funds has also led to regular power cuts, limiting the use of technological equipment. The study reveals that the government is failing to provide enough electrical power to sustain the whole population. The poor economy has also led to lack of awareness amongst the public. Further to this, it

was found that SMEs lack financial resources for the initiation of the technology. Unawareness was identified as another inhibitor of B2C e-commerce adoption by SMEs in Zimbabwe, this confirms results from a study on e-commerce adoption by SMEs in Egypt by El-Nawawy and Ismail (1999) in which awareness and low education levels were the main inhibitors of e-commerce adoption. Research findings indicate that both SMEs and customers are concerned with security and confidentiality of their information online. Another inhibitor identified in this study is the incompatibility of technology with the nature of everyday business. Delays and failure in the adoption of B2C e-commerce services could not be fully related with the organizational factors like owner/manager characteristics and firm characteristics because of the unavailability of Internet in the country. Most participants put the blame on slow network and poor Internet, therefore it is not clear to the researcher whether these organizations would utilise B2C e-commerce services given that the quality of the network improve.

Despite the delay and failure in the adoption of B2C e-commerce services, SMEs in the country still showed a great appreciation of the benefits offered by the technology. The research findings indicate that the elimination of the middleman and transport cost reduces transaction costs. No cash transactions are involved in e-commerce activities and this makes the service safer when compared to offline transactions. Most SMEs liked the idea of doing everything in the comfort of their homes or 'wherever one is' as long as Internet access is available. The need to be up-to-date with technology and the need to fight competition were cited as the major drivers in the adoption of B2C e-commerce. Most of the adopters confirmed that they were inspired by their competitors.

It has been identified from the findings that Zimbabwe is experiencing unique governmental factors due to the current political situation, and these factors are making a huge impact on the growth of the IT sector. Factors like Internet and phone bill monitoring, restricting private investors from taking part in the IT sector, and tough regulations on investors have been identified as barriers to the growth of the sector. In conclusion, the Zimbabwean government and responsible organizations need to play a crucial role in creating an environment that is conducive to the adoption of B2C e-commerce. Also the government

needs to ensure that there is adequate technological infrastructure which will in turn bring a reliable and affordable network throughout the country.

6.2 Limitations

- B2C e-commerce is a new phenomenon in Zimbabwe, consequently participants found certain questions irrelevant or difficult to answer. The researcher had to explain the meaning of e-commerce at the beginning of each interview.

- Due to the political situation in Zimbabwe, it was difficult to convince participants that the data being collected was meant for academic purpose only. Participants were not comfortable with discussing certain issues, such as how the economic and political conditions have affected the diffusion of technology within small firms.

- Riyadh et al. (2009) indicate that public utilities in developing countries are often found only in major cities of the country. The sample for this study was drawn from the capital city of the country where most development begins and most technologically advanced people are based. This study does not represent those areas outside of the main centers. The findings might not be generalized to other smaller towns in the country due to environmental differences of the towns.

- The researcher tried to carry out online interviews but only one such interview was successful due to the unavailability of Internet in the country.

6.3 Recommendations

The section presents practical recommendations to SMEs, responsible ministries as well as the government. Recommendations for further research are also presented in this section. This looks at areas that need attention from researchers but were outside the scope of this research.

6.3.1 Technology planning and development

This research has shed more light on factors influencing the adoption and implementation of B2C e-commerce by SMEs in Zimbabwe. SMEs and supporting organizations as well as the government and relevant ministries can learn from the findings. The study has examined a number of flaws in the development of technology in the country. Based on these findings, the researcher can make the following recommendations:

- The government needs to create an environment that is conducive for ICT development as well as improve public awareness and access to technology through establishing 'Telecenters' and introducing computer programmes in educational institutions.
- SMEs should invest time and money in educating staff and management about e-commerce and its benefits.
- SMEs should create a culture that is favourable to technology and innovation.

6.3.2 Further research

Limitations of the research suggest the need for further studies to be conducted. A longitudinal research could give a more in-depth insight into the problem since data is collected over a longer time period. Since the data collection for this research was done at a single point of time, a longitudinal research could help further research to monitor the adaption of SMEs to technology changes. For more reliable information, a triangulation method could be applied so that the short-comings of one method would be covered by another. This is likely to yield more reliable results. For a more representative data about e-commerce adoption and implementation in Zimbabwean SMEs, the researcher suggests sampling more SMEs from different parts of the country.

From the participants point of view, the issues associated with e-commerce and Internet in Zimbabwe are a national concern. One of the participants pointed out that not only small but also large organizations in the country are failing to take advantage of e-commerce opportunities in their full capacity. Further research is therefore recommended on e-commerce adoption in Zimbabwe from the perspective of environmental issues. The

research should encompass the banking sector, government and responsible ministries in Zimbabwe. Further research should also assess whether commercial banks in Zimbabwe are offering e-commerce enabling services like online payment systems, credit cards and more. There is a need for a more detailed assessment of the role played by the government and responsible ministries in promoting the growth of e-commerce in the country. Assessing the impact of the strict laws and regulations passed by the government and responsible ministries is crucial. Most e-commerce research has identified lack of knowledge by the public as a barrier. The researcher recommends an assessment of barriers to e-commerce adoption from the public's point of view.

For comparative purposes, there is need to replicate this study in other African countries, to see if the factors and conditions found in Zimbabwe are applicable to other African contexts. In their study of changes in the barriers faced in e-commerce adoption Chitura et al. (2008) suggest that researchers need to focus on ways to overcome the known barriers and to stop looking for new ones. The researcher also recommends the same for future studies.

References

Addo, T. B. A., Chen, M. M., & Leu, Y. Y. (2003). B2B e-commerce in the United States, Europe and Japan: A comparative study. *Journal of the Academy of Business and Economics*. Retrieved June 20, 2010, from http://findarticles.com/p/articles/mi_m0OGT/is_1_2/ai_113563640/

Africa Partnership Forum. (2008). ICT in Africa: Boosting economic growth and poverty reduction. *Proceedings of the 10th meeting of African Partnership Forum*, *7-8 April 2008* (pp. 1-31). Tokyo, Japan.

Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences Journal*, *30*(2), 361-391.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action-control: From cognition to behavior* (11–39). Heidelberg, Germany: Springer.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision* Processes 50(2), 179-211.

Ajzen, I. & Fishbein, M. (1975). B*elief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Alam, S. S., & Noor, K. M. (2009). ICT adoption in Small and Medium Enterprises: An empirical evidence of service sectors in Malaysia*. International Journal of Business Management 4*(2), 112-125. Retrieved May 10, 2011, from www.ccsenet.org/journal.html

Allcock, S., Webber, S., & Yeates, R. (1999). *Business information and the Internet: Use of the Internet as an information resource for SMEs* (British Library Research and Innovation Report No. 136), London: British Library.

Alvesson, M., & Skoldberg, K. (1994). Taking the linguistic turn in organizational research.

Journal of Applied Behavioural Science, 36(2), 136-58.

Alvesson, M., & Willmott, H. C. (1992). *Critical management studies.* London: Sage.

Alzougool, B., & Kurnia, S. (2008). Electronic commerce technologies adoption by SMEs: A conceptual study. *Proceedings of the 19th Australasian Conference on Information Systems, 3-5 Dec 2008* (pp. 42-54). Christchurch, Australia. Retrieved June 20, 2010, from http://www.bsec.canterbury.ac.nz/acis2008/Papers/acis-0135-2008.pdf.

Azam, M. D., & Shah, N. (2007). Implementation of B2C e-commerce in Bangladesh: The effects of buying culture and e-infrastructure. *Advances in Global Business Research, 3*(1), 55-81.

Bhalla, A., Davies, R., Chitiga-Mabugu, M., & Mabugu, R. (1999). Globalization and sustainable human development: Progress and challenges for Zimbabwe. *Proceedings of the United Nations Conference on Trade and Development, United Nations Development Programme 13-14 December 1999* (pp.1-101). Harare, Zimbabwe. Retrieved June, 2010, from http://www.unctad.org/en/docs /poedmm128.en.pdf.

Baptiste, I. (2001). *Qualitative data analysis: Common phases, strategic differences*. Retrieved September 18, 2010, from http://www.qualitative-research.net/fqs/fqs-eng.htm

Carlsson, C., Carlsson, J. & Hyvonen, K. (2006). *Adoption of mobile devices/services-Searching for answers with the UTAUT*. Proceedings of the 39th Hawaii International Conference on System Sciences, Hawaii.

Cavana, R. Y., Delahaye, B. R., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods (3rd ed.)*. Australia: John Wiley.

Chitura, T., Mupemhi, S., Dube, T., & Bolongkikit, J. (2008). Barriers to electronic commerce adoption in small and medium enterprises: A critical literature review. *Journal of Internet Banking and Commerce*, *13*(2), 1-13. Retrieved January 13, 2011, from

http://www.arraydev.com/commerce/jibc/.

Cloete, E. (2002). SMEs in South Africa: Acceptance and adoption of e-commerce. *Proceedings of the South African Computer Lecturers' Association*, *16–18 September 2002*, (pp.1-12) Port Elizabeth, South Africa.Retrieved June 5, 2010, from http://.sacla.org.za.SACLA2002/Proceedings/Papers/Cloete.doc.

Cloete, E., Courtney, S., & Fintz, J. (2002). Small business' acceptance and adoption of e-commerce in the Western-Cape Province of South Africa. *Electronic Journal on Information Systems in Developing Countries, 10*(4), 1-13. Retrieved June 5, 2010, from http://www.ejisdc.org.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage.

Davis, F. (1989). *Perceived usefulness, Perceived ease of use and user acceptance of Information Technology.* MIS Quarterly, 13, 319-340.

Davis, F.D., Bagozzi, R.P. & Warshaw, P.R. (1989). *User acceptance of computer technology: a comparison of two theoretical models.* Management Science, 35, 982-1002.

Dedrick, J., Goodman, S., & Kraemer, K. (1995). Little engines that could: Computing in small energetic countries. *Communications of the ACM*, *38*(5)*,* 21-26.

Dube, T., Chitura, T., & Runyowa, L. (2010). Electronic commerce benefits and adoption barriers in small and medium enterprises in Gweru, Zimbabwe. *Journal of Internet Banking and Commerce, 15*(1), 1-17. Retrieved June 19, 2011, from http://www.arraydev.com/commerce/jibc/

Duncombe, R., & Heeks, R. (2001). *Information and communication technologies (ICTs) and small enterprise in Africa*. Retrieved April 13, 2011, from http://www.sed.manchester.ac.uk/idpm/research/is/ictsme/index.htm.

Duncombe, R., Heeks, R., Kintu, R., Nakangu, B., & Abraham S. (2005). E-commerce for

small enterprise development. *A Handbook for Enterprise Support Agencies in Developing Countries. Institute for Development Policy and Management (IDPM).* Retrieved April 20, 2010, from http: http://www.sed.manchester.ac.uk/idpm/ researh/is/ictsme/index.htm.

Economic Commission for Africa. (2000). *Report of the workshop on the theme, enhancing the competitiveness of Africa SMEs in regional and global trade: The role of support services* Organised by ECA in collaboration with small and medium development organization of Mauritius, Radisson Beach Hotel, 27 November to 1 December 2000.

El-Nawawy, M. A., & Ismail, M. M. (1999). Overcoming deterrents and impediments to electronic commerce in light of globalization. *Proceedings of the 9th Annual Conference of the Internet Society, 22-25 June 1999,* INET 99, San Jose, USA.

Retrieved November *10, 2011, from* www.itu.int/md/dologin md.asp? lang=en &id=D10- WTIM8.

Gefen, D., & Straubb, D. W. (2004). Consumer trust in B2C e-commerce and the importance of social presence: Experiments in e-products and e-services. *International Journal of Management Science, 32*(6), 407-424.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, *8*(4), 597-607. Retrieved November 10, 2011, from http://www.nova.edu/ssss/QR/QR8-4/golafshani.pdf.

Gwabanayi, K. (2011, 18 June). *Potraz stops Econet project*. The Sunday Mail, Zimbabwe. Retrieved June 19, 2011, from http://zimpapers.co.zw/index.php?option=com content&view=article&id=3793:potraz-stops-econet-project&catid=41:business &Itemid=133

Hendricks, D. (2005). *An investigation into the consensus surrounding information systems project success*. Master's Thesis, University of Cape Town, Cape Town, South Africa.

Hirschheim, R. A. (1992). Information systems epistemology: An historical perspective. In R.

Galliers (Eds.), *Information systems research: Issues, methods and practical guidelines* (pp. 28-60). London: Blackwell Scientific.

Hirschheim, R., & Klein, H. K. (1994). Realizing emancipatory principles in information systems development: The case for ethics. *MIS Quarterly, 18*(1), 83-109.

Hunaiti, Z., Masa'deh, R., Mansour, M., & Al-Nawafleh, A. (2009). Electronic commerce adoption barriers in small and medium-sized enterprises (SMEs) in developing countries: The case of Libya*. IBIMA Business Review*, *2*(5), 37-45.

Hung, S.Y., Ku, C.Y. & Chang, C.M. (2003). *Critical Factors of WAP Services Adoption: an Empirical Study.* Electronic Commerce Research & Applications, 2(1), 42-60.

Intermediate Technology Development Group. (2003). *Practical answers to poverty*. Annual report 2002/2003. Retrieved December 20, 2010, from http://practicalaction .org/docs/region southern africa/appropriate_initiatives_nov_03.pdf.

Internet world stats. (2009). *Internet world stats*: Usage and population statistics. Retrieved May 2, 2010, from www.internetworldstats.com.

Jasra, J. M., Khan. M. A., Hunjra, A. I., Rehman, R. A. U., & Azam, R. I. (2011). Determinants of business success of small and medium enterprises. International Journal of Business and Social Science, 2(20), 274-280.

Joppe, M. (2000). The research process. Retrieved February 25, 2010, from http://www. ryerson.ca/~mjoppe/rp.htm.

Joubert, J. (2006). *The importance of Trust in M-commerce.* Masters thesis, Cape Town; Department of Information Systems, Faculty of Commerce, UCT.

Kabanda, S., & Brown, I. (2010). A structurational view of e-commerce in SMEs in least developing countries*.* In T. Alexander, M. Turpin and J.P. van Deventer (eds), *Proceedings of the 18th European Conference on Information Systems*, *7-9 June 2010.* Pretoria, South Africa: University of Pretoria.

Kalakota, R., & Whinston, A. B. (1997). Electronic commerce: A manager's guide. MA:

Addison-Wesley.

Kaplan, B., & Maxwell, J. A. (1994). *Qualitative research methods for evaluating computer information systems, in evaluating health care information systems: methods and applications*. Thousand Oaks, CA: Sage.

Kapurubandara, M. (2009). A framework to e-transform SMEs in developing countries. *Electronic Journal on Information Systems in Developing Countries, 39*(3), 1-24.*Retrieved* May 2, 2010, from http://www.ejisdc.org

Kapurubandara, M., & Lawson, R. (2006*).* Barriers to adopting ICT and e-commerce with SMEs in developing countries: An exploratory study in Sri Lanka. *Proceedings of the Conference on Collaborative Electronic Commerce Technology and Research*, *9 December 2006* (pp. 1-13). Adelaide.

Kapurubandara, M., & Lawson, R. (2007*).* SMEs in developing countries need support to address the challenges of adopting e-commerce technologies. *Proceedings of the 18th Bled Electronic Commerce Conference , 3-6 June 2007* (pp. 1-15). Bled: Slovenia.

Kapurubandara, M., & Lawson, R. (2008). Availability of e-commerce support for SMEs in developing countries. *International Journal on Advances in ICT for Emerging Regions, 1*(1), 3-11.

Kassie, Y. (2004). *Assessment on e-commerce readiness of businesses and consumers in Ethiopia.* Senior Essay, AAU*:* Addis Ababa*.*

Kauffmann, C. (2005). Financing SMEs in Africa. *Policy Insights, 7*, 1-4. Retrieved May 10, 2010, from http://www.oecd.org/dataoecd/57/59/34908457.pdf.

Keeling, K., Vassilopoulou, K., McGoldrick, P., & Macaulay, L. (2000). Market realities and innovation in small to medium enterprises: Facilitators and barriers to the adoption of electronic commerce. *New Product Development and Innovation Management*, *2*(1), 57-70.

Kelly, S., & Cook, S. (2011). *Freedom on the net 2011*: A global assessment of Internet and digital media. April 18, 2011, Retrieved January 2, 2012, from http://pdf.usaid.gov/pdf_docs/PNADU846.pdf.

Kirby, D., & Turner, M. (1993). IT and the small retail business*. International Journal of* Retail and Distribution Management, 21(7), 20-27.

Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly, 23*(1), 67-94.

Kotelnikov, V. (2007). *Small and medium enterprises and ICT.* United Nations Development Programme–Asia-Pacific Development Information Programme (UNDP-APDIP) and Pacific Training Centre for Information and Communication Technology for Development (APCICT). Retrieved May 10, 2010, from http://www.unapcict.org.

Kwinika, S. (2009, 18 June). The future of Zimbabwe is still viable. http://www.itnewsafrica.com/2009/06/future-of-zimbabwe-ict-still-viable.

Lacovou, C. L., Benbasat, I., & Dexter, A. A. (1995). Electronic data interchange and small organizations: Adoption and impact of technology*. MIS Quarterly, 19*(4), 465-485.

Lawrence, J. E., & Tar, U.A. (2010). Barriers to ecommerce in developing countries. *Information, Society and Justice, 3*(1), 23-35. Retrieved August 10, 2011, from http://www.londonmet.ac.uk/fms/MRSite/acad/dass/ISJ%20Journal/V3N1/03_Barriers%20to%20E-commerce%20in%20developing%20countries_Lawrence&Tar.pdf.

Lee, A. S. (1991). Integrating positivist and interpretive approaches to organizational research. *Organization Science, 2*(4), 342-365.

Lincoln, Y.S., & Guba, E. (1985). *Naturalistic enquiry*. Beverley Hills, CA: Sage.

Machona, M. F. (2006). *Towards African e-index. SME e-access and usage. Research ICT Africa*. Retrieved January 10, 2011, from http://www.researchictafrica.net/publications/Research_ICT_Africa_eIndex_Series/SME%20eAccess%20and%20usage%20in%2014%20African%20Countries.pdf.

MacGregor, R. C., & Kartiwi, M. (2010). Perception of barriers toe-commerce adoption in SMEs in a developed and developing country: A comparison between Australia and Indonesia. *Journal of Electronic Commerce in Organizations*, *8*(1), 61-82. Retrieved September 18, 2010, from http://www.igi-global.com/viewtitlesample.aspx?id=40249.

MacGregor, R., & Vrazalic, L. (2005). A basic model of electronic commerce adoption barriers: A study of regional businesses in Sweden and Australia. Journal of Small Business and Enterprise Development, 12(4), 510-527.

Machingura, D. (2009). Zimbabwe media sustainability index 2009. Media Monitoring Project Zimbabwe, Harare. Retrieved June 10, 2011, from *http://www.irex.org/system/files/3-Africa_09_Zimbabwe.pdf.*

Malhotra, Y. (1996). *Enterprise architecture: An overview*. Retrieved August 2, 2010, from www.brint.com/papers/enterarch.htm.

Malhotra, Y. & Galletta, D.F. (1999). Extending the technology acceptance model to account social influence: Theoretical bases and empirical validation. *Proceedings of the 32nd Hawaii International Conference on System Sciences, January 1999*, Maui; Hawaii.

Mallat, N. (2005). *Theoretical constructs of mobile payment adoption*. Conference Paper. July 2005.

Mambo, C. (2010, January 25). *Zimbabwe ignoring SME sector*. An NNN-New Ziana Special Report. Retrieved June 19, 2011, from http://news.brunei.fm/2010/01/25/zimbabwe-ignoring-sme-sector/

Matula, S., & Van Brackel, P. (2007). ICT skills readiness for the emerging global digital economy among small businesses in developing countries: A case study of Botswana. *Library High Tech,* 25(2), 231-245.

Mazango, E. (2008). *Telecommunications sector reform: Liberalization & universal service*

policy in Zimbabwe. Retrieved March 3, 2010, from www.media.uio.no/forskning/.../theses/thesis-ERIC_MAZANGO.pdf.

McMillan, J. H., & Schumacher, S. (2006). *Research in education: Evidence-based inquiry*. New York: Pearson Education.

Melián-Alzola, L., & Padrón-Robaina, V. (2007). Measuring the results in B2C e-commerce. *International Journal of Quality & Reliability Management*, *24*(3), 279-293.

Ministry of Information Communication Technology. (2005). *National information and communication technology (ICT) policy framework 2005.* Retrieved May 3, 2010, from www.ictministry.gov.zw

Ministry of Information Communication Technology. (2010). *Ministry of information communication technology (MICT) strategic plan 2010-2014*. Retrieved May 3, 2010, from http://www.techzim.co.zw/wp- content/uploads/2010/02/Zimbabwe_mict_ strategic_plan2010-2014.pdf.

Mohamad, R., & Ismail, N. A. (2009). Electronic commerce adoption in SME: The trend of prior studies. *Journal of Internet Banking and Commerce*, *14*(2), 1-16. Retrieved May 20, 2010, from http://www.arraydev.com/commerce/jibc/.

Molla, A. (2005*). Exploring the reality of e-commerce benefits among businesses in a developing country*. University of Manchester, Precinct Centre, Manchester: UK. Retrieved May 20, 2010, from http://www.sed.manchester.ac.uk/ idpm/publications /wp/di/index.htm.

Molla, A., & Heeks, R. (2007). Exploring e-commerce benefits for businesses in a developing country. *Information Society Journal*, *23*(2), 95-108.

Muhammad, B., Muhammad, T. A., & Muhammad, A. (2008). Reliability and validity of qualitative and operational research paradigm. *Pak.j.stat.oper.res. 4*(1), 35-45.

Myers, M. (2009). *Qualitative research in business and management*: Sage.

Odedra-Straub, M. (2003*).* E-Commerce and development: Whose development? *Journal of Information Systems in Developing Countries*, *11*(2), 1-5, Retrieved June 12, 2011, from http://www.ejisdc.org/ojs2/index.php/ejisdc/article/viewFile/60/60.

Ojukwu, D. (2006). Achieving sustainable growth through the adoption of integrated business and information solutions: A case study of Nigerian small & medium sized enterprises. *Journal of Information Technology Impact*, *6*(1), 47-60. Retrieved June 20, 2010, from http://www.jiti.com/v06/jiti.v6n1.047-060.pdf.

Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research Journal*, *2*(1), 1-28.

Pan, S. L., Zulfiqar, A. K., Lee, J., Huang, J. C. (2001). E-government: An exploratory study of on-line electronic procurement systems case study. *Proceedings of the 9th European Conference on Information Systems 27-29 June 2001* (pp. 1010-1022). Bled: Slovenia.

Patton, M. Q. (2001). *Qualitative evaluation and research methods (3rd Ed.)*. Thousand Oaks, CA: Sage.

Payne, J. E. (2001). E-Commerce readiness for SMEs in developing countries: A guide for development professionals. *Academy for Educational Development,* Washington, USA. Retrieved June 24, 2010, from http://learnlink.aed.org/Publications/Concept_Papers/ecommerce_readiness.pdf.

Piris, L., Fitzgerald, G., & Serrano, A. (2004). Strategic motivators and expected benefits from e-commerce in traditional organizations*. International Journal of Information Management, 24*(6), 489-506.

Poon, S., & Swatman, P. (1999). An exploratory study of small business Internet commerce issues. Information System Management, 35(1), 9-18.

Reserve Bank of Zimbabwe. (2007). Challenges faced by SMEs. Retrieved June 20, 2011, from http://www.rbz.co.zw/pdfs/2007%20rural/ch14_16.pdf.

Rhodes, J. (2003). Can e-commerce enable marketing in an African rural women's community based development organization? *Informing Science Journal, 6*(6), 157-172.

Richard, B., Hinson, R., Heeks, R., Molla, A., & Mbarika, V. (2010). A resource-base analysis of e-commerce in developing countries. *Proceedings of the 18th European Conference on Information Systems, 6-9 June 2010* (pp. 1-12). Pretoria, South Africa.

Riquelme, H. (2002). Commercial Internet adoption in China: Comparing the experience of small, medium and large businesses. *Internet Research: Electronic Networking* Applications and Policy, 12(3), 276-286.

Riyadh A. N., Akter M. S., & Islam, N. (2009). The adoption of e-banking in developing countries: A theoretical model for SMEs. *International Review of Business Research 5*(6), 212-230.

Rogers, E. (1995). *Diffusion of innovations (4th Ed.)*. New York: Free Press.

Rowley, J. (2002). *E-business: Principles and practice.* New York: Palgrave.

Saunders, M., Lewis, P., & Thornhill, A. (2003). Research methods for business students. England: Pearson Education Ltd.

Sekaran, U. (2003). *Research methods for business: A skill building approach* (4th ed.). New York: John Wiley.

Selim, H.M. (2008). E-commerce adoption and acceptance by firms: Exploratory study. *Proceedings of the International Conference on Information Resources Management CONF-IRM 2008, 5 January 2008.* Paper 23. Retrieved May 20, 2010, from http://aisel.aisnet.org/confirm2008/23.

Shanks, G. (2002). Guidelines for conducting positivist case study research in information systems. *Information Systems*, *10*(1), 76-85.

Smith, J. E. (2010, September 28). *Zimbabwe cell phone boom still can't beat investor fears*. My Broadband. Retrieved January 12, 2011, from http://mybroadband.co.za/news/

cellular/15445-zimbabwe-cell-phone-boom-still-can-t-beat-investor-fears.html.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* Newbury Park, CA: Sage.

Storey, V. C., Straub, D. W., Stewart, K. A., & Welke, R. J. (2000). A conceptual investigation of the e-commerce industry*. Communications of the ACM*, 43(7), 117-123.

Tafirenyika, D. (2010). Measuring the social and economic impacts of ICTs using survey data in Zimbabwe. *Proceedings of the 8th World Telecommunication/ICT Indicators meeting (WTIM-10), 24 - 26 November 2010* (pp. 1-15). Geneva, Switzerland.

Tangpong, C., Islam, M., & Lertpittayapoom, N. (2009). New niche formation and creative destruction of B2C e-commerce: A multi-retail sector study. *Proceedings of the 51st Annual Meeting of the Midwest Academy of Management (Strategy & Organization Theory Track)*, (pp. 1-15).

Thomas, D. R. (2003). *A general inductive approach for qualitative data analysis*. Retrieved August 18, 2010, from http://www.fmhs.auckland.ac.nz/soph/centres/hrmas/_docs/Inductive2003.pdf.

Thong, J., & Yap, C. S. (1995). CEO characteristics, organizational characteristics, and information technology adoption in small business. *Omega*, *23*(4), 429-442.

Tornatzky, L. G., & Fleischer, M. (1990). *The processes of technological innovation.* Lexington, Massachusetts: Lexington Books.

Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. (2003). User acceptance of information technology: Toward a unified view**.** *MIS Quarterly: Management Information Systems*, 27, 425-478**.**

Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Young, Z., & Ridely, G. (2003). E-commerce in developing countries. *Electronic Journal of Information Systems in Developing Countries*, *10*(4), 1-13. Retrieved May 20, 2010,

from http://www.ejisdc.org.

Zappala, S., & Gray, C. W. J. (2006). *Impact of e-commerce on consumers and small firms*. London: Ashgate.

Zikmund, W. G. (2000). *Exploring marketing research.* Fort Worth: Dryden Press.

Zunguze, M. (2008). *Investigations into the extent SMEs have embraced the use of ICTs in their business operations: A case for import and export SMEs*. Retrieved May 20, 2010, from www.ekowisa.org.zw.

Zunguze, M. (2009). *E-knowledge for women in southern Africa*. Retrieved May 20, 2010, from www.ekowisa.org.zw.

Zwass, V. (2008). *Electronic commerce*. Article from Encyclopedia Britannica. Retrieved April 30, 2010, from http://www.britannica.com/eb/article-9126084/e-commerce.

Appendix A: Interview guide

These questions were used as a guide to the questions asked during the interview sessions. Some responses led to further questioning depending on the data obtained.

Section A: Demographics

1. When was your company formed?
2. How many employees does your company have?
3. Where is your head office and how many branches do you have?
4. Can you give a brief description of your company's history and background?
5. Which department are you employed under?
6. How many years have you been in the company?
7. What is your designation?
8. What business are you into?

Section B: B2C e-commerce adoption and implementation

1. Do you have an IT department in your company?
2. If not, how do you take care of your IT needs?
3. Do you have Internet connection?
4. If not, are there any plans for a connection?
5. Does your company have a website?
6. When was the website launched?
7. Do you sell your products online?
8. Who gave you the idea of selling products online and what were the driving forces?
9. What is the percentage of online to offline sales?
10. Do you use Internet for financial transactions?
11. What kind of complaints do you usually receive from your online customers?
12. Does your company have an ICT policy?

Section C: Perceived benefits

1. What benefits have you realised from using e-commerce services?
2. What benefits do you think B2C e-commerce offer to businesses and its customers?
3. From your own point of view, what do you think influences the adoption IT within individuals?

Section D: Perceived challenges

1. What challenges are you facing from implementing e-commerce services?
2. From your own point of view, what can you say are the major challenges faced by SMEs in adopting e-commerce strategies?

Section E: SME perception

1. What do you think the government and ICT companies can do to help SMEs in the adoption of e-commerce?
2. Is the current economic and political condition in the country affecting the use of technology within your organization?
3. Do you think the Ministry of ICT is operating on its full capacity to support e-commerce adoption within SMEs?
4. Do you have any questions for me?

Appendix B: Respondents profiles

The section present different key characteristics of people who participated in the interviews. These are shown in table 8.1

Case study	Department	Title	Profession	Age range
SME1	No departments	Owner/Manager	Not mentioned	30-40
SME2	No departments	Owner/Manager	Not mentioned	40-50
SME3	No department	Manager	Not mentioned	40-50
SME4	Marketing	Sales representative	Marketing	20-30
SME5	Information Technology	Network administrator	Information Technology	20-30
SME6	Sales	Sales Representative	Not mentioned	60-70
SME7	Finance	Finance officer	Finance	30-40
SME8	No department	Manager	Marketing Management	20-30

Table 8.1: Respondents profile

Appendix C: A sample of transcripts

Interview transcriptions	**Analysis**
SME1	
Interview 1: Manager	
When was your company formed?	
Our company was formed in May 2008	
How many employees do you have?	
We have got 3 then a couple of casual workers mainly like drivers	
Can you give a brief description of your company i.e. what business are you into?	
Vehicle rental services and we offer vehicle hire packages for corporate companies.	
How many years have you been in this company?	
Since its inception.	
Do you have an IT department?	
No, we hire on a casual basis when required	
Do you have an Internet connection?	
Well with the modern technology that is available I will say we have but not on a full time basis, like Econet has USB modems and Africom is doing the same thing, so for a small organization you would rather opt for something like that to minimise costs rather than employing or getting a service that will cater for all the computers, so we use modems.	Limited Internet connection
Did you face any challenges in securing the Internet connection?	
Well the first time we tried with Africom we had a challenge, because it was still a new product that was on the market. They have just launched	Limited network

the product so coverage throughout some areas wasn't 100%, like here in the offices it wasn't accessing anything so they were saying its a black spot and other areas out of town, but when we tried with Econet it worked.	coverage
Why did you decide to have an Internet connection?	
We wanted a cheaper way to contact our customers, usually if you look at the cost of a mobile phone its well far much expensive than e-mailing.	E-mailing is cheaper than mobile phones
Do you have a website for your company?	
No we don't have.	
Are you looking forward to having a website?	
Well as we grow yes, we are looking at it but the main challenge is that, we are mainly targeting local people. We have neither extended nor looked at expanding to other international organizations, but its only local companies or international companies that are based here in Zimbabwe.	
Do you think you can launch a website for local customers only?	
Well, yes we do door-to-door and Internet marketing but it is mainly door-to-door because you target specific people and groups to minimize risk. When you are doing business for security reasons to be honest you don't want to be exposed to everyone because even individuals you don't want any contact with will start phoning any-time and you may feel its actually exposing you more, so we try by all means to focus on specific groups.	By doing business online the manager feels that she exposes her company to intruders
Do you do financial transactions over the Internet?	
Not really, but promotional ones and marketing	
Why don't you do financial transactions on the Internet?	

Well in most cases we are on the receiving end to be honest, then as for our suppliers they prefer cash transactions. I would say because we are on the receiving end therefore in most cases we really don't apply that, but in other areas of our work.	
What challenges are you facing from doing your business over the Internet*?*	
Well I would say because of the line of work that we do at times you don't get a response in time or you spend the whole day out of office because of door-to-door marketing or car dispatching. When you get back to the office there maybe expired information you have already received via a phone call or other means, so it makes it difficult for us to rely completely on the Internet 100%.	Incompatibility of the technology and business line
From your own opinion, what do you think are the advantages and disadvantages of doing business using the Internet?	
I would say if you are in the office its quite effective to be honest since you have instant response. As for the disadvantage I have already mentioned that, if you are out of the office you do not get anything.	Online transacting is efficient
What issues do you think determines e-commerce adoption among individuals?	
I think it depends upon the people we deal with e.g. supplier's level if it's an SME, structure of the organization and availability of Internet.	Customer awareness level determines the chances of adoption
What do you think the government and ICT companies can do to help SMEs in implementing e-commerce activities?	
I can't say I have an answer for this question but, it's more to do with an organization itself or how people accept changes. Even though I don't see how the government can intervene directly to use such things, it's actually	

in the interest of the directors and management in an organization because at times there are certain regulations they put in place or certain facilities to encourage adoption of e-commerce. Thus, if the management or directors are forthcoming to use such a facility then, it won't serve the purpose its meant to serve.	

Appendix D: Analysis tables

Categories	Concepts
Perceived benefits	Cost reduction, efficient , convenience, globalisation, fast, hassle free
Perceived barriers	Incompatibility, slow network, unreliable network, lack awareness, background, literacy level, age, skills, economic hardships, load shedding, limited access, poor coverage, targeted market, limited resources, management interest, internet monitoring, unaffordable bandwidth, poor bandwidth, technology fear, poor infrastructure, lack privacy, government support, legislation, government commitment, trust, poor resources, finance, sector abandoned, expensive services, security, confidentiality loss, personality lose
Perceived drivers	Modern times, diversity, external pressure
Business perception	Improve network, willingness, need to learn
Internet use	Emailing , Advertising, Planning , Research

Table 9.1: Concepts and categories

Concept	Count
Perceived benefits	
Cost reduction	9
Efficient	9
Convenience	6
Globalisation	3
Hassle free	4
Fast	10
Perceived barriers	
Incompatibility	3
Slow network	13
Unreliable network	9
awareness	6
Background	3
Literacy	5
Age	4

Skills	5
Economic Hardships	14
Load shedding	10
Limited access	8
Poor coverage	5
Targeted market	3
Limited resources	7
Management interest	4
Internet monitoring	6
Unaffordable bandwidth	7
Government commitment	8
Poor bandwidth	7
Technology fear	3
Poor infrastructure	14
Lack privacy	6
Government support	9
Tough legislation	10
Trust	5
Poor resources	10
Financial resources	7
Sector abandoned	2
Expensive services	8
Confidentiality loss	4
Personality lose	2
Perceived drivers	
Modern times	7
Diversity	3
External pressure	6
Business perception	
Improve network	7
Willingness	5
Need to learn	3
Internet use	
Emailing	8
Advertising	6
Planning	2
Research	8

Table 9.2: Concepts count

Appendix E: Ethics form

1. PROJECT DETAILS	
Project Title:	*An analysis of factors affecting the use and adoption of B2C e-commerce in developing countries. Case study Zimbabwe.*
Principal Researcher/s: Precious R. Mashanda **E-Mail Address:** peeranga@gmail.com	**Research Supervisor / Co-researchers:** Dr Eric Cloete

Brief description of the project:

This study attempts to explore factors leading to a low level of e-commerce participation among SMEs in Zimbabwe. Specifically, the study seeks to identify factors influencing adoption and implementation of B2C e-commerce in Zimbabwean SMEs by (1) exploring the factors affecting B2C e-commerce adoption, (2) determining the level of e-commerce adoption in Zimbabwe, (3) assessing whether there is a gap between what SMEs expect the government to do to promote the growth of e-commerce and what is currently being done by the government, (4) identify SMEs perception about e-commerce and (5) examines the activities necessary to promote the growth of B2C e-commerce in Zimbabwe.

Research methods and procedure: (please tick and explain procedure)

□ **Interviews** □ Survey questionnaire □ Experiment □ **Secondary data** □ Observation □ Other (please specify):

Interviews

Face to face, semi-structured and online interviews were carried out. Online interviews were done for companies that were not physically accessible.

Secondary data

Analysis of company documents websites

2. PARTICIPANTS

Characteristics of participants:

Gender**:** *Both*

Race/Ethnicity: *Any*

Age: *Adults*

Location: *Zimbabwe*

Other:

Affiliations of participants: (please tick)

☐**Company employees**☐Hospitalemployees☐Generalpublic☐Militarystaff☐Farmworkers☐Students☐Other (specify)
Company employees

If your sample includes children (aged 15 and below), mentally incompetent persons, or legally restricted groups please explain on a separate page why it is necessary to use these particular groups

3. ORGANIZATIONAL PERMISSION

If your research is being conducted within a specific organization, please state how organizational permission will be obtained:

A letter asking for permission to take up interviews at an organization has been attached. Interviews can only be done at the organization if permission is granted.

4. INFORMED CONSENT

What type of consent will be obtained from study participants?

- Oral consent
- **Written consent** *Written consent*
- Anonymous survey questionnaire (covering letter required, no consent form needed)
- Other (specify): _____

How and where will consent/permission be recorded?

In writing, at the company, just before the interview commence.

If subjects are minors or mentally incompetent, describe on a separate page how and by whom permission will be granted?

5. CONFIDENTIALITY OF DATA

What precautions will be taken to safeguard identifiable records of individuals? Please describe specific procedures to be used to provide confidentiality of data by you and others, in both the short and long run. This question also applies if you are using secondary sources of data.

Pseudo names will be used to identify different companies and individuals during analysis. Information will be destroyed soon after the analysis.

6. RISK TO PARTICIPANTS

Does the proposed research pose any physical, psychological, social, legal, economic, or other risks to study participants you can foresee, both immediate and long range? (tick one)

No risks are foreseen in this study.

□ Yes □ **No**

If yes, answer the following questions on a separate page:

1. Describe in detail the nature and extent of the risk and provide the rationale for the necessity of such risks
2. Outline any alternative approaches that were or will be considered and why alternatives may not be feasible in the study
3. Outline whether and why you feel that the value of information to be gained outweighs the risks

7. intended dissemination of research findings

Have you discussed authorship issues with your co-researchers or supervisor? (tick one)

□ Yes □ **No**

If yes, what did you agree?

Documents attached

1. **A full copy of the research proposal**
2. **Cover letter**
3. **Consent form signed by the participants**
4. **Interview guide and one interview sample**

I certify that that the material contained herein is truthful and that all co-researchers and supervisors are aware of the contents thereof:

Applicant's Signature: ……  …….. Date: ……28/02/2012….

For Ethics committee representative only **Recommendation:** **Signature:** **Date:**
For Ethics committee CHAIRPERSON only **Recommendation:** **Signature:** **Date:**

Appendix F : Introductory letter

Department of Information Systems
Leslie Commerce Building
Private Bag, Rondebosch 77001
Tel: (021) 650-2261
Fax No: (021) 650-2280
Tel. Add: ALUMNI, Cape Town

Dear Sir/Madam

Request to participate in a research study

I am a student at the University of Cape Town in the Faculty of Commerce, Department of Information Systems, studying for a Masters degree in Information Systems. One of the requirements of this degree is a research project in the Information Systems field. My study seeks to explore and explain barriers to e-commerce adoption by SMEs in Zimbabwe.

As part of my research I will be conducting interviews to gain an insight of SMEs position regarding the issue of technology adoption. Further information will be obtained through company documents and websites analysis if applicable.

The questions prepared for the interview have been approved by the UCT Ethics committee. Please be advised that participation is voluntary and all data collected will be kept strictly confidential. Results from this study will disclose neither the company's particulars nor those of individual participants. A pseudo name will be given to your company for the analysis purpose to ensure confidentiality. You are allowed to opt out at any stage if you feel uncomfortable with the participation.

Your participation in this research will be greatly appreciated.

I thank you in advance.
Yours Faithfully,

Precious Mashanda

If you have any further queries, please direct them to:

peeranga@gmail.com
Cell: +2778 292 1781
OR
Supervisor: Dr Eric Cloete
Department of Information Systems
University of Cape Town
E-Mail: ecloete@uct.ac.za
Phone: +27 21 650 2279

Appendix G: Consent form

Department of Information Systems
Leslie Commerce Building
Private Bag, Rondebosch 77001
Tel: (021) 650-2261
Tel. Add: ALUMNI, Cape Town
Fax No: (021) 650-2280

Consent Form

This is to certify that _____of_____(Address) in my sound state of mind have committed my company to participate in this study by permitting Precious Mashanda to collect data from this company. She may interview some of the employees and analyse some company documents and website on condition that the company and individual particulars will be covered in the results of the study and that the information will be used for academic purposes only.

Signature_____Date_____

If there are any queries, please direct them to:

peeranga@gmail.com

Cell: +2778 292 1781

OR

Supervisor: Dr Eric Cloete

Department of Information Systems

University of Cape Town

E-mail: eric.cloete@uct.ac.za

Phone: +27 21 650 2279